FORM GEN. 160

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

CAO File No. 0220-05951-0000
Council File No. 13-1641, 13-1158-S3,
07-1342, 10-0270, 14-1158-S2
Council District 1, 13

Date: April 8, 2022

To: Los Angeles City Council

From: Matthew W. Szabo, City Administrative Officer
Chair, Municipal Facilities Committee

Subject: **TRANSMITTAL – TAYLOR YARD G2 RIVER PARK FINAL IMPLEMENTATION FEASIBILITY REPORT**

SUMMARY

At its Regular Meeting on March 31, 2022, the Municipal Facilities Committee (MFC) considered an updated Bureau of Engineering (BOE) report and recommendations for various authorizations related to the G2 Taylor Yard River Park Project located at 2850 Kerr Street in the Glassell Park and Cypress Park neighborhoods of Council District 1. A prior version of the report was presented at the February 24, 2022 MFC meeting, whereupon the MFC instructed BOE to revise the report and attachments to include an updated financial cost estimate for the project. This report includes this estimate.

The MFC considered the recommendations in the updated report and further amended Recommendation #10 to require regular reporting on the project's estimated funding gap to the MFC. Language to be incorporated as part of the recommendation requires BOE to provide "updates on annual operating funding gaps as estimated in Chapter 11, Table 11-2."

RECOMMENDATIONS

That the Council, subject to the Mayor's approval:

1. Approve the Taylor Yard G2 River Park Project Implementation Feasibility Report and Appendices (IFR) for the G2 Taylor Yard River Park Project.

2. Direct and request that all City departments facilitate the execution of the next steps for the City-owned G2 parcel as described in the IFR for the G2 Taylor Yard River Park Project, and support the implementation of the proposed improvement work on the State-owned G1 parcel, and improvements to the Rio de Los Angeles State Park, all areas that are included in the 100-Acre Partnership working group, under the City leadership of the Bureau of Engineering (BOE).

3. Approve the City Engineer's recommendation to pursue the site configuration of the Island scheme bridging the G1 and G2 sites as shown in the attached Implementation Feasibility Report, Figure ES-10, page ES.22.

4. Request that the Los Angeles Department of Water and Power (LADWP) play an active role in the realization of the preferred design concepts for G1 and G2, which will include LADWP infrastructure relocations and the installation of new infrastructure to support the intended uses.

5. Request that LADWP add potable water service and recycled water service to their capital program for the Taylor Yard G1 and G2 sites to build out the intended programs.

6. Request that LADWP investigate the relocation of the high voltage power structures in an alignment closer to the existing rail right of way. The relocation has potential benefits of a straighter alignment for the high voltage lines, the -2- potential for fewer support structures with higher towers, and potentially the use of mono-poles that would limit the footprint on the ground and improve security.

7. Instruct Los Angeles Sanitation and Environment (LASAN) to work with Engineering to evaluate the options for sewer service for the G1 and G2 sites and identify funding to add the sewer connections to the capital program in order to build out the intended public uses on the G1 and G2 sites.

8. Instruct BOE to explore, pursue, and obtain appropriate property rights on the private sections of Kerr Road as necessary to facilitate construction of utilities, bikeway infrastructure, and any necessary improvements to Kerr Road.

9. Instruct the Los Angeles Department of Transportation (LADOT) to identify funding for the planning, design, and implementation of bikeway infrastructure along Kerr Road, as well as pedestrian safety and access.

10. Instruct BOE to report back on the multi-year capital needs to implement the complete build out of the G2 preferred design, as estimated in Chapter 17, Table 17-2, and updates on annual operating funding gaps as estimated in Chapter 11, Table 11-2, and potential City costs for the G1 site.

11. Instruct the City Administrative Officer to report back on a funding strategy for the full build out of the Taylor Yard G2 River Park Project and the adjacent Taylor Yard G1 shared costs.

12. Instruct BOE to report back on the Taylor Yard Equity Strategy efforts, and.

13. Instruct BOE, with input from other City departments, to provide regular updates on the Taylor Yard G2 River Park Project per the "Next Steps" as articulated in the IFR in Chapter 14, and provide regular updates on the projects of the 100-Acre Partnership working group which also includes the Taylor Yard G1 site and the Rio de Los Angeles State Park.

FISCAL IMPACT STATEMENT

Approval of the recommendations in this report will not have an immediate impact on the General Fund but will instruct BOE to report back on the multi-year capital needs to implement the complete build out of the G2 preferred design, as estimated in Chapter 17, Table 17-2, and potential City costs for the G1 site. Approval also instructs the City Administrative Officer to report back on a funding strategy for the full build out of the Taylor Yard G2 River Park Project and the adjacent Taylor Yard G1 shared costs.

Based on BOE's preferred Island Scheme, it is noted that the estimated range of project costs for the River Park project as reflected in Chapter 17: Updated Cost Estimates (as of March 2022), could be up to $1.06 billion.

DEBT IMPACT STATEMENT

There is no anticipated debt impact from approval of the recommendations in this report.

FINANCIAL POLICIES STATEMENT

The recommendations of this report comply with the City's Financial Policies in that approval of this report does not obligate General Fund or other City funding sources being used to fund the project.

Attachment – March 22, 2022 BOE Taylor Yard River Park Final Implementation Feasibility Report

MS:YC/JVW/NSH: 15220033

FORM GEN. 160 (Rev. 11-02)

CITY OF LOS ANGELES
INTERDEPARTMENTAL CORRESPONDENCE

Date: March 22, 2022

To: Municipal Facilities Committee

From: Christopher F. Johnson, P.E., G.E.
Bureau of Engineering

ENGINEERING CITY OF LOS ANGELES
Christopher F. Johnson
cn=Christopher F. Johnson, o=Department of Public Works, Bureau of Engineering, ou=Clean Water Division, email=christopher.johnson@lacity.org, c=US
2022.03.22 15:44:16 -07'00'

Subject: **TAYLOR YARD G2 RIVER PARK PROJECT FINAL IMPLEMENTATION FEASIBILITY REPORT**

RECOMMENDATIONS

Approve this report and forward it to the City Council for consideration:

1. Approve the Taylor Yard G2 River Park Project Implementation Feasibility Report and Appendices (IFR) for the G2 Taylor Yard River Park Project.
2. Direct and request that all City departments facilitate the execution of the next steps for the City-owned G2 parcel as described in the IFR for the G2 Taylor Yard River Park Project, and support the implementation of the proposed improvement work on the State-owned G1 parcel, and improvements to the Rio de Los Angeles State Park, all areas that are included in the 100-Acre Partnership working group, under the City leadership of the Bureau of Engineering (Engineering).
3. Approve the City Engineer's recommendation to pursue the site configuration of the Island scheme bridging the G1 and G2 sites as shown in the attached Implementation Feasibility Report, Figure ES-10, page ES.22.
4. Request that the Los Angeles Department of Water and Power (LADWP) play an active role in the realization of the preferred design concepts for G1 and G2, which will include LADWP infrastructure relocations and the installation of new infrastructure to support the intended uses.
5. Request that LADWP add potable water service and recycled water service to their capital program for the Taylor Yard G1 and G2 sites to build out the intended programs.
6. Request that LADWP investigate the relocation of the high voltage power structures in an alignment closer to the existing rail right of way. The relocation has potential benefits of a straighter alignment for the high voltage lines, the

potential for fewer support structures with higher towers, and potentially the use of mono-poles that would limit the footprint on the ground and improve security.

7. Instruct Los Angeles Sanitation and Environment (LASAN) to work with Engineering to evaluate the options for sewer service for the G1 and G2 sites and identify funding to add the sewer connections to the capital program in order to build out the intended public uses on the G1 and G2 sites.
8. Instruct Engineering to explore, pursue, and obtain appropriate property rights on the private sections of Kerr Road as necessary to facilitate construction of utilities, bikeway infrastructure, and any necessary improvements to Kerr Road.
9. Instruct the Los Angeles Department of Transportation (LADOT) to identify funding for the planning, design, and implementation of bikeway infrastructure along Kerr Road, as well as pedestrian safety and access.
10. Instruct Engineering to report back on the multi-year capital needs to implement the complete build out of the G2 preferred design, **as estimated in Chapter 17, Table 17-2**, and potential City costs for the G1 site.
11. Instruct the City Administrative Officer's staff to report back on a funding strategy for the full build out of the Taylor Yard G2 River Park Project and the adjacent Taylor Yard G1 shared costs.
12. Instruct Engineering to report back on the Taylor Yard Equity Strategy efforts.
13. Instruct Engineering with input from other City departments to provide regular updates on the Taylor Yard G2 River Park Project per the "Next Steps" as articulated in the IFR in Chapter 14, and provide regular updates on the projects of the 100-Acre Partnership working group which also includes the Taylor Yard G1 site and the Rio de Los Angeles State Park.

ATTACHMENTS

1. Taylor Yard G2 River Park Project IFR, October 2021, **updated March 2022**

2. Taylor Yard G2 River Park Project IFR Appendices, October 2021

3. 100-Acre Partnership Letter of Intent, January 10, 2020

BACKGROUND & CURRENT ACTIVITIES

The Taylor Yard G2 River Park Project is planned for the approximately 42-acre G2 (herein referred to as G2) parcel of the former Taylor Yard rail yard. The City of Los Angeles (City) purchased the Taylor Yard G2 Parcel on March 1, 2017 (C.F. 13-1641) located at 2850 Kerr Street in the Glassell Park and Cypress Park neighborhoods of Council District 1. The parcel is adjacent to the Los Angeles River (River), Rio de Los Angeles State Park, and the Taylor Yard G1 Parcel (referred to in this report as G1 and also known as the "Bowtie" parcel) owned by the State of California.

With the City's purchase of the G2 site, the City applied for and received a grant in 2017 from the California State Coastal Conservancy for $2 million in Proposition 1 funds (C.F. 14-1158-S3). The grant was to perform environmental site assessments and develop an Implementation Plan with recommended concepts for both interim uses of the site and long-term development.

Following the City's purchase of the G2 parcel, a 12.5-acre easement on the G2 parcel was sold to the Mountains Recreation and Conservation Authority (MRCA) on December 7, 2018, per Council File 13-1641-S3. This easement sale directs the intended uses of the 12.5 acres to implement the river recreational development goals of the Los Angeles River Revitalization Master Plan adopted by the Council on May 9, 2007, and the Los Angeles River Ecosystem Restoration and Recreation (LARERR) Project approved by the Council on June 29, 2016, per the terms of the sale.

Prior to the City acquiring the G2 parcel, the Taylor Yard G2 River Park was included as Project No. 165 of the City Council-adopted Los Angeles River Revitalization Master Plan (C.F. 07-1342) which was approved by City Council on May 9, 2007, along with the California Programmatic Environmental Impact Report and the Federal Programmatic Environmental Impact Statement associated with the Los Angeles River Revitalization Master Plan.

Taylor Yard G2 was also described in the U.S. Army Corps of Engineers (USACE) LARERR Feasibility Study, also known as the ARBOR Study (Area with Restoration Benefits and Opportunities for Revitalization), for which the City is serving as the local sponsor (C.F. 10-0270). The G2 parcel is situated in Reach 6 of the LARERR Project and is critical to the fulfillment of the LARERR Project goals to restore ecosystem values in and along an 11-mile corridor of the River from the edge of Griffith Park into Downtown Los Angeles. City Council adopted the LARERR Study on June 29, 2016 (C.F. 14-1158-S2), with subsequent Senate approval on September 15, 2016. The President signed the legislation that included the LARERR on December 16, 2017.

In January 2022, the Federal government announced a $28 million allocation of funding for the LARERR Project, to be administered by the Los Angeles District of the USACE. This funding officially moves the Federal LARERR Project into the construction phase from the USACE's perspective and should accelerate the USCAE's efforts on Reach 6 and Reach 7 of the LARERR Project.

In mid-2017 Engineering initiated the site investigation and conceptual site design work on the G2 site that is summarized in the IFR, in close collaboration with the City Council and the Mayor's office, with extensive public input, and with oversight from the Department of Toxic Substances Control (DTSC) on site contamination characterization. On February 11, 2021, a draft of the IFR was released to the public. All public comments have been reviewed, as described in Appendix F, and appropriate edits to the document were incorporated.

As part of the characterization of the site contamination, the findings as described in the Report of Findings, Appendix A of the IFR, were provided to DTSC and posted on Envirostor on June 21, 2020. The findings of the investigation, combined with previous investigation results, will be used to prepare a Response Plan and a Risk Evaluation using a multi-stage approach to site remediation to enable the development of a public river park at G2. The Report of Findings provides a guide for remedial planning in support of near term and future park development projects.

Engineering and partners have worked closely with community members to gather input and ideas for the development of the G2 parcel. This work included an intensive study of the contamination levels on the 42-acre parcel, as well as design workshops, tours, community events, focus groups, discussions, surveys, and canvassing throughout the neighborhood. Engineering has compiled the results of the site assessment research and analysis, the conceptual designs developed with the community and a summary of the work completed into a document called the Implementation Feasibility Report (IFR). Engineering has finalized the IFR for the Taylor Yard G2 River Park Project (attached). Collectively, thanks to our design and research teams, the information in the IFR reflects the potential of the site, and the challenges, along with the depth and breadth of knowledge gained over the past years. It includes important design concepts, proposed public uses, environmental site characterizations, and a path for meaningful wildlife habitat creation. Though the full buildout of the Taylor Yard G2 River Park Project will take several years to complete, the IFR is the foundation for moving forward with early implementation projects on the site.

The City intends to complete a phased remediation and development of the entire G2 parcel, including interim uses. The objective of a phased approach is to address required remediation and enable safe public access as funding is available. This might also include interim site uses for natural flora and fauna that incorporate more passive, natural methods of site remediation that are typically slow acting. The site is known to be contaminated; therefore, all uses of the site are contingent on the approval of DTSC, the oversight regulatory agency for this site.

The process of phased site remediation and phased site development will include robust stakeholder input on all projects. The City anticipates that the near-term uses will involve habitat creation, water quality improvement measures, passive recreation, educational elements, nature programming, and events.

In 2021, discussed in Chapter 14, *Next Steps*, of the IFR, Engineering initiated design work for two projects at the G2 site known as the Paseo del Río Project and the Proposition O Water Quality Project, both early activation projects at G2. These were approved by City Council via C.F. 20-1380 and C.F. 13-1526, with associated funding. Engineering has identified a design team, and both projects will start the design process in the next few months.

Paseo del Río, as authorized by Council (C.F. 20-1380) will remediate and develop a portion of the site to provide early access to G2 and the LA River. California Department of Parks and Recreation (State Parks) is currently developing preliminary concepts for a complementary project on the Bowtie parcel. The whole Paseo del Río Project is planned to be approximately 8 acres (approximately 6 acres on G2 and 2 acres on Bowtie) and will require remediation followed by implementation of riverfront public access. It may include trails, native habitat, water quality improvement features, greenspaces, trail recreational opportunities, a kayak launch and landing, gathering spaces or outdoor classrooms, restorative elements, and amenities such as parking, access points, restrooms, gates, lighting, and interpretive elements. The Project will be implemented in conjunction with the MRCA, and State Parks.

The Proposition O Water Quality Project will create a habitat-rich water quality improvement wetland feature on the G2 site using diverted stormwater and will provide public access in coordination with the Paseo del Rio project. The Proposition O Water Quality Project was approved by the Proposition O Administrative Oversight Committee on February 16, 2021, and City Council on April 14, 2021, via C.F. 13-1526. The Project will be implemented in conjunction with the MRCA and State Parks.

Recently State funding of $4.75 million was secured to augment City funding for work on the existing Rio de Los Angeles State Park, located just east of Taylor Yard G2. Rio de Los Angeles State Park is a State-owned park that is jointly managed by the City Department of Recreation and Parks (RAP) and State Parks. RAP manages the active recreation parts of the park, which are heavily used by the community, and State Parks manages the passive trail areas. This new funding will augment City funds to address renovations to existing soccer fields, install new field lighting, implement parking lot improvements, and fund the construction of a new restroom near the renovated fields. This project was approved by C.F. 21-1370 and 21-0941 and will be completed through collaboration between RAP and Engineering. The total project funding identified for this work is $ 9.6 million.

To facilitate further coordination between property owners and the development of the Paseo del Río Project, the Proposition O Water Quality Project, and other common objectives, the City, State Parks, and the MRCA signed a Letter of Intent on January 10, 2020 (attached) to pursue a Memorandum of Understanding known as the 100-Acre Partnership at Taylor Yard which includes the following areas: the Rio de Los Angeles State Park, the existing 40-acre park owned by State Parks and managed cooperatively by State Parks and the City through RAP; the Bowtie parcel, also known as G1, which is owned and managed by State Parks; and the City-owned 42-acre G2 Parcel which also includes a 12.5-acre easement owned by the MRCA. The three properties combine for a total of 100 acres within the former Taylor Yard rail yard. The goal of the 100-Acre Partnership is to cooperate to create a unified world class River Park at Taylor Yards in recognition of the significant mutual public benefits to be realized by cooperating on the design, construction, financing, operation, maintenance, and management of the 100 acres. This Partnership is discussed in Chapter 14, *Next Steps* (section 14.1.2, item 1), of the IFR.

To formalize the 100-Acre Partnership and build on the Letter of Intent signed by all parties, the parties have developed a Memorandum of Understanding (MOU) that will be presented to the City Council in the near future. Since the Letter of Intent was signed, the members of the proposed 100-Acre Partnership have been working closely on all projects and planning within the 100-acre site. The cooperation and collaboration have proven to be extremely valuable.

The IFR also includes a recommendation in Chapter 14: Next Steps on page 14.282 as follows:

“3. Develop an Equity Strategy document and then implement its policy and program recommendations. The Strategy will assess potential impacts to the surrounding communities and their vulnerable populations, and it will recommend plans and actions to mitigate those impacts. Assure that the strategy includes the convening of various City departments and key community stakeholders to provide guidance on the creation of the recommendations and establish a fund that could provide financing for the solutions. Lead: Mayor’s Office”

To pursue this objective, the Mayor’s LA RiverWorks team issued a Request for Interest on May 5, 2021, and received twelve responses by the deadline of July 2, 2021. Working with other City staff and the members of the proposed 100-Acre Partnership, follow up conversations were held with five respondents, and a decision was made to pursue a working relationship with one of the respondents who was judged to be best suited to helping to formulate an equity strategy. At this moment, discussions are underway to execute a MOU with the local non-profit to lead the initial equity strategy formulation. The MOU will be presented to City Council in the near future.

RECOMENDED ALTERNATIVE FOR G2 PER THE IFR

As indicated in the Abstract of the IFR, Engineering recommends that an Island scheme that bridges the G2 and G1 sites be pursued with additional River flow modeling as the most likely long-term objective for site configuration. This configuration will also offer the habitat-rich potential of an off-channel land to water interface that could be protected during high River flows. Below is the language in the Abstract of the IFR:

“Hydrology and hydraulic modeling were performed on River flows for the site planning options under various scenarios because of the existing flood risk in this stretch of the River. Preliminary results indicate that an island in the River that maintains the existing channel geometry and elevation, and moves up into the adjacent Taylor Yard G1 parcel, also referred to as the “Bowtie” parcel (G1 parcel), to create a more direct course for the River, could enable a greater flow capacity and thereby reduce potential flood risk.

“Due in part to some of the challenges identified in this Report, BOE recommends moving forward with studying the feasibility of a project that encompasses not only the Project site, but also the G1 parcel, and Rio de Los Angeles State Park in coordination with RAP, State Parks, and the MRCA. These properties combined could create 100 acres of open space in the City, over a mile of River frontage, and provide the most effective design solution to meet the many goals of the Project."

Engineering has initiated conversations on this approach with State Parks as they begin their early conceptual planning of the G1 site, and with the MRCA.

FISCAL IMPACT STATEMENT

On February 24, 2022, Engineering presented an earlier version of this report to the Municipal Facilities Committee. The Committee requested Engineering return with an updated cost estimate for the G2 preferred design to reflect the cost in March 2022 dollars and additional escalation. The IFR has been revised as follows:

- **In Section 12.4.2: Class C Cost Estimate, the final sentence on page 12.264 and note B on Table 12-2 on page 12.265 has been added, both referencing Chapter 17.**
- **The addition of Chapter 17: Updated Cost Estimates, on pages 17.291 and 17.292, which is entirely new and includes a summary of updates to the cost estimate, Table 17-1: Class C Estimate comparing December 2019 cost to March 2022 cost, and Table 17-2: Optimized Class C Estimate.**
- **Updates to the title page, Table of Contents, and Table of Tables.**

Engineering recommends the optimized estimate presented in Table 17-2.

Approval of the recommendations in this report will instruct Engineering to report back on the multi-year capital needs to implement the complete build out of the G2 preferred design, **as estimated in Chapter 17, Table 17-2**, and potential City costs for the G1 site, and instruct the City Administrative Officer's staff to report back on a funding strategy for the full build out of the Taylor Yard G2 River Park Project and the adjacent Taylor Yard G1 shared costs.

CFJ/erg

Attachments

cc: Mary Hodge, Deputy Mayor
Councilmember Gil Cedillo, Council District 1
Councilmember Mitch O'Farrell, Council District 13
Sharon Tso, Chief Legislative Analyst
Matt Szabo, City Administrative Officer
Gary Lee Moore, City Engineer
Deborah Weintraub, Chief Deputy City Engineer

TAYLOR YARD G2

RIVER PARK PROJECT

Implementation

Feasibility Report

ENGINEERING
CITY OF LOS ANGELES

Coastal Conservancy

TAYLOR YARD G2

RIVER PARK PROJECT

Implementation

Feasibility Report

City of Los Angeles

Department of Public Works

Bureau of Engineering

October 2021

Updated March 2022

ABSTRACT

The proposed Taylor Yard G2 River Park Project (the Project) would create a 42-acre nature-focused open space adjacent to the Los Angeles River (the River), catalyzing the revitalization of the River, opening up access to the River, and providing much-needed green space in the City of Los Angeles (the City). In March 2017, the City purchased the Taylor Yard G2 parcel (the Project site), an abandoned former rail yard, and began to further the vision for this stretch of the River.

The City of Los Angeles's Bureau of Engineering (BOE) prepared this Implementation Feasibility Report (the Report) for the Project to provide a summary of technical analysis of the Project site, site planning options for the Project, and extensive community outreach completed to date. This Report is a culmination of several years of efforts by BOE to advance the Project and define the next steps to make the vision a reality.

BOE has identified three site planning options for the Project– Island, Soft Edge, and The Yards. All three site planning options reflect the goals of the community to provide a space that is focused on nature; passive recreation such as walking, hiking, and nature viewing; and the River. The Island and Soft Edge options meet the long-established goals and objectives of the Project, to reconfiguring the River's edge to recreate natural habitats, and include relocation of a corridor of high voltage power lines currently located along the River's edge. However, they both also present technical challenges that must be further studied moving forward, including the impact on River hydraulics due to modifications to the River channel geometry, cost control challenges, and remediation approaches given the scale of earthmoving activities. The Yards represents an alternative option to keep the River's edge and power lines in place to avoid impacting River hydraulics and save the cost of relocating the towers, while still creating habitat-rich open space.

Hydrology and hydraulic modeling were performed on River flows for the site planning options under various scenarios because of the existing flood risk in this stretch of the River. Preliminary results indicate that an island in the River that maintains the existing channel geometry and elevation, and moves up into the adjacent Taylor Yard G1 parcel, also referred to as the "Bowtie" parcel (G1 parcel), to create a more direct course for the River, could enable a greater flow capacity and thereby reduce potential flood risk.

Due in part to some of the challenges identified in this Report, BOE recommends moving forward with studying the feasibility of a project that encompasses not only the Project site, but also the G1 parcel, and Rio de Los Angeles State Park in coordination with City's Department of Recreation and Parks, State Parks, and the Mountains Recreation and Conservation Authority. These properties combined could create 100 acres of open space in the City, over a mile of River frontage, and provide the most effective design solution to meet the many goals of the Project.

In the short term, BOE intends to advance two early activation projects on the Project site – Paseo del Río and a water quality improvement project. For Paseo del Río, a pathway along the bank of the River would span the Project site and the G1 parcel. Programming space, kayak launch/landings, and parking would also be provided. A water quality improvement project also would be implemented on the Project site as an early activation project. BOE initiated planning activities for these two early activation projects in 2020.

Table of Contents

Figures

Tables

Appendices

Acronyms and Abbreviations

1D, 2D, 3D	one-, two-, and three-dimensional
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disability Act
ANR	State of California's Division of Agriculture and Natural Resources
ARBOR	Area with Restoration Benefits and Opportunities for Revitalization
bgs	below ground surface
BMP	best management practice
BOE	City of Los Angeles, Bureau of Engineering
CAHSR	California High Speed Rail
CAHSRA	California High Speed Rail Authority
Cal/OSHA	California Division of Occupational Safety and Health
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CDPR	California Department of Parks and Recreation
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfs	cubic feet per second
CHAP	Combined Habitat Assessment Protocol
City	City of Los Angeles
CLC	Community Leadership Committee
CLRRA	California Land Reuse and Revitalization Act
CMF	Metrolink's Central Maintenance Facility
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COC	constituents of concern
COPC	constituents of potential concern
County	Los Angeles County
County Plan	Los Angeles River Master Plan

CPUC	California Public Utilities Commission
CRAM	California Rapid Assessment Method
CUP	conditional use permit
CWA	Clean Water Act
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
Ecosystem Plan	Los Angeles River Ecosystem Restoration Integrated Feasibility Report
FEMA	Federal Emergency Management Agency
FOLAR	Friends of the Los Angeles River
ft/s	feet per second
FY	Fiscal Year
GHG	Greenhouse Gas
GIS	Geographic Information Systems
G1 parcel	Taylor Yard G1 parcel
HEC-RAS	Hydrologic Engineering Center – River Analysis System
HHRA	Human Health Risk Assessment
HU	habitat unit
ITP	incidental take permit
kV	kilovolt
kVa	kilovolt-ampere
kW	kilowatt
kWh	kilowatt-hour
LA	landscape area
LACDA	Los Angeles County Drainage Area
LACFCD	Los Angeles County Flood Control District
LACI	Los Angeles Cleantech Incubator
LADBS	Los Angeles Department of Building and Safety
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department

LAMC	Los Angeles Municipal Code
LAPD	Los Angeles Police Department
LA ROSAH	Los Angeles Regional Open Space and Affordable Housing
LARRMP	Los Angeles River Revitalization Master Plan
LARWQCB	Los Angeles Regional Water Quality Control Board
LASAN	Los Angeles Bureau of Sanitation
LAUSD	Los Angeles Unified School District
lb	pound
LBVI	least Bell's vireo
LED	light-emitting diode
LID	low impact development
LRTP	Metro's Long Range Transportation Plan
Metro	Los Angeles County Metropolitan Transportation Authority
Metrolink	Southern California Regional Rail Authority
MRCA	Mountains Recreation & Conservation Authority
NGO	non-governmental organization
NPDES	National Pollutant Discharge Elimination System
NRPA	National Recreation and Park Association
O&M	operations and maintenance
Park Needs Assessment	Countywide Comprehensive Parks and Recreation Needs Assessment
PCE	tetrachloroethene
PF	plant factor
pLAn	Sustainable City pLAn
Project	Taylor Yard G2 River Park Project
Project site	Taylor Yard G2 Parcel
RAP	Remedial Action Plan
RCB	reinforced concrete box
RCP	reinforced concrete pipe
RCRA	Resource Conservation and Recovery Act
Resilient Los Angeles	Resilient Los Angeles Plan

RI/FS	Remedial Investigation & Feasibility Study
River	Los Angeles River
ROW	right-of-way
RTP	Regional Transportation Plan
SBI	Site Biodiversity Index
SCAQMD	South Coast Air Quality Management District
SFV Area 4	San Fernando Valley Area 4
SLIDE	Simplified Landscape Irrigation Demand Estimation
SR	State Route
SRO	single-room occupancy
State Parks	California Department of Parks and Recreation
SVE	Soil Vapor Extraction
SVOCs	semi-volatile organic compounds
SWPPP	Storm Water Pollution Prevention Plan
TASC	Technical Advisory Stakeholder Committee
TCE	trichloroethene
TPH	total petroleum hydrocarbons
TPL	Trust for Public Land
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
Vector District	Greater Los Angeles County Vector Control District
VES	Vapor Extraction Systems
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WSE	water surface elevation
XLPE	Cross-linked polyethylene

EXECUTIVE SUMMARY

Transformation of the Taylor Yard G2 Parcel (the Project site) from an abandoned former rail yard into a nature-focused open space is critical for the fulfillment of long-standing regional priorities to restore habitat values and recreation along the Los Angeles River (River). The transformation of this 42-acre, River-adjacent parcel will catalyze restoration of the larger River system.

ES.1 Introduction

The Taylor Yard G2 River Park Project (the Project) is planned for the approximately 42-acre Project site in Council District 1 along the River to restore habitat value, reconnect the community to the River, protect and enhance water resources, and provide much-needed open and recreational space in the City of Los Angeles (the City). Often prioritized in prior planning documents for River revitalization, the Project site presents a significant opportunity for ecosystem restoration on a regional scale that could include reconfiguring the concrete channel walls and the River, while also providing benefits to the local community. Figure ES-1 illustrates the Project site location relative to the surrounding neighborhoods and nearby open spaces.

The City intends to remediate and activate the Project site in phases over an approximately 10-year period as implementation and funding are approved. The City's Bureau of Engineering (BOE) has completed extensive preliminary technical analyses, instituted a robust community and stakeholder engagement process, and developed three site planning options for the Project. This Implementation Feasibility Report provides a summary of the work completed to date and recommendations for moving forward. The Project options described here represent the ultimate vision for the site. Any early activation projects implemented would be designed to allow for the eventual implementation of the Project.

Figure ES-1. Taylor Yard G2 Parcel Vicinity Map

ES.2 Background

The River is 51 miles long and was once the backbone of a vast system of riparian foothill, riverine, and freshwater marsh habitat that carried seasonal rains and subterranean flows to the coastal plain and the Pacific Ocean. As recently as the mid-1800s, the River was a braided stream with a vast floodplain. Increased urban development, agricultural diversions, and transportation infrastructure shrank the floodplain and resulted in increasingly devastating floods. To reduce risk to surrounding communities, the River was engineered into a concrete channel to move stormwater as quickly as possible to the Pacific Ocean. The channelization of the River has diminished both plant and wildlife diversity and quality and the River has become disconnected from its floodplain and significant ecological zones. Restoration of the River is a long-standing regional priority and the focus of many prior planning efforts, including the City's 2007 Los Angeles River Revitalization Master Plan, the 2015 United States Army Corps of Engineers' (USACE) Los Angeles River Ecosystem Restoration Integrated Feasibility Report (Ecosystem Plan), and the 1996 Los Angeles River Master Plan by the County of Los Angeles, the last of which is currently undergoing an update anticipated to be completed in 2021. Each of these plans view the Project site as a piece of the overall opportunity area that includes the State-owned Taylor Yard G1 Parcel (G1 parcel), often referred to as the “Bowtie” parcel, directly to the north and the State-owned and City-operated Rio de Los Angeles State Park to the east.

The former Taylor Yard rail complex, from which the G2 parcel was derived, was an approximately 244-acre complex previously owned by Union Pacific Railroad and its predecessors for rail maintenance and fueling, servicing nearly all freight rail transport in and out of downtown Los Angeles until 1973, when most of the operations were moved elsewhere. Taylor Yard was divided into 10 designated parcels–Parcels A, B, C, D, E, F, G, H, I, and J. Since the early 1990s, these parcels have been developed for transportation facilities; industrial buildings; and residential, institutional, and commercial uses. Parcel G, formerly known as the “Active Yard,” was further divided into two parcels (G1 and G2), which were closed for operations in 2006. In 2009, most aboveground structures at the Project site were demolished. Some foundations, slabs, and footings remain. Subsurface contamination caused by prior rail uses is known to exist within the Project site.

The City purchased the Project site on March 1, 2017, for the purpose of implementing the Ecosystem Plan. With the Project site now in public hands, the long-envisioned revitalization of the River in this location has become possible. On April 19, 2019, the City gained a valuable partner in the revitalization effort with the sale of a 12.5-acre multi-purpose easement over the G2 parcel to the Mountains Recreation and Conservation Authority (MRCA).

ES.3 Site Constraints

Because of the historic uses of the Project site as a railroad yard and its location in an urban environment directly adjacent to the River, numerous site constraints exist. The following key constraints were considered during site planning option development.

- **Soil contamination** – Nearly a century of rail operations resulted in contaminated soil conditions, which must be remediated in collaboration with the Project site’s regulatory agency, the California Department of Toxic Substances Control (DTSC), to a level that is safe for park visitors and the surrounding community, both during construction and ongoing operation of the Project. Contaminants consist of primarily lead, total petroleum hydrocarbons, and volatile organic compounds. A comprehensive site assessment was conducted at the Project site to confirm concentrations and better define the limits of the contamination. Possible remediation approaches, pending discussion with and approval from DTSC, were identified to eliminate and mitigate any possible human health and safety risk or exposure to the noted contaminants that best achieve the Project goals.
- **High voltage electrical transmission lines** – A corridor of three high voltage electrical transmission lines serving Downtown Los Angeles owned by the Department of Water and Power (LADWP) run along the Project site’s west edge, immediately adjacent to the River. To reconfigure the concrete embankment and significantly modify the River’s edge, the lines must be relocated, which has been deemed feasible by LADWP and BOE.
- **River hydraulics and flood management** – There is known flood risk in the stretch of River where the Project site is located called the Glendale Narrows. Any modification to the River configuration and vegetation would either decrease or increase water surface elevation and the corresponding flood risk. The Project must be designed to have no negative impact to existing flood risk along the River. Preliminary hydrology and hydraulic modeling was performed for the site planning options. The results indicate that

water surface elevations could increase due to widening the cross-sectional area of the channel and increased channel roughness created by new riparian habitat, which would reduce flow velocities. Therefore, designs that maintain the current channel geometry and corresponding water surface elevation or allow for similar or increased flow velocities in another way may be the most feasible. See Section ES.8 for further discussion on widening the floodplain.

- **Surrounding property uses** – Division of the original former Taylor Yard rail complex into 10 unique parcels resulted in a variety of uses in the area, some of which complement the development of a habitat-focused open space and others that pose some challenges (i.e., adjacent active rail tracks).
- **Agencies with jurisdiction of the River** - Numerous agencies are anticipated to have jurisdiction or oversight responsibilities for modifications to the River channel and water flow near the Project.
- **Existing and potential easements** – Several utility and rail easements on the Project site will require access to the site by third parties and present design constraints, particularly related to excavation.
- **Site ingress/egress** – The Project site can currently only be accessed publicly via a private access roadway from San Fernando Road. Secondary access from the G1 parcel is currently only for authorized personnel. Additional ingress/egress points will need to be identified to improve circulation and provide adequate emergency access.
- **Bridge laydown area** – The City's Taylor Yard Bicycle and Pedestrian Bridge Project is using an approximately 3-acre laydown area on the south end of the Project site to support construction activities between 2019 and 2021.
- **Potential future site requirements** – Future proposed projects along the existing railroad tracks in this vicinity by the California High Speed Rail Authority, the Southern California Regional Rail Authority (commonly referred to as Metrolink), and the Los Angeles County Metropolitan Transportation Authority (Metro) may require certain set-backs or other accommodations.
- **Geotechnical and groundwater conditions** – The subsurface conditions of the Project site require specific geotechnical engineering considerations.
- **Utilities** – Water, sewer, and electric utilities will need to be located, sized, and brought to the Project site.

ES.4 Community and Stakeholder Engagement

Because of its potential to influence both the local community and the Los Angeles region, the development of site planning options for the Project included a robust community and stakeholder engagement plan. BOE aimed to achieve a high level of engagement by implementing a strategy to inform, educate, and engage members of the community early and often. A wide range of techniques was employed, from traditional community meetings to informal one-on-one or small group discussions. The formation of two Project Advisory Stakeholder Committees was an asset to the Project team by facilitating discussions with and among key engaged stakeholders. Digital outreach included the development of a Project website and regular communications by email to a growing stakeholder database. As a first for BOE, the team partnered with non-government organizations (NGOs) Mujeres de la Tierra and Friends of the Los Angeles River (FOLAR) to learn and benefit from their intimate knowledge of the local and River communities.

Between 2017 and 2019, five large community meetings, five Advisory Stakeholder Committee meetings, 20 updates to local Neighborhood Councils, and nine site tours were held for the Project. Additionally, a community survey resulting in over 1,300 responses, canvassing, 30 Project emails, events hosted in partnership with the NGO team members, and over 20 other small focused meetings and Project communications have been held to create a dialogue among community leaders and engaging interested stakeholders "where they are" in the community.

Key findings of the community and stakeholder engagement efforts on the Project are as follows:

- **Nature** – There is a high interest in natural components, such as open space, trails, and habitat.
- **Recreation** – Outdoor recreation including walking, hiking, and cycling ranks high.
- **River** – Stakeholders have a familiarity with the River, and a high interest in River interactions and education.

The desire for a safe environment, facilities for a full range of park users, and high-quality, affordable concessions and activities were also mentioned during numerous community meetings and discussions. The feedback gave the Project team clear insight into community expectations and desires for features, activities, and site uses, which helped guide site planning option development.

ES.5 Site Planning Options

The Project would remediate soil contaminants to allow for safe access and use of the site, create habitat-focused open space, and provide facilities and amenities identified through community and stakeholder engagement. Based on the goals and objectives of the Project, three site planning options were developed called Island, Soft Edge, and The Yards, as summarized below.

Island

Creates an island to separate River flows and mimic split flow channels and provides a significant amount of new riparian and upland habitat, per the Ecosystem Plan objectives.

Soft Edge

Creates a soft-edged River by cutting back the east bank and replacing it with a significant amount of new riparian and upland habitat, per the Ecosystem Plan objectives. The existing River channel would be modified to create a series of terraces.

The Yards

Maintains the Riverbank in its current configuration with the park developed and the existing LADWP power lines remaining in-place along the River, providing riparian and upland habitat per the Ecosystem Plan objectives within the site.

The site planning options are the result of an iterative and comprehensive planning option development process. As planning options, they provide a broad outline of the functions and form of the Project and conceptualize how design elements might interact in different ways. The three options vary in the River's edge condition, topography, and the placement of programmable spaces. They each analyze circulation including connections to Rio de Los Angeles State Park, Elysian Valley, and the G1 parcel; incorporate a stormwater bioretention best management practices (BMP) feature; and include the same or very similar site features. Each option also shows approximately 4.5 acres of building footprint of facilities for community-driven programming, including a park office and ranger station, kayak launch and small café, recreational camping and restroom, youth enrichment center, café, research building, museum/cultural center, public facility, restaurant, and kayak landing with another small café and information kiosk. The buildings incorporate sustainable and nature-friendly strategies such as green roofs, habitat towers, and native landscaping. The physical models of all three site planning options are shown in Figure ES-6 and Figure ES-7.

ES.5.1 Island

The Island site planning option (Figure ES-2) uses the creation of an island to provide a unique moment in the River where the public can experience the River up close. In this option, the existing power lines and towers are relocated to an alignment on the east side of the Project site to allow for the reshaping of the site's western edge. The River channel is then re-formed to create an island that separates River flows, mimics fluvial geomorphic processes of deposition and erosion, and provides multiple layers of riparian and upland habitat per the objectives of the Ecosystem Plan. From the island, the site moves eastwards as a series of ecologies that allow for the viewing of habitat in a more natural setting, programmed areas, passive recreation, and habitat.

Following the development of the Island site planning option, an additional round of hydrology and hydraulic modeling was performed on River flows with the island in a modified location from the original option shown in Figure ES-2, moving it within the Project site and aligning it with the existing channel boundaries and elevation. Under conditions with minimal vegetation, this modification resulted in an increase in River flow velocities, enabling a greater flow capacity and thereby reducing potential flood risk. A site plan of the modified Island site planning option is provided in Figure ES-3. Additionally, this modeling indicates that further benefits to water velocities may be derived by moving the location of the island farther upstream, into the G1 parcel. This is discussed further in Section ES.8, Section 7.2.2, and Chapter 14, *Next Steps*.

Figure ES-2. Site Planning Option – Island

Figure ES-3. Site Planning Option – Modified Island

ES.5.2 Soft Edge

The Soft Edge site planning option (Figure ES-4) envisions a soft-edged River on the east bank with a significant amount of new riparian and upland habitat per the Ecosystem Plan objectives. The existing concrete trapezoidal channel would be modified to a create a series of terraces that manages both dry- and wet-weather storm runoff from the site and adjacent neighborhoods through a series of wet meadows and ephemeral wetlands. By creating an undulated edge, the River's natural processes (erosion, sedimentation, meandering water) are mimicked and provide visitors with a representation of a more naturalized River's edge. The interior of the site consists of four main components: a plaza, fields, and a hill, which are all linked by an esplanade and would give visitors a layered experience of the site's various ecologies. The existing power lines and towers on the east Riverbank would be relocated to an alignment on the east side of the Project site and incorporated into a native nursery.

Figure ES-4. Site Planning Option – Soft Edge

ES.5.3 The Yards

The Yards site planning option (Figure ES-5) maintains the existing concrete trapezoidal River channel and power lines and towers while creating an extensive path network, cantilevered moments that extend over the channel, and programmed area throughout the site. Stormwater and River water would be diverted to a large depression (referred to as a bioretention Best Management Practice) that cleans the water through a constructed wetland system before being directed back into the River. The bioretention Best Management Practice would bring a habitat-rich wetland fed in part by River flows into the center of the site, creating valuable a riparian zone without major alterations to the River's edge. Cut-and-fill would be managed on-site, with excavation from the bioretention Best Management Practice creating undulating hills and varied topography. An open meadow area would allow for flexible uses and picnicking, while an esplanade along the River's edge would allow visitors unique views of the River and surrounding valley. An interactive art piece and pavilion would occupy the former site of the turntable as the central node of the site.

Figure ES-5. Site Planning Option – The Yards

Figure ES-6. Physical Models of the Three Site Planning Options (1 of 2)

Figure ES-7. Physical Models of the Three Site Planning Options (2 of 2)

ES.6 Comparison of Site Planning Options

The three site planning options (see Section 6.2 for renderings) were assessed to determine how effectively each met the Project goals and objectives:

- created a safe park user experience that provides access to nature,
- habitat-friendly recreation, restored natural resources,
- remediated contaminated soil,
- reflected the site's history,
- advanced revitalization of the River consistent with existing plans,
- provided water quality improvement and maintained or improved flood management,
- created connectivity,
- integrated community and stakeholder needs,
- advanced sustainable and resilient principles,
- created a funding and governance strategy that balances revenue generation and community needs, and
- created a Project that serves as an icon.

Six evaluation categories were established to assess the design alternatives against the Project's established goals:

1. Habitat restoration per the Ecosystem Plan
2. Park user experience and public access
3. Potential economic return
4. Cost
5. Consistency with public input
6. Degree of technical feasibility

Each category was weighted equally to develop an overall score for each site planning option. In evaluating the options against each other, the Island and Soft Edge options meet the long-established goals and objectives of the Project, reconfiguring the River's edge to recreate natural habitats. However, they also present technical challenges that must be further studied moving forward, including the impact on River hydraulics due to modifications to the River channel geometry and efficient cost control given the scale of earthmoving activities. The Yards represents an alternative option to keep the River's edge and power lines in place to avoid impacting River hydraulics and save the cost of relocating the towers, while still creating habitat-rich open space. Because the Island and Soft Edge options performed similarly in the evaluations, a preferred site planning option cannot be determined at this time. The viability of the future design will also depend upon funding availability and contributions of potential strategic partners.

ES.7 Key Findings and Recommendations

The technical studies, community and stakeholder engagement, and thoughtful and creative conceptual design thinking behind the three site planning options has provided invaluable insight into the Project site and the River. A multi-beneficial habitat-focused open space that connects and engages the surrounding communities and stands as an example of a world-class transformation is required to call the Project successful. Development of the three site planning options has resulted in eight key findings that must be considered as implementation of the Project continues.

Safe, Cost-Effective, Site Remediation

The site assessments conducted as part of this effort confirmed and better defined the limits of the contamination at the Project site. The Project must be designed, constructed, and operated in a manner that protects site users, the surrounding community, and ecological receptors from any negative impacts from contaminants. Future development of a Response Plan will incorporate the most feasible, safe, and prudent approach to remediation, in coordination with and subject to DTSC approval and supervision.

Power Lines and Towers

For two of the three site planning options, the LADWP power lines and towers currently running along the River on the western edge of the Project site would need to be relocated to reconfigure the concrete Riverbank and create riparian habitat. BOE and LADWP have determined that relocating the towers farther east into the site is feasible. Further coordination to relocate the towers will be needed if the Riverbank is changed for the Island and Soft Edge options. The Yards will not require relocation.

River Hydraulics and Flood Control

There is existing flood risk in the Glendale Narrows. River flow conditions make widening the channel and introducing vegetation a potential risk to flood control. The preliminary modeling conducted by the Project team indicates that maintaining the existing channel geometry, careful selection of channel stabilization strategies, and increased maintenance of the River channel will maintain, and could improve, flood management in this area.

However, the River channel in the Glendale Narrows is not designed or maintained to withstand the present day "100-year flood" or flood having a one percent chance of occurrence in any given year. Additionally, any project implemented at the Project site would not be able to remove adjacent neighborhoods from the floodplain. As part of the 2020 LA River Master Plan Update effort, the County conducted a review of prior hydrology and hydraulics analyses and explored potential solutions, both new and previously recommended solutions, to alleviate flood capacity concerns. Further City and County coordination with USACE, who currently maintains and operates this portion of the River, will be required to fully understand the most feasible solutions and optimal channel configurations to allow for habitat restoration and improved flood capacity.

Studies indicate that beginning channel modifications farther upstream in the G1 parcel could create efficiencies in the flow of the River that could not be achieved in the Project site alone. A 100-acre project, which would include G1 and Rio de Los Angeles State Park, will allow for further and more in-depth evaluations of alternative scenarios.

Access and Connections to Surrounding Areas

Improving safe site access and establishing connections between neighborhoods is a priority for all stakeholders. Coordinating access through the G1 parcel, across the railroad tracks to Rio de Los Angeles State Park and Sonia Sotomayor Center for Arts and Sciences, and across the River to Elysian Valley will create functional unity. Establishing a coordinated maintenance and patrol strategy among those properties will also ensure a clean and safe environment for park users.

Rich Riverine and Upland Urban Habitat

The Project will provide many acres of valuable habitat while including a wide variety of community-driven uses. A site-specific urban ecology approach has been developed for the Project that prioritizes habitat quality, habitat variety, edge effects, and offsite connectivity based on the City’s recent efforts toward developing a customized biodiversity index for Los Angeles. Clustering human activities, further increasing habitat quality and variety, mitigating edge effects, and reducing hardscape will maximize performance. Figure ES-8. Habitat – Island Section Perspective illustrates possible habitat for a selection of targeted taxa in the Island site planning option. Partnering with the California Department of Parks and Recreation (State Parks) to maximize habitat at the G1 parcel and utilizing the partnership with MRCA to prioritize natural space within its easement will also add to the habitat value within the context of an urban multi-use space that considers urban habitat goals.

Rich Passive Recreational Opportunities for Youth, Families, and Seniors

A key outcome of the community and stakeholder engagement process is the need for after-school, regular youth enrichment opportunities, affordable open space activities for families, and facilities for local seniors. For the Project to provide these functions, along with a rich habitat environment, coordination with the G1 parcel and Rio de Los Angeles State Park will provide greater acreage to ensure the Project serves both the local community and the region.

Offset Costs with Cultural and Social Facilities

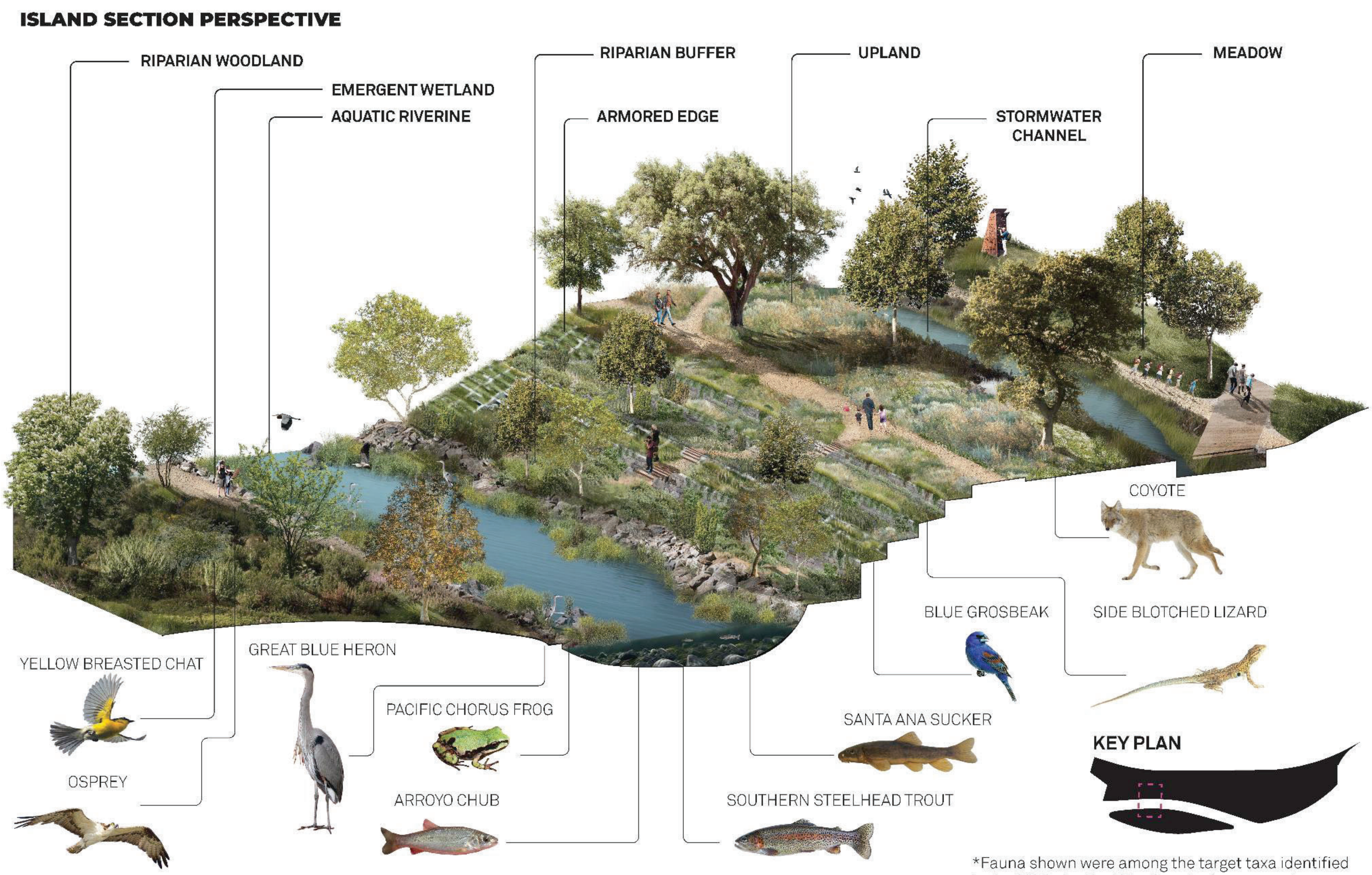
To ensure a well-maintained and safe environment for park users, established revenue streams to offset capital and operations and maintenance costs is crucial for long-term success. A financial strategy incorporating appropriate partnerships will be developed to ensure continued Project success.

Site Development for Early Public Use

The Project site must be remediated and developed in a series of projects as funding and approvals are secured and follow a typical process that has been used in other regional large brownfield open space projects.

BOE recommends moving forward with studying the feasibility of a project that encompasses not only the entire Project site, but also the G1 parcel and Rio de Los Angeles State Park in coordination with City's Department of Recreation and Parks, State Parks, and MRCA. These properties combined could create 100 acres of open space in the City (Figure ES-9), over a mile of River frontage, and provide the most effective design solution to address key findings of this site planning option development process.

Figure ES-8. Habitat – Island Section Perspective



*Fauna shown were among the target taxa identified in the G2 Taylor Yard Biodiversity Assessment.

Figure ES-9. 100-Acres of Open Space – Taylor Yard G1 and G2 Parcels and Rio de Los Angeles State Park

ES.8 River Floodplain Widening at Taylor Yard G2

Widening the River channel at the Project site has been suggested as a potential approach to create a more natural channel, provide more riparian habitat, and add a water storage area for flood mitigation. The option has been considered by many agencies, including the City, the USACE, the California Coastal Conservancy, and the County of Los Angeles Public Works. Investigations of new River configurations at the Project site initially evaluated floodplain widening and restoration as discussed in the Ecosystem Plan. The initial analysis showed that widening the River at this single location was problematic for a number of reasons. The preliminary investigation also showed that excavation of the site for water storage provided limited benefits for large floods.

The first concern with widening the river is that the current River design upstream and downstream of the site requires high velocities to move the design flows through the River system. Widening the River at the Project site as diagrammed in the USACE Ecosystem Plan slows the flows in this River section. The water depth increases by a predicted 3.59 feet above the water surface elevation of the current channel configuration during a 100-year storm event. The higher water level increases the potential for flooding and puts additional households and businesses in Elysian Valley at risk.

Second, the existing design flow capacity in the River adjacent to the Project site is significantly less than the flow generated from a 100-year flood event. A 1992 analysis by the USACE showed the River channel capacity meets the 57-year flood level with the design cross-sections. The 2016 study by the USACE showed that this capacity has been further reduced by sediment deposition and plant growth in the River at this location. The existing capacity does not include climate change considerations and may underestimate future rainfall volumes and intensities. The USACE study includes an increased flow of 93,800 cubic feet per second, which reduces the channel capacity to an 11-year capacity. The growth of vegetation and deposition of sediment create a roughened channel with a reduced flow area in the project reach. These changes to the design cross-section impact flow capacity more than can be offset with channel widening.

The third concern is related to flood control. The Project discussion focused on reducing storm flows to the River in a major rain event, increasing flow capacity, and increasing large water storage basins to provide better flood protection regionally. However, the flows at this location are too large for this project to make any impact on flood flow reduction through capture and storage. Flow reduction into the River regionally requires systematic retrofitting of the watershed using the principles of Low Impact Development. It will also require large scale distributed water storage reservoirs. These measures will increase water infiltration where feasible into the ground, decrease runoff to the River, and change the timing of peak flow rates into the River. These changes have the potential to significantly reduce peak flow depths throughout the river system. Restoring River flow capacity requires removing invasive vegetation and sediment from the River through this section. Increasing the flow capacity in this region requires adding more channel width or a bypass pipe and ensuring that downstream channel flow capacity is not exceeded. Water storage capacity within the Project site's footprint is not large enough to impact flows in a design storm event. Using the entire 40-acre site for water storage and assuming a 20-foot depth results in 800 acre-feet of stormwater storage. Assuming the River has a storm event like 2019 with the 11,000 cubic feet per second recorded as inflow to the Sepulveda Dam, the site would fill up in under 60 minutes. The current estimate for the 100-year design flow is 93,800 cubic feet per second. This flow rate would fill the site within 7 minutes. Excavation below the current riverbed elevation is not feasible due to high groundwater at the site. The high cost of excavating the Project site is cost prohibitive for these minimal gains in storage and flood reduction.

Fourth, the City's analyses concluded that River width increases need to take place along extended distances to function well for stormwater flows. Widening the channel only at the Project site and then returning flow to the narrower downstream channel increases flood risk. The analysis showed that depth must increase at the downstream end of the project to create the energy to replace the flow momentum that is lost in a widened section and get flows moving back into the narrower channel downstream of the project area.

The City's preliminary analysis for this study support other studies that indicate that the following steps are potential solutions for the 100-year storm event: increase perviousness in the entire watershed basin to infiltrate more stormwater and reduce runoff directed to the River; remove invasive plants and sediment in the River to increase the flow capacity; and build a large bypass tunnel around the Glendale Narrows.

Significant River widening at the Project site or using the Project site for stormwater storage were not pursued as options in this report based on the preliminary studies conducted by the City, which showed an increased risk to the surrounding neighborhoods with this alternative.

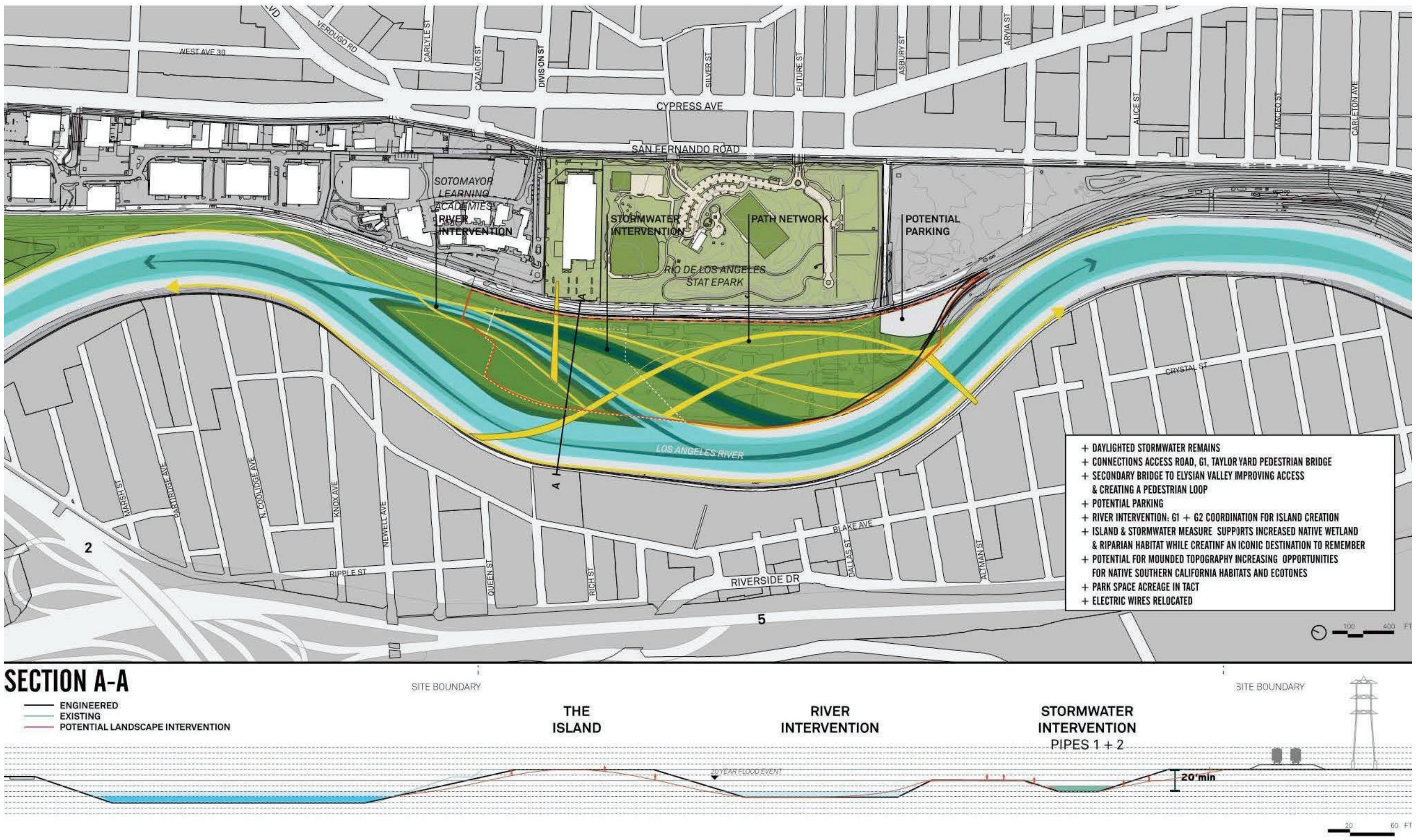
ES.9 Implementation Next Steps

Phasing of Project implementation is broken into near-term (1-3 years) and long-term next steps. This Report represents a summary of the opportunities and challenges of the 42-acre Project site. To take advantage of 100-acres of planning, the near-term next step is to execute a Memorandum of Understanding among the City, MRCA, and State Parks to jointly plan, implement, and operate projects within the 100-acre area. Figure ES-10 illustrates an initial potential concept for the 100-acre area to initiate this joint planning process.

Additional near-term priorities include continuing community and stakeholder engagement, developing an equitable development strategy, starting remediation on portions of the Project site, completing conceptual design for the G1 parcel, implementing athletic field improvements at Rio de Los Angeles State Park (pending funding), and releasing a Request for Interest/Request for Proposals to engage design professionals to deliver the 100-acre Project. Two early activation projects are envisioned, Paseo del Rio and a water quality improvement project. For Paseo del Rio, a pathway along the bank of the River would span the Project site, including the MRCA easement, and extend across the G1 parcel. Programming space, kayak launch/landings, and parking would also be provided. The water quality improvement project would be implemented primarily within the MRCA easement as an early activation project. This project could be integrated into the long-term vision for the Project because some or all of the bioretention Best Management Practice would remain.

Long-term next steps for the Project include preparing a community plan update consistent with the equitable development strategy, pursuing funding to ensure long-term Project implementation, and pursuing a "split delivery" approach with USACE to recognize the City as the delivery lead for this stretch of the River, while retaining as much federal funding as possible.

Figure ES-10. 100-Acre Initial Concept for Study



1 INTRODUCTION

The City of Los Angeles (the City) purchased the approximately 42-acre Taylor Yard G2 parcel (the Project site) along the Los Angeles River (the River) to restore habitat value, reconnect the community to the River, protect and enhance water resources, and provide much-needed open and recreational space in the City. Often prioritized in prior planning documents for River revitalization, the Project site presents a significant opportunity for ecosystem restoration on a regional scale that could include altering the concrete channel walls while providing benefits to the local community.

The Project site is in the Northeast Los Angeles neighborhoods of Cypress Park and Glassell Park, surrounded by the neighborhoods of Atwater Village, Elysian Valley, and Lincoln Heights. It is bounded by the River to the west, Rio de Los Angeles State Park to the east, the State-owned Taylor Yard G1 Bowtie parcel (G1 parcel) to the north, and the active Metrolink Central Maintenance Facility (CMF) to the south. Figure 1-1 illustrates the Project site's location relative to the surrounding neighborhoods and properties. When combined with Rio de Los Angeles State Park and the G1 parcel, the Project would contribute to 100 acres of open space with over a mile of river frontage along the River (Figure 1-2).

The Project site is located within City Council District 1, currently represented by Councilmember Gilbert Cedillo; Los Angeles County Supervisor District 1, currently represented by Supervisor Hilda Solis; California State Assembly District 51, currently represented by Assemblymember Wendy Carrillo; California State Senate District 24, currently represented by Senator Maria Elena Durazo; and U.S. Congress District 28, currently represented by Representative Adam Schiff.

The City intends to remediate and activate the Project site in phases over an approximately 10-year period. This Implementation Feasibility Report focuses on the ultimate vision of the Project site called the Taylor Yard G2 River Park Project (the Project). Any earlier phases would be designed to not preclude the eventual implementation of the Project and follow their own community planning and environmental review process. The City's Bureau of Engineering (BOE) began planning and conceptual design efforts through a Proposition 1 grant from the State Coastal Conservancy shortly following the City's purchase of the Project site in 2017. This report provides a summary of the work completed to date and recommendations for moving forward.

BOE developed three alternative site planning options for the Project and has completed an extensive preliminary technical analysis of a variety of concept components to better understand Project feasibility. A robust community and stakeholder engagement process was also integrated into concept development to determine how the Project can best benefit the community and the region.

Figure 1-1. Taylor Yard G2 Parcel Vicinity Map

Figure 1-2. Taylor Yard G1 and G2 Parcels and Rio de Los Angeles State Park

1.1 Site Rail History

The former Taylor Yard rail complex, from which the G2 parcel was derived, was an approximately 244-acre complex previously owned by Union Pacific Railroad (UPRR) and its predecessors for rail maintenance and fueling, servicing nearly all freight rail transport in and out of downtown Los Angeles until 1973, when most of the operations were moved elsewhere. Taylor Yard was divided into 10 designated parcels–Parcels A, B, C, D, E, F, G, H, I, and J. Since the early 1990s, these parcels have been developed for transportation facilities; industrial buildings; and residential, institutional, and commercial uses as shown in Figure 1-3. Parcel G, formerly known as the "Active Yard," was further divided into two parcels (G1 and G2), which were closed for operations in 2006. In 2009, most aboveground structures were demolished. Some foundations, slabs, and footings remain. Subsurface contamination caused by prior rail uses is known to exist within the Project site.

During its time as a rail complex, Taylor Yard employed many residents of the surrounding neighborhoods, forming a strong relationship between the Project site and the community. The photographs in Figure 1-4 show some of the people and historic rail operations at the Project site.

Figure 1-3. Parcels Derived from the Former Taylor Yard Rail Complex

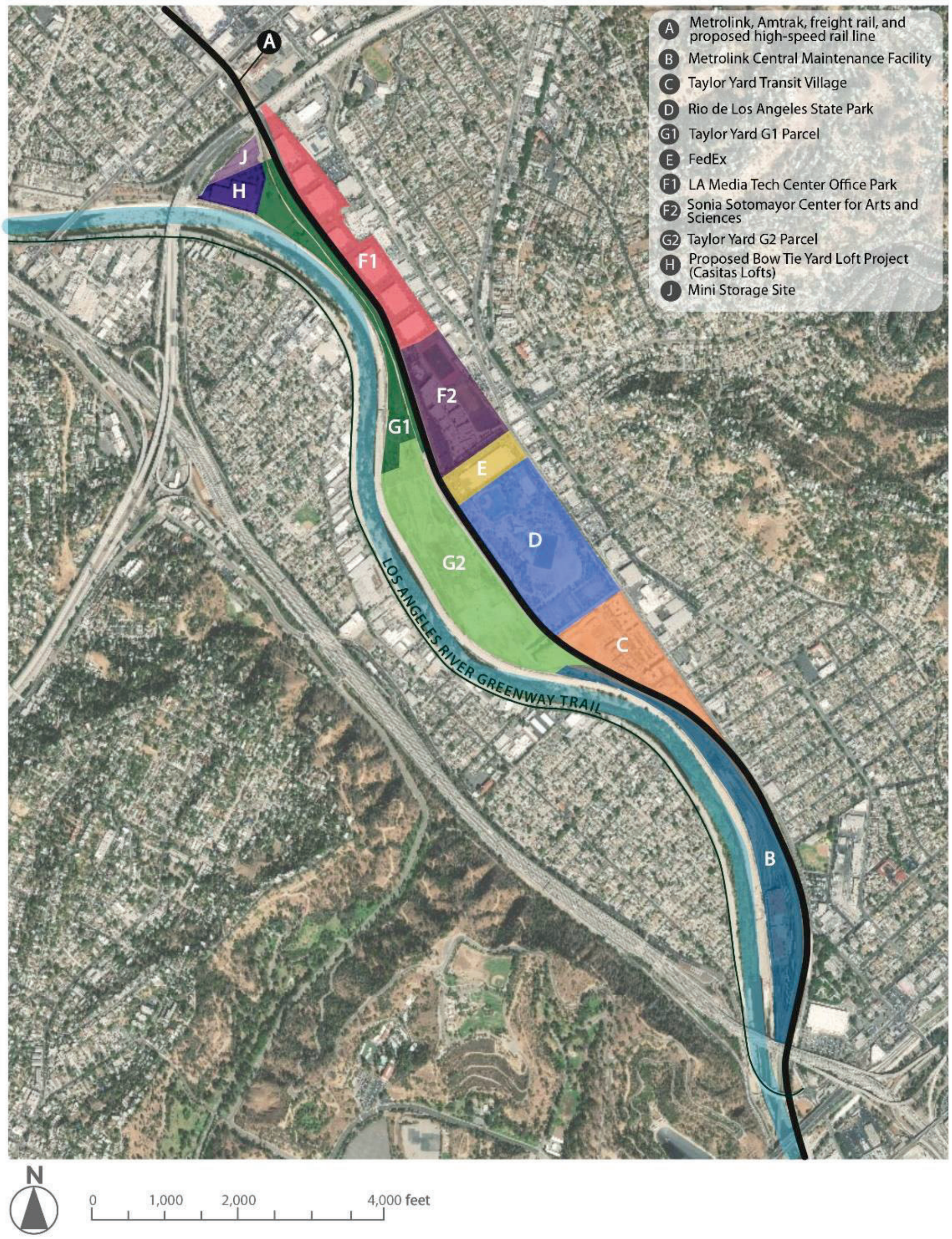


Figure 1-4. Historic Photographs of Rail Operations at the G2 Parcel

Elevated Stock Switches at Taylor Yard

Circa 1950

Taylor Yard Round House Day Shift

1949

Taylor Yard Turntable

Circa 1950

1.2 Project Background

The 51-mile-long River was once the backbone of a vast system of riparian foothill, riverine, and freshwater marsh habitat that carried seasonal rains and subterranean flows to the coastal plain and the Pacific Ocean. Over time, increased urban development, flooding, and channelization have degraded the River ecosystem as segments have been encased in concrete banks and covered with a mostly concrete bed. As a result, plant and wildlife diversity and quality have diminished, and the River has become disconnected from its floodplain and significant ecological zones. Restoration of the River is a long-standing regional priority.

In 1996, Los Angeles County (the County) finalized its Los Angeles River Master Plan (County Plan) which discussed Taylor Yard, prior to the subdivision into parcels, and its potential for improvement. Taylor Yard is located within Reach 4 of the County Plan focused on the Glendale Narrows, the stretch of river from about Griffith Park to downtown Los Angeles. The County Plan was organized around six issues: aesthetics, economic development, environmental quality, flood management and water conservation, jurisdiction and public involvement, and recreation. The economic development and environmental quality sections of the County Plan make direct references to Taylor Yard as a “restoration project previously identified as high potential.” Currently, the County is preparing an update to its Los Angeles River Master Plan anticipated to be complete in 2021. The current update effort identifies the Project site as a large-scale planned project that will contribute to the improved quality of parkland, river ecosystem, and river access for adjacent neighborhoods, meeting several of the identified needs along this stretch of River (County of Los Angeles 2019a).

In 2002, using funds from Proposition 204, the State Coastal Conservancy commissioned and completed a study to assess the feasibility of project alternatives at the Project site that included habitat restoration, flood storage improvement, and recreation enhancement.

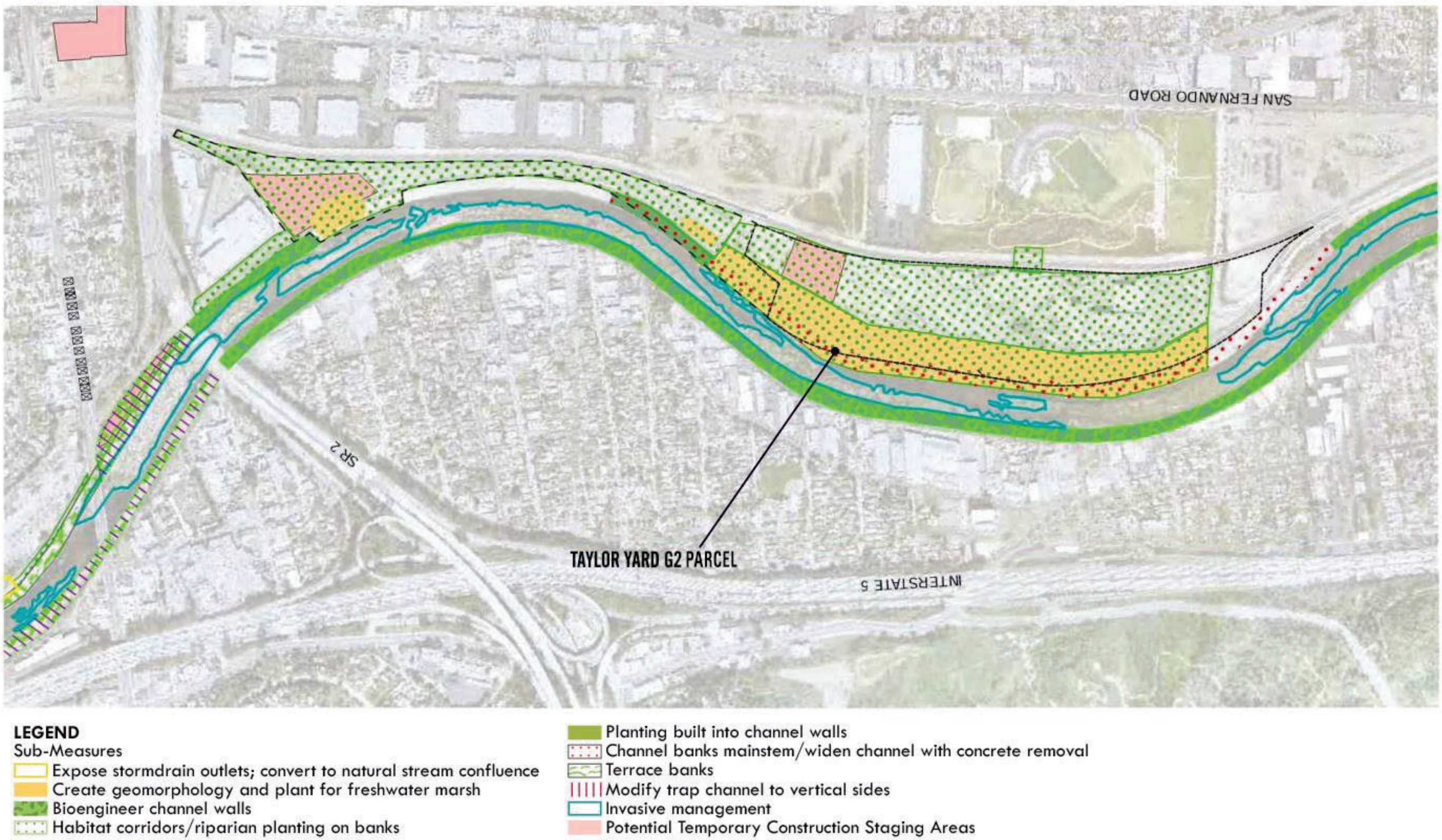
In 2007, the Los Angeles City Council adopted the Los Angeles River Revitalization Master Plan (LARRMP), which established a 25- to 50-year vision for transforming the 32-mile-long stretch of the River within the City limits. The Project is No. 165 of more than 200 projects outlined in the LARRMP. Located in Reach 7 of the LARRMP, the Project site is one of five Opportunity Areas identified for major revitalization projects that could include restoration of riparian habitat, naturalization of the river channel, trails, parks, and other recreational facilities.

Echoing the LARRMP, the 2015 United States Army Corps of Engineers’ (USACE) Los Angeles River Ecosystem Restoration Integrated Feasibility Report (Ecosystem Plan), also known as the ARBOR or “Area with Restoration Benefits and Opportunities for Revitalization” Study, evaluated the restoration of 11 miles of the River within the Glendale Narrows. Restoration efforts would reestablish historic riparian strand, freshwater marsh, and aquatic habitat communities, reconnecting the River to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo Mountains while maintaining existing levels of flood risk management. The study evaluated the No Action Alternative and five action alternatives, Alternative 10, 13, 13v, 16, and 20, and the Recommended Plan is Alternative 20. A key element of the Ecosystem Plan at Taylor Yard calls for removing the concrete channel embankments to widen the River approximately 300 feet into the Project site and create freshwater marsh habitat. Alternative 20 also included opportunities for passive recreation that are compatible with the restored environment (USACE 2015). Figure 1-5 is the concept-level diagram for habitat restoration at Taylor Yard, located within Reach 6 of the Ecosystem Plan, which identifies the Project site as a key location to achieve its goals.

In addition to the plans specifically mentioned here, BOE reviewed numerous other studies and planning efforts as part of the development of the Project planning options. The review revealed a striking consistency among planning efforts, focusing primarily around ecosystem, open space, and compatible recreation, and provided clear guidance for site planning option development.

Taking a major step in advancing decades of work on the River, the City Council instructed staff to negotiate with UPRR for the acquisition of the G2 parcel on December 10, 2013. These negotiations resulted in a successful purchase on March 1, 2017. With the Project site now in public hands, the long-envisioned revitalization of the River in this location now is possible. On April 19, 2019, the City gained a valuable partner in the revitalization effort with the sale of a 12.5-acre multi-purpose easement over the G2 parcel to the Mountains Recreation and Conservation Authority (MRCA), a local public agency dedicated to the preservation and management of local open space and parkland, wildlife habitat, watershed lands, and trails and to ensuring public access to public parkland. The MRCA is a joint powers authority between the Santa Monica Mountains Conservancy, the Conejo Recreation and Park District, and the Rancho Simi Recreation and Park District. The State's Wildlife Conservation Board granted funds for the easement purchase to the MRCA.

Figure 1-5. Habitat Restoration in Reach 6 of the USACE Ecosystem Plan



1.3 Project Need

As the first project of its size and complexity to be implemented along the River, the Project has the potential to catalyze River revitalization along the entire 51 miles. The need for this Project has been clearly established through the review of decades of completed studies and includes restoring the River to a more natural state while managing flood risk, remediation, and increasing park and open space to create a resilient City and ecosystem. The County Plan explains that “the state of the river today reflects land use and flood protection decisions made in the past which placed a low priority on maintaining the river’s natural environment” (County of Los Angeles 1996).

Restoration of ecology and hydrology and the creation of new water quality and open space features are the two key needs identified in the LARRMP. The LARRMP discusses the restoration of the River’s ecology and hydrology through re-creation of a contiguous riparian habitat corridor within the channel, and through removal of the concrete walls where feasible. This would involve restoring riparian vegetation to support birds and mammals, and ideally, developing fish passages, fish ladders, and riffle pools to allow for restoration of steelhead trout and other native fish habitat. However, if the River were completely restored to a naturalized condition throughout its entire length, it would be very difficult to achieve flood control requirements and maintain current urban development. The LARRMP is therefore clear in stating that, in addition to restoring ecological function, revitalizing the River includes storing peak flows to reduce flow velocities in the channel to facilitate ecological restoration and access.

The LARRMP additionally discusses the development of multi-benefit green spaces along the River channel that simultaneously provide open space and water quality benefits. In the short-term, channel walls can be modified to provide green landscaped terraces for wildlife habitat, water quality treatment, and increased public enjoyment. However, to accomplish longer term improvement goals requires an expansion of channel capacity and reduction in flow velocities. The LARRMP suggests that this can be achieved through a combination of flood storage outside the channel, underground flow diversions, and land acquisition including the purchase of private property to allow for channel widening (City of Los Angeles 2007).

An enhanced focus on biodiversity is among the goals of the City’s 2019 Green New Deal Sustainability pLAn (LA’s Green New Deal). LA’s Green New Deal seeks to achieve and maintain no net-loss of native biodiversity by 2035. It also seeks to set biodiversity targets and pilot its first wildlife corridor by 2021, including updating watershed protection policies with enhanced stream protection. By 2025, the City plans to develop a strategy for protection and enhancement of natural biodiversity, including the preservation and expansion of connectivity and access to natural habitats and an increase in the number of native and pollinator-friendly gardens and natural areas in public spaces (City of Los Angeles 2019). The Project has the potential to provide regionally significant riparian and upland habitat directly connected to the River. Significant additions of habitat, through projects such as this one, will be necessary to offset losses elsewhere, thus supporting the City’s no-net-loss objectives.

The Project site is known to be contaminated and is designated as a brownfield, defined by the United States Environmental Protection Agency (USEPA) as a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. The site is under the regulatory authority of the Department of Toxic Substances Control (DTSC), the State agency charged with the protection of California’s people and environment by restoring contaminated resources, enforcing hazardous waste laws, and encouraging a reduction in hazardous waste and the manufacturing of safer products.

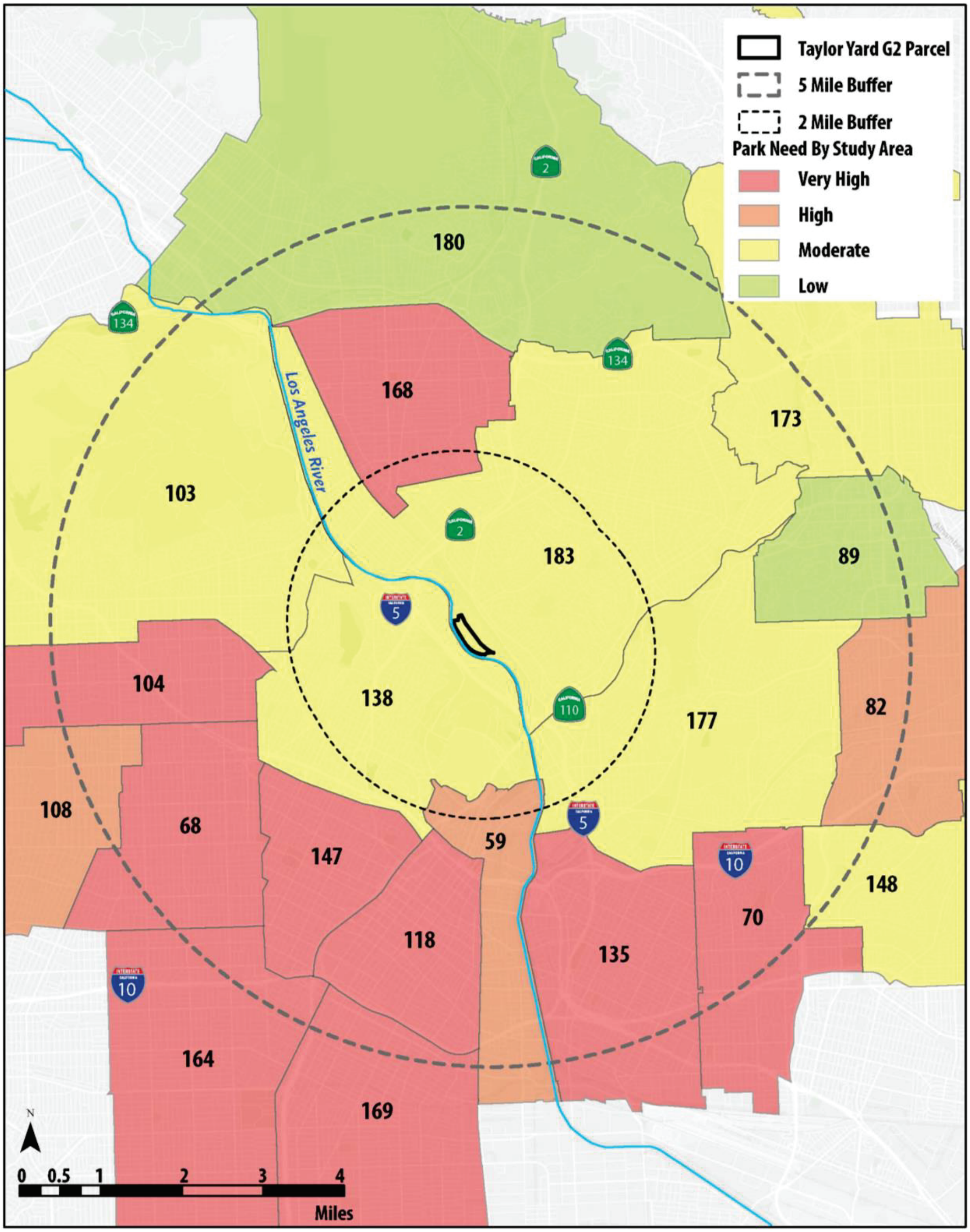
Prior to the City's ownership, UPRR completed a Remedial Action Plan as mandated by a 1990 Enforceable Agreement with DTSC under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Remedial Action Plan sets forth the plan to remediate the Project site to industrial use standards and is the current DTSC-approved plan for remediation. In early 2018, the City entered into a voluntary cleanup agreement with DTSC under the California Land Reuse and Revitalization Act (CLRRA) and completed studies to explore the feasibility of alternative land uses. To proceed with development of the Project site that incorporates wildlife habitat, recreational open space, and water quality improvement, the City must prepare a revised cleanup plan, called a Response Plan under CLRRA, for DTSC review and approval. The Response Plan will ensure appropriate cleanup targets are met for the planned land uses. Chapter 3, *Site Contaminants*, of this report, provides further discussion on site contamination.

At the time the 1996 County Plan was published, the City had the lowest percentage of park space among all United States urban centers. In May 2016, the County completed the Countywide Comprehensive Parks and Recreation Needs Assessment (Park Needs Assessment) analyzing where Los Angeles County residents lacked access to parks and open space. This effort documented existing parks and recreation facilities in cities and unincorporated communities and used the data to determine the scope, scale, and location of park needs in Los Angeles County. Figure 1-6 shows the resulting need for improved park access by study areas within two and five miles of the Project site. The Project site is generally surrounded by communities that are in moderate, high, or very high need of open space and would benefit from the development of additional open space (County of Los Angeles 2016). The County is currently preparing an update to their County Plan ("County Plan update"), the completion of which will inform further analysis and design.

Similarly, LA's Green New Deal establishes a goal to add parks and open space within walking distance of every City household by locating a park within 0.5-mile of at least 65 percent of Angelenos by 2025, 75 percent by 2035, and 100 percent by 2050. At present, only 56 percent of residents live within 0.5-mile of a park or open space. The 2018 Resilient Los Angeles Plan (Resilient Los Angeles) and 2015 Plan for a Healthy Los Angeles also point toward increasing parks and open space. Resilient Los Angeles explains that access to parks is a vital way of ameliorating climate impacts for vulnerable populations and includes a specific goal to foster a healthy and connected River system. The Plan for a Healthy Los Angeles, which is an added element to the City's General Plan, lists increasing access to parks and open space as a top health priority. Specifically, it includes a section on the River that advocates for inclusion of local community input and enhancement of bicycle and pedestrian connections. This is part of the Plan's overarching "Bountiful Parks and Open Spaces" objectives to increase the number of parks, improve park access, and improve the percentage of citywide population meeting physical fitness standards. To accomplish this, equitable distribution of park space in every neighborhood and the creation of a continuous greenway of interconnected parks along the River is imperative.

The need for this Project is clear. Taylor Yard provides a key opportunity for revitalizing riverine habitat and function, reclaiming a contaminated site for public use, and providing much needed open space in the City.

Figure 1-6. Results of 2016 County Park Needs Assessment Near the Project Site



Note: Numbers on map represent the names of the study areas in the 2016 County Park Needs Assessment

1.4 Project Goals and Objectives

BOE established a set of 12 goals and objectives early in the planning effort as described in Table 1-1. These goals and objectives were shared with stakeholders and the community for comment and guided development of the site planning options.

Table 1-1. Project Goals and Objectives

Objective	Goals
Park User Experience	Provide safe public access to the River. Serve the region as well as the neighboring communities. Inspire a network of River parks. Create an open space experience that provides access to nature.
Recreation	Provide a high-quality environmentally and habitat-friendly place with recreational activities for a full range of park users.
Natural Resources	Restore natural habitats to support biodiversity as part of the urban ecology. Support wildlife corridors and connectivity.
Environmental	Remediate contaminated soil and other impacted media. Prepare a Response Plan that ensures health and safety. Ensure appropriate environmental clearance.
History	Reflect the site’s history. Create a unique sense of place, reflecting its location on the River and role in the region’s infrastructure.
Consistency with Existing Plans	Advance revitalization of the River. Be consistent with previous plans, most importantly the 2007 City LARRMP and the 2015 USACE Ecosystem Plan, as well as developing plans, including the County Plan update.
Water	Provide stormwater quality improvement. Maintain or improve flood risk.
Transportation and Connectivity	Connect the internal trail system within the Project site to off-site pedestrian and bicycle paths, as well as other transportation modes and options.
Social and Community	Integrate stakeholder engagement to meet community needs.
Sustainability	Advance sustainable/resilient principles. Achieve Envision™ certification. Use green design, sustainable building strategies, and native plants to address climate change.
Economic Return and Governance	Create a funding/governance strategy that balances revenue generation needs and community needs.
Design Excellence	Evaluate opportunities and constraints at multiple scales. Provide multiple scenarios for review. Serve as an icon that inspires the world.

1.5 Project Overview

The Project will remediate soil contaminants to allow for safe access and use of the site, create habitat-focused open space, and provide facilities and amenities identified through community and stakeholder engagement. Although the City intends to remediate and develop the G2 parcel through phases, the Project represents the ultimate vision for the site and is anticipated to open to the public in 2028. Any earlier phases implemented at the site will be designed to not preclude the eventual implementation of the Project and follow their own community planning and environmental review process.

Based on the goals and objectives of the Project, three site planning options were developed called Island, Soft Edge, and The Yards. Chapter 6, *Site Planning Options*, of this report details these three options, and Chapter 10, *Comparison of Site Planning Options*, provides an evaluation of how effectively each meets the established goals and objectives. The three options are summarized as follows:

Island

Creates an island to separate River flows, mimic split flow channels, and provides a significant amount of new riparian and upland habitat, per Ecosystem Plan objectives.

Soft Edge

Creates a soft-edged River by cutting back the east bank and replacing it with a significant amount of new riparian and upland habitat, per Ecosystem Plan objectives. The existing River channel would be modified to create a series of terraces.

The Yards

Maintains the Riverbank in its current configuration with the park developed and the existing Los Angeles Department of Water and Power (LADWP) power lines remaining in-place along the River, providing riparian and upland habitat per Ecosystem Plan objectives.

2 SITE CONSTRAINTS

The Project site is a 41.485-acre parcel bounded by the River to the west, existing railroad tracks and Rio de Los Angeles State Park to the east, the G1 parcel to the north, and the active Metrolink CMF to the south. Numerous physical site constraints were identified for consideration in the development of the site planning options that include:

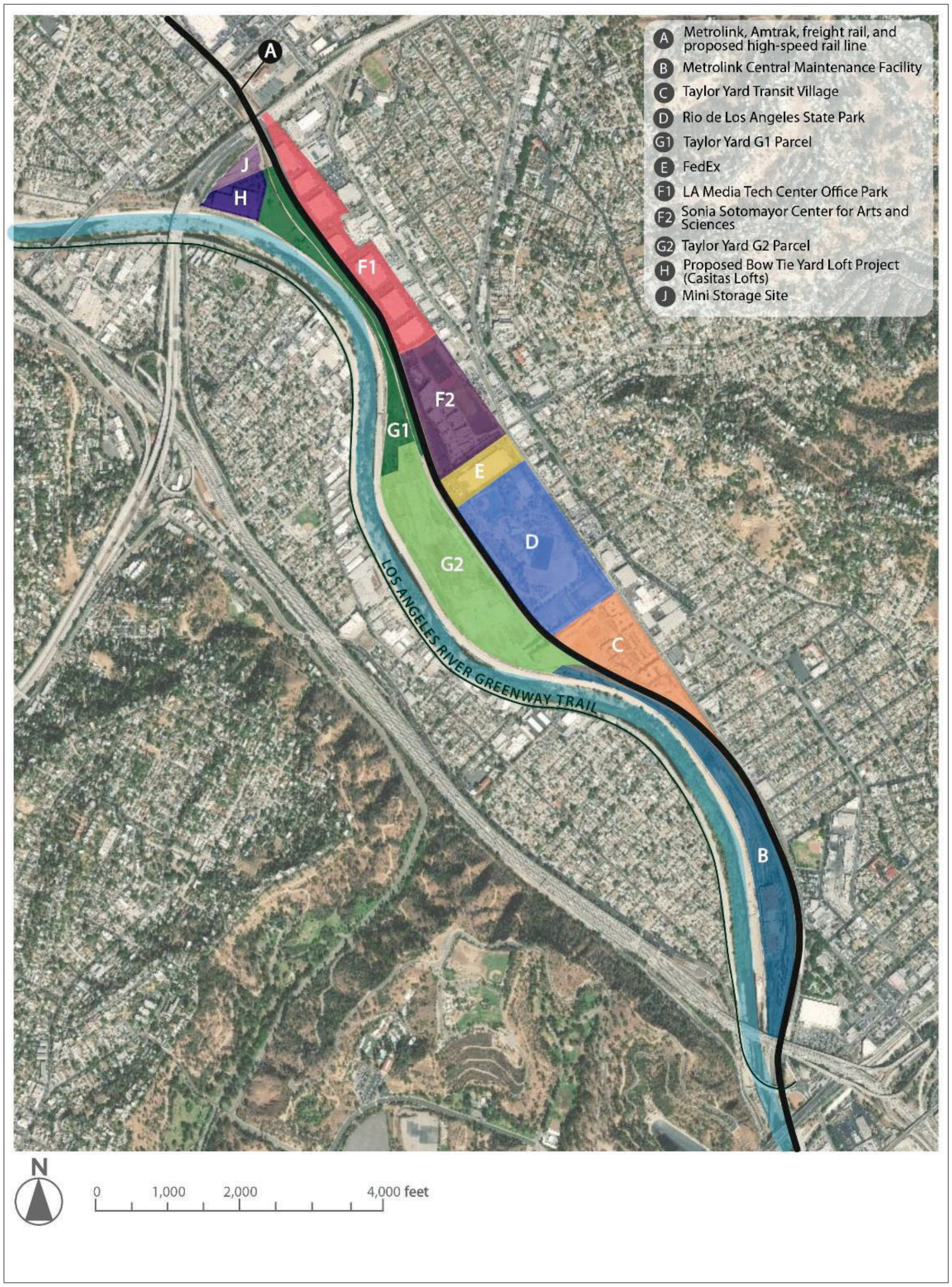
- **Soil contamination** – See Chapter 3, *Site Contaminants*.
- **High voltage electrical transmission lines** – See Chapter 4, *High Voltage Electrical Transmission Lines*.
- **River hydraulics and flood management** – See Chapter 7, *River Hydraulics and Flood Management*.
- **Surrounding property uses** – Division of the original former Taylor Yard rail complex into 10 unique parcels resulted in a variety of uses in the area, some of which complement the development of habitat-focused open space and others that may conflict (i.e., adjacent active rail tracks).
- **Agencies with jurisdiction on the River** - Numerous agencies are anticipated to have jurisdiction or oversight responsibilities for Project modifications to the River channel or River flow.
- **Existing and potential easements** – Several utility and rail easements on the Project site may require access to the site by third parties and present design constraints, particularly related to excavation.
- **Site ingress/egress** – The Project site can currently only be accessed publicly via a private access roadway from San Fernando Road. Secondary access from the G1 parcel is currently only for authorized personnel. Additional ingress/egress points may be identified to improve circulation and provide enough emergency access.
- **Bridge laydown area** – The City's Taylor Yard Bicycle and Pedestrian Bridge is using an approximately 3-acre laydown area on the southern end of the Project site to support construction activities between 2019 and 2021.
- **Potential future site requirements** – Future proposed projects along the existing railroad tracks in this vicinity by the California High Speed Rail Authority (CAHSRA), the Southern California Regional Rail Authority (commonly referred to as Metrolink), and the Los Angeles County Metropolitan Transportation Authority (Metro) may require certain set-backs or other accommodations.
- **Geotechnical and groundwater conditions** – The subsurface conditions of the Project site require specific geotechnical engineering considerations.
- **Utilities** – Water, sewer, and electric utilities will need to be located, sized, and brought to the Project site.

Analysis in this chapter provides an overview of each of the constraints listed above that were considered during site planning option development and will drive future decisions regarding subsequent design activities. The Planning, Land Use, and Zoning Report (Appendix E) further describes the existing land use and zoning conditions for the Project site.

2.1 Surrounding Property Uses

The 244-acre former Taylor Yard rail complex was divided into 10 designated parcels – Parcels A, B, C, D, E, F, G, H, I, and J. Parcel G, formerly known as the Active Yard, was further divided into two parcels: G1 and G2. These parcels and their current uses are shown in Figure 2-1 and summarized below:

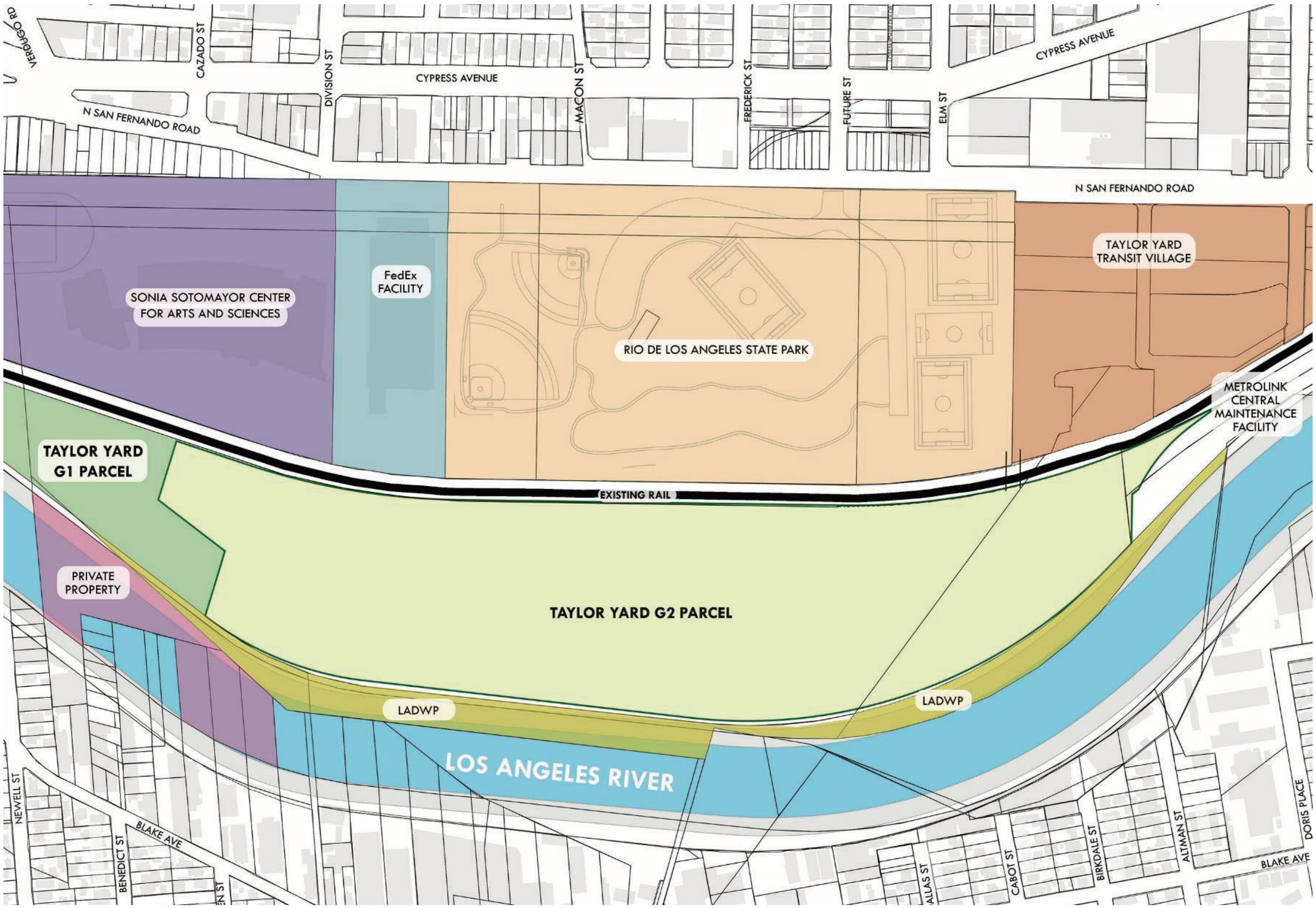
Figure 2-1. Existing Uses on the Former Taylor Yard Rail Complex



- **Parcel A** – Rail corridor that runs north-south along the east edge of the Project site owned by Metro. It is currently used for Metrolink, Amtrak, and freight service. California High Speed Rail (CAHSR) is also planned along this corridor.
- **Parcel B** – CMF, which is owned by Metro and leased to Metrolink. Tail tracks from the CMF extend into the southern edge of the Project site. The segment of tail tracks located on the Project site is owned by the City and under license to Metrolink.
- **Parcel C** – Taylor Yard Transit Village, which includes the existing River Park Apartments, a joint transit-oriented development with Metro, that includes a mix of single- and multi-family residential (including affordable units). Metro owns the parcel and leases or sells individual units to residents. The Taylor Yard Transit Village Master Plan includes space to accommodate commercial retail uses and a future rail station (McCormack, Baron, Salazar n.d.).
- **Parcel D** – Rio de Los Angeles State Park, which opened in 2007, and includes 40 acres of open space and recreational facilities such as playing fields, tennis and basketball courts, playgrounds, and trails. The parcel is owned by the California Department of Parks and Recreation (State Parks) and portions of the park are operated by the City's Department of Recreation and Parks (RAP). The existing rail corridor creates a barrier between the Project site and Rio de Los Angeles State Park.
- **Parcel E** – FedEx distribution center that is immediately adjacent to the Rio de Los Angeles State Park and the Project site and separates these parks from the Sonia Sotomayor Center for Arts and Sciences. The parcel is under private ownership.
- **Parcel F1** – Los Angeles Media Tech Center, built in 2001, comprising a total of 397,000 square feet of research and development, industrial, and office space. Each building on the parcel is under private ownership.
- **Parcel F2** – Sonia Sotomayor Center for Arts and Sciences, established in 2010, consisting of independent charter schools and Los Angeles Unified School District (LAUSD) pilot schools. LAUSD owns the parcel.
- **Parcel G1** – Referred to as the "Bowtie Parcel" and owned by State Parks, which plans to develop the site into public open space. This parcel along with the Project site were often viewed together in previous planning efforts as a significant opportunity to meaningfully re-envision the River in this location. This site could also provide potential public access to the Project site from the north via Kerr Street and Casitas Avenue.
- **Parcel H** – Proposed Bow Tie Yard Lofts Project site, also known as the Casitas Lofts Project, which would replace the existing manufacturing, warehousing, and film production uses with a mixed-use development that includes residential and commercial uses. The parcel is under private ownership.
- **Parcel J** – Mini storage facility. The parcel is under private ownership.

LADWP owns the Riverbank immediately to the west of the Project site as shown in Figure 2-2, with easements owned by the Los Angeles County Flood Control District (LACFCD).

Figure 2-2. Riverbank Property Owners



2.2 Agencies with Jurisdiction of the River

Three primary agencies govern the River channel and water flow. USACE governs flood protection and standards and water releases from the dams, and it maintains sections of the channel under federal ownership, which includes the channel adjacent to the Project site. Within the channel, USACE typically considers the ordinary high-water mark as a basis for determining its jurisdiction, which indicates that most of the riverbed is considered Waters of the U.S. Additionally, USACE designates the River channel as a Traditional Navigable Water (USACE 2015) due to its use by watercraft, plans for restoration, and other factors. This designation qualifies the River and its tributaries for Clean Water Act (CWA) protections.

LACFCD governs maintenance of channel sections under County of Los Angeles ownership, most storm drain outfalls, and permits for channel modifications. Improvements or modifications to the River channel must go through a permit application process. LACFCD acts as the first point-of-contact even in the reaches of the River that are federally maintained, such as in the Project site location, then requests comments from USACE (City of Los Angeles 2007).

The City governs some storm drain outfalls, water releases from City treatment plants, and use of the water within the channel and monitors water quality in the River.

In addition to the agencies already discussed, other local and State agencies are anticipated to have jurisdiction or oversight responsibilities for modifications to the River channel or flow for the Project (Table 2-1).

Table 2-1. Agencies with Jurisdiction over the River

Agency	Jurisdictional Purpose
USACE	Built and governs flood protection and standards, water releases from the dams, and maintenance of channel sections under federal ownership, including the channel adjacent to the Project site
LACFCD	Governs maintenance of channel sections under County of Los Angeles ownership and most storm drain outfalls, permits channel modifications
City of Los Angeles	Governs some storm drain outfalls, water releases from City treatment plants, and use of the water within the channel
Los Angeles Regional Water Quality Control Board (LARWQCB)	Responsible for overseeing the beneficial uses as well as water quality from stormwater and other discharges into the River
State Water Resources Control Board	Oversees California Water Rights and beneficial uses, including the use of River water
LADWP	Owns and has Water Rights to the effluent from the water reclamation plants in Los Angeles that discharge to the River as well as other stormwater discharge
California Department of Fish and Wildlife (CDFW)	Responsible for overseeing the habitat to support fish and wildlife in the River

Figure 2-3 depicts potential jurisdictional resources within the River channel. Waters of the U.S. extend from the bed of the River channel to halfway up the Riverbank (trapezoidal concrete channel). Waters of the State and CDFW jurisdictional waters cover the entire River channel – from top of bank to the top of bank.

Widening the River channel at the Project site, as called for in previous planning efforts, would likely increase Waters of the U.S., Waters of the State, and CDFW-jurisdictional waters and habitat. Therefore, close coordination with USACE, LARWQCB, and CDFW would be required.

Figure 2-3. Potential Jurisdictional Resources

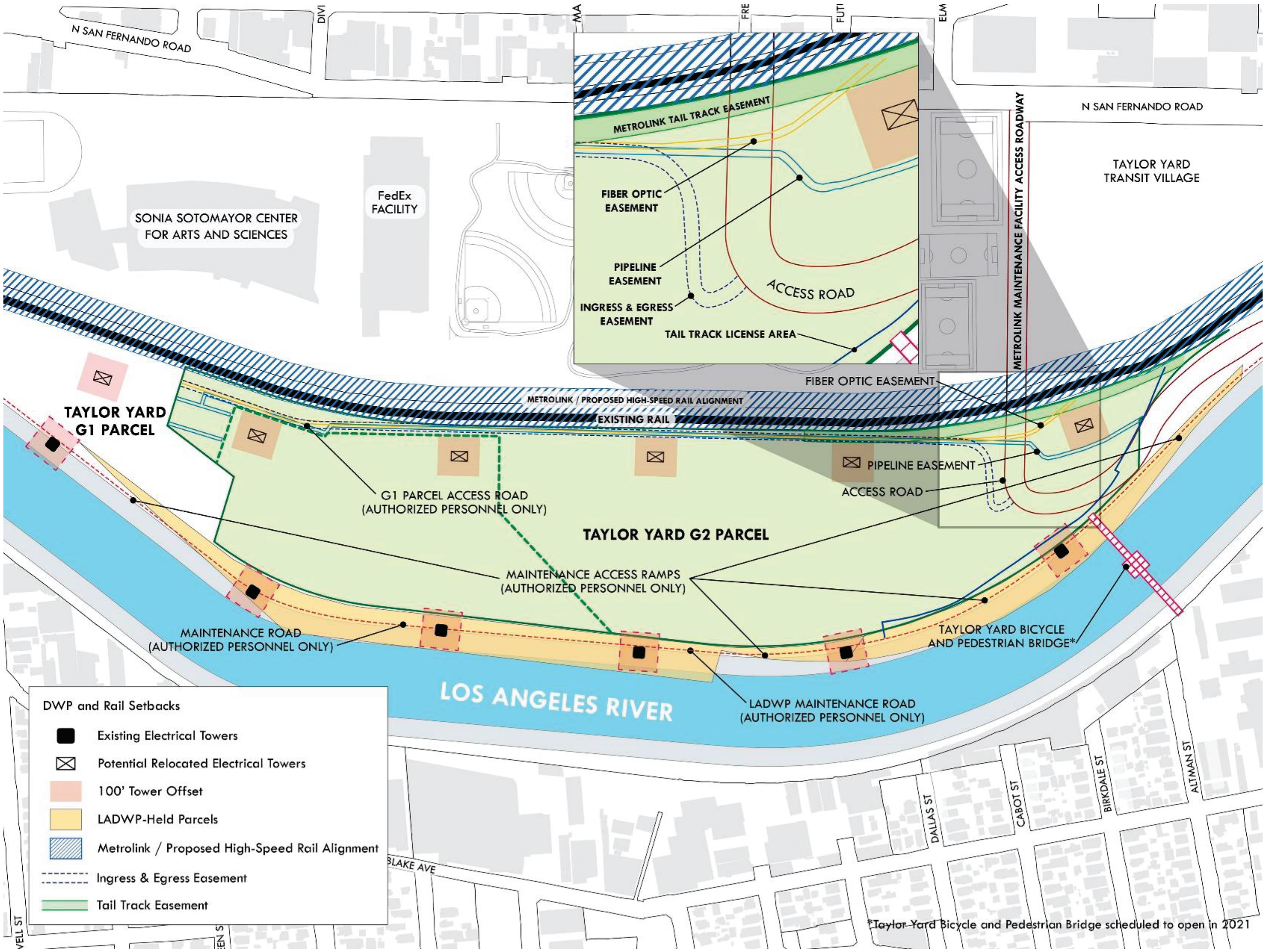
2.3 Existing and Potential Easements

There are a variety of existing easements on the Project site (Figure 2-4). Many of the utility easements are along the east edge of the Project site, adjacent to the existing rail lines, and must be considered in design. The existing easements include the following:

- **Fiber Optic Easement** – An existing fiber optic easement that runs along the east edge of the Project site is approximately 10-feet wide. UPRR retained ownership of the utility easement, and the fiber optic lines within the easement are owned by Verizon, Sprint, AT&T, and Qwest. The fiber optic lines are underground, which limits what can be developed over the easement because access to the easement must be maintained.
- **Pipeline Easement** – An existing easement for active crude and refined oil pipelines that runs along the east edge of the Project site is approximately 10-feet wide. The pipeline itself is 20 inches in diameter and approximately 5 feet underground. The pipeline easement also has a secondary parallel alignment on the far northern edge of the site. UPRR retained ownership of the utility easement, and the pipeline itself is owned by Plains All American and is operated by Pacific Pipeline System. Like the fiber optic easement, development over the easement is limited because access to the pipelines must be maintained. The following restrictions apply to development surrounding the pipeline:
  - Any roads, streets, or driveways shall be constructed with a minimum cover of 48 inches.

  - Any drainage ditches shall be constructed with a minimum cover of 12 inches for concrete lined and 36 inches for unlined. Any drainage canals shall be constructed with a minimum of 60 inches of cover below the ultimate flow line.
- **Metrolink Tail Track License Area** – Tail tracks located on the southern edge of the Project site along the River's edge are currently licensed to Metrolink to accommodate storage and emergency access to the CMF. The tracks extend approximately 1,000 feet into the Project site from the CMF (the Tail Track License Area). Modifications to the River's edge would require relocation of these tail tracks.
- **Metrolink Tail Track Easement** – In 2011, UPRR sold an easement over a portion of the southeast corner of the Project site to Metrolink (the Tail Track Easement). This allows Metrolink to relocate the licensed tail tracks to this easement and away from the River's edge. See Section 2.6 for a more detailed discussion of the proposed relocation.
- **Ingress/Egress Easement** – An easement with the State of California is located along the east side of the parcel to allow for vehicle access to the Project site and the G1 parcel. The ingress/egress easement is approximately 20-feet wide and runs north-south from the access roadway on the south. As noted above, when the tail tracks are relocated to the east side of the Project site, the ingress/egress easement would need to be reconfigured to maintain access, for which Metrolink would be responsible.
- **Access Roadway Easement** – A shared access roadway easement between the City and Metro runs along the south end of the site. The private access roadway connects to San Fernando Road. The access roadway is approximately 64-feet wide, which extends beyond the roadway easement boundaries, and passes underneath the existing railroad tracks and connects to the ingress/egress easement that continues north. This access roadway currently provides the only public vehicular and pedestrian access to the site. In order to make the access roadway compliant with City street standards, the abutments on the existing rail bridge would need to be widened.
- **Multi-purpose MRCA Easement** – The City granted an easement on the Project site to the MRCA. The MRCA easement encompasses a 12.5-acre area on the northern end, adjacent to the G1 parcel. The easement is for environmental remediation, habitat restoration, public access and recreation, and open space preservation. The easement allows for the MRCA to develop and operate the future park improvements in perpetuity.

Figure 2-4. Existing Easements on the Project Site



2.4 Site Ingress/Egress

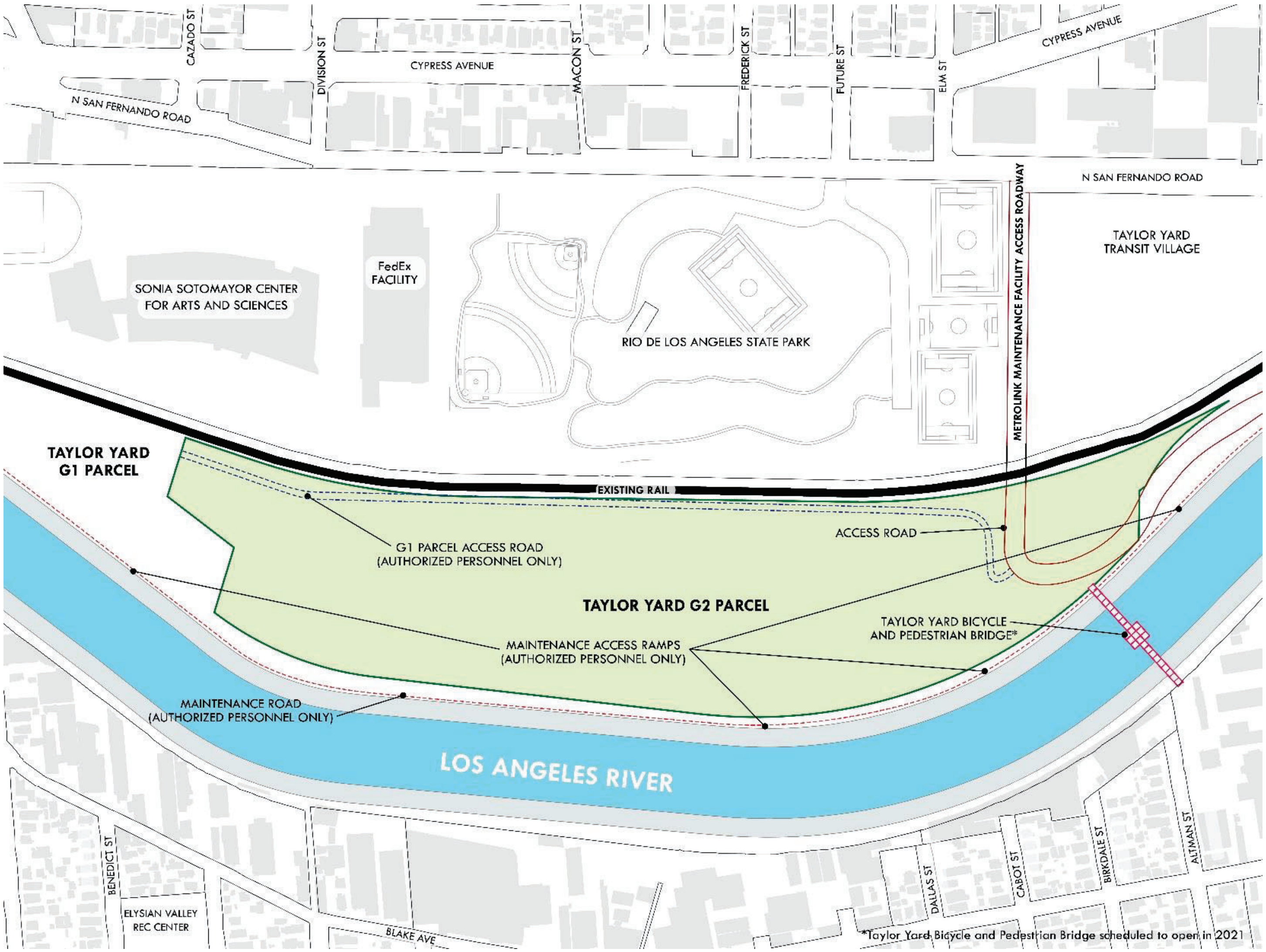
The Project site is quite isolated and is currently closed to public access. It has no direct frontage along the major arterial street, San Fernando Road, and can only be accessed via the existing access roadway on the south end of the site. The access roadway from San Fernando Road passes south of Rio de Los Angeles State Park and is grade-separated beneath the existing railroad tracks. The signpost for the access roadway currently reads "Metrolink Central Maintenance Facility." Authorized personnel can access the Project site from the north through the G1 parcel via Kerr Street, which connects to Fletcher Drive on the north side of State Route (SR) 2. Within the site, this route utilizes the ingress/egress easement along the east side of the parcel. The CMF is closed to the public, so the Project site is also inaccessible from the south.

On the west, the Project site is bounded by the River. There are two degraded ramps on the southwestern boundary of property that lead to an LADWP maintenance road on the riverbank that are currently gated. There are no existing bridges connecting to neighborhoods on the west at this location. The closest existing River crossing is the Riverside Drive Bridge located about 1 mile downstream, south of the CMF. It has a protected bicycle lane and pedestrian path over Interstate 5 and connects the Elysian Valley and Cypress Park neighborhoods. In April 2019, construction started on the Taylor Yard Bicycle and Pedestrian Bridge. The Taylor Yard Bicycle and Pedestrian Bridge will provide pedestrian and bicycle access across the River to the Los Angeles River Greenway Trail and Elysian Valley neighborhood when it opens in 2021. The landing of the new bridge will be located on the southern end of the Project site, just south of the access roadway. The bridge will be approximately 400-feet long and 17-feet wide.

Within the interior of the Project site, current access is limited to mostly unpaved and informal roads and trails.

For site development, the Los Angeles Fire Code requires emergency vehicle ingress and egress, fire protection, emergency escape routes, and public assembly areas. The access roadway provides emergency vehicle access. A second emergency vehicle access point will need to be identified and could be through the G1 parcel on the north end of the Project site. In addition, a second pedestrian access point should be incorporated into the design to serve as emergency egress and improve circulation. The Los Angeles Fire Department (LAFD) will review the Project plans to ensure that proper egress is provided in the event of an evacuation for the volume of visitors anticipated at the park. Any special events planned at the park would require a separate permit process with LAFD to ensure proper crowd control, medical services, and egress from the Project site.

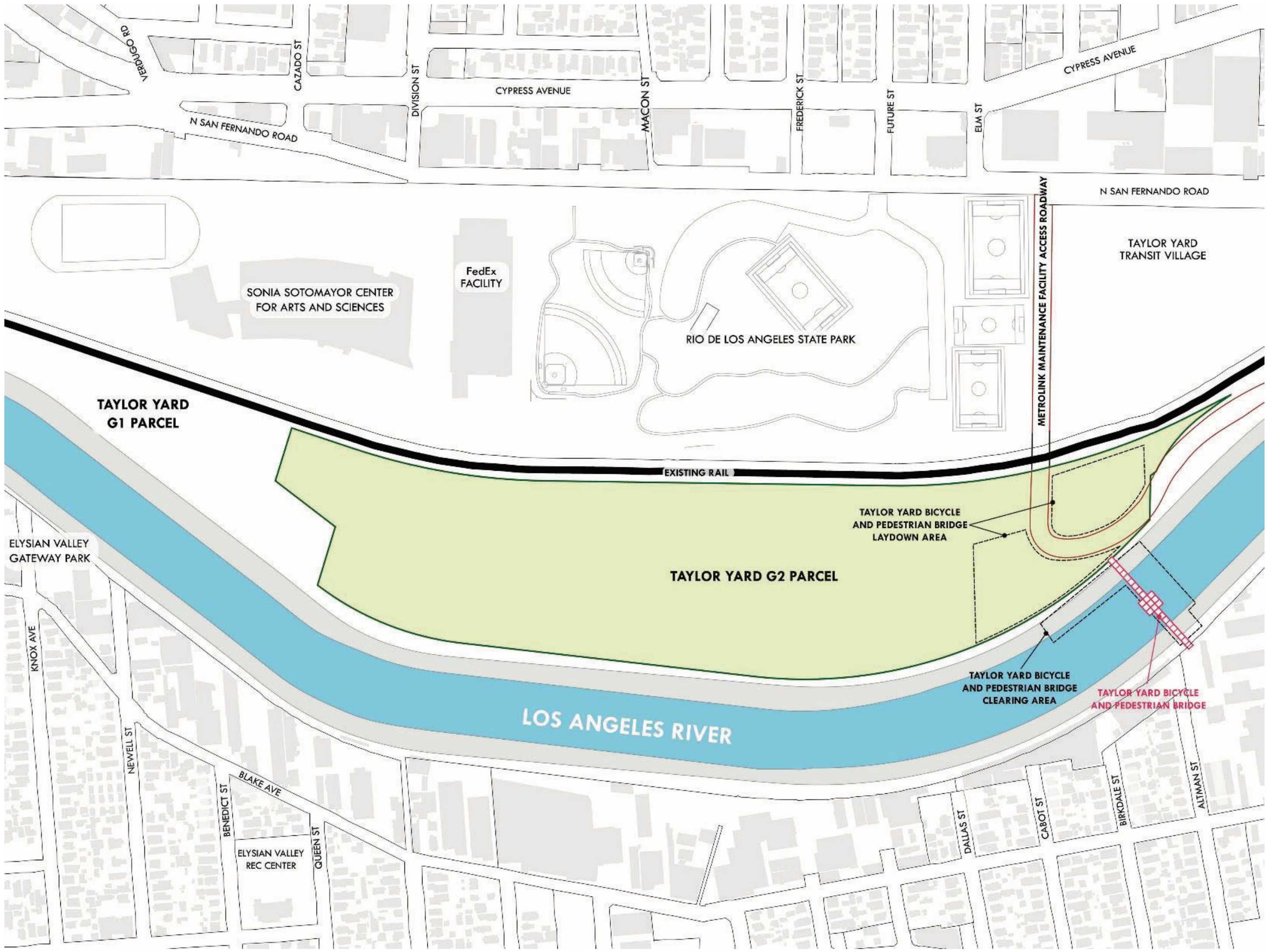
Figure 2-5. Existing Access and Egress from the Project Site



2.5 Taylor Yard Bicycle and Pedestrian Bridge Laydown Area

The Taylor Yard Bicycle and Pedestrian Bridge is currently under construction and scheduled to open in 2021. During the anticipated 2-year construction period, an approximately 3-acre area on the south end of the site is being used for construction laydown and access to the River channel as shown in Figure 2-6. This area is currently dedicated to construction laydown activities and fenced off from the public. The laydown area is accessed by the contractor via the access roadway. Once construction of the bridge is complete, this area will be relinquished and incorporated into the Project design.

Figure 2-6. Taylor Yard Bicycle and Pedestrian Laydown Area



2.6 Potential Future Site Requirements

California High Speed Rail

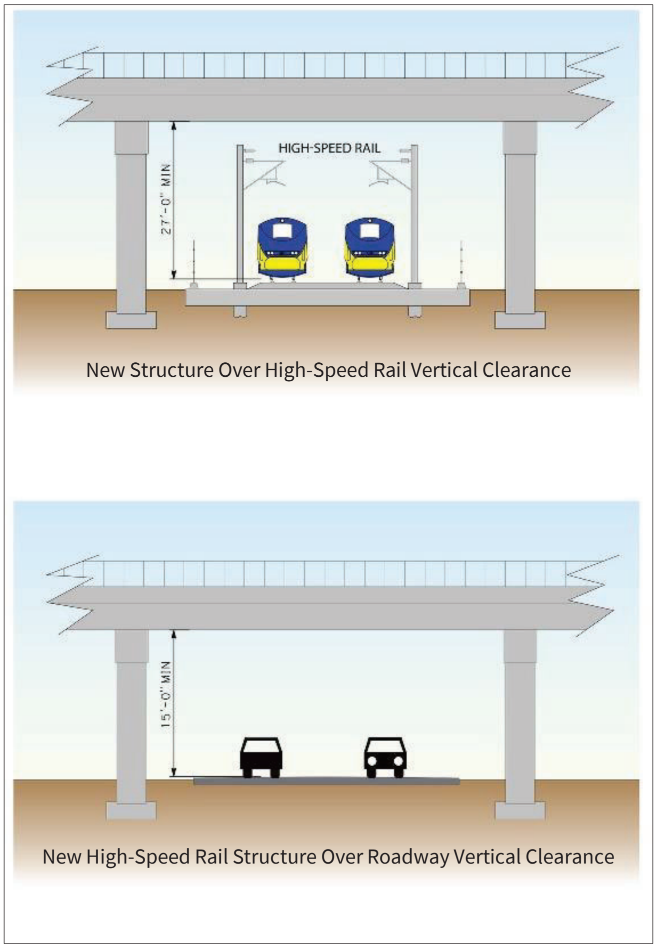
The planned CAHSR project would use the Metro-owned railroad corridor that runs along the east edge of the Project site. In addition to the two existing railroad tracks, currently operated and maintained by Metrolink, the CAHSR project proposes adding two electrified tracks along the west edge of the existing rail corridor parallel to the Project site. In close coordination with Metro and Metrolink, these tracks are planned so that they can be added within the existing railroad right-of-way (ROW) and would not require additional property acquisitions on the Project site. Figure 2-7 shows the alignment as currently proposed by CAHSRA (CAHSRA 2018). The City is in communication with CAHSRA regarding this alignment.

Figure 2-7. CAHSR Alignment as Proposed by CAHSRA

CAHSRA would introduce new vertical requirements for track crossings, which would dictate the design of any underpasses or overpasses (Figure 2-8) to facilities on the east side of the rail tracks. A new structure constructed over CAHSR tracks would require a minimum 27-foot vertical clearance between the top of the CAHSR tracks and the underside of the new structure. If a road passes beneath a CAHSR bridge, the minimum vertical clearance between the top of the roadway surface and the underside of the CAHSR structure is 15 feet for a local roadway.

Although the current access roadway that runs from San Fernando Road to the Project site, providing the only vehicular access point to the Project site, meets the 15-foot vertical clearance requirement, it has been identified as an undercrossing that would require modification due to limited capacity to construct additional tracks (CAHSRA 2018). Modifications to the undercrossing should allow for the existing access roadway to be widened to meet standard street dimensions.

Figure 2-8. CAHSR Vertical Clearance Requirements



Potential Metrolink Tail Track Relocation Project

In 2011, UPRR sold the Tail Track Easement, located along the southeast edge of the Project site, to Metrolink, allowing Metrolink to relocate the licensed tail tracks to this easement and away from the River's edge. The Tail Track Easement is 20-feet wide and 1,400-feet long, extending north of the access roadway from the southeastern-most corner of the Project site. Metrolink completed a CMF Track Reconfiguration Study in 2017 that generally calls for two new sets of tail tracks to be constructed within the Tail Track Easement to replace the single set of tracks currently under license for added efficiency. This configuration would require part of the Tail Track Easement to be widened an additional 20 to 30 feet. A new bridge would be built over the existing access roadway, adjacent to the existing bridge, to accommodate the additional tracks (Metrolink 2017). The new bridge should be designed to allow the existing access roadway to be widened to meet standard street dimensions to incorporate bike lanes. The Metrolink Fiscal Year (FY) 2019–2020 proposed budget included the Tail Track Relocation Project design as a key project to be completed in FY 2019–2020. Coordination between the City and Metrolink on this potential project is ongoing.

The Tail Track Easement overlaps with the existing ingress/egress easement (see Figure 2-4). Depending on Metrolink's final design of the new tail tracks, the ingress/egress easement may need to be relocated, for which Metrolink would be responsible.

Potential River Park Metro Station

In July 2019, the Metro Board received and filed the results of the Los Angeles-Glendale-Burbank Corridor Feasibility Study (Metro 2019). The study assessed potential locations for additional rail stations, evaluated rail service in the corridor provided by various technologies, and evaluated increases to passenger rail service along the existing Metrolink corridor between Union Station and Burbank Airport North Station. It identified two potential locations for new stations – a Grandview/Sonora Station in Glendale and a River Park Station in Los Angeles located adjacent to the Taylor Yard Transit Village. The potential River Park Station would serve Cypress Park and surrounding neighborhoods and provide access to the Project (Metro 2019). If planning for the River Park Station progresses, close coordination with the City, Metro, and Metrolink will be required.

2.7 Geotechnical and Groundwater Conditions

Geotechnical Conditions

The Project site is located at the northern edge of the Los Angeles coastal plain and is underlain by up to 160 feet of unconsolidated alluvial sediments (California Department of Water Resources [DWR] 1961). These sediments include fluvial deposits associated with the Los Angeles River and stream terrace and alluvial fan deposits associated with smaller tributary drainages originating in the hills bordering the Glendale Narrows, as well as colluvium (United States Geological Survey [USGS] 2004). The Glendale Narrows is an 11-mile alluvium-filled valley created by erosion of the surrounding Elysian Hills, Santa Monica Mountains, and Repetto Hills and subsequent sediment deposit from the River and smaller tributary drainages. The alluvium associated with the River generally comprises sand- and gravel-dominated deposits, while the alluvium and colluvium derived from the surrounding hills often comprises silt- and clay-dominated deposits (USGS 2004). Older (Pleistocene) poorly consolidated alluvium dominated by silt and clay are present in nearby outcrops northeast of the Project site. The Miocene Puente Formation is the bedrock unit that underlies the alluvial sediments in the area, and it consists predominantly of sandstones and mudstones (Lamar 1970).

The Elysian Park Anticline is the major structural feature near the Project site. This anticline trends northwest/southeast, and the anticlinal axis is located south of the Project site. Folding and uplift associated with the Elysian Park Anticline occurred contemporaneously with deposition of sediments in the Glendale Narrows, and the structure is currently considered active (Oskin et al. 2000).

Much of the Project site surface is covered by asphalt, concrete, and railroad ballast, beneath which the Project site is underlain by three soil types:

- Silty sand (fill) – 5 to 15 feet thick
- Coarse-grained alluvium – 25 to 100+ feet thick
- Fine-grained alluvium – 5 to 10 feet thick

The fill is primarily composed of silty sand with some gravel and structural debris. The fill layer extends from ground surface to as much as 15 feet below ground surface (bgs).

The coarse-grained alluvial unit consists of poorly graded sand with little to no silt or clay. This soil unit begins as shallow as 5 feet bgs and extends to depths greater than 100 feet (maximum depth explored at the Project site). Discontinuous silt layers, assigned to the fine-grained alluvium unit, are interbedded with the coarse-grained unit between depths of 15 and 30 feet. The coarse-grained unit is interpreted as channel or point bar deposits associated with the River.

The fine-grained alluvial unit consists of silt and silty sand between depths of 15 and 30 feet and occurs in discontinuous layers within the coarse-grained alluvium. The occurrence of this soil unit is limited to the northern area of the Project site and is believed to be associated with stream terrace deposits originating from drainages in the hills northeast of the Project site and overbank deposits associated with the River (WSP 2018b).

Groundwater

The Project site lies within the Glendale Narrows portion of the Los Angeles Forebay Sub-Basin of the Central Groundwater Water Basin (DWR 1961). The general groundwater flow direction beneath the Project site is to the south-southeast with an average hydraulic gradient across the entire site of 0.002 foot per foot. Groundwater at the Project site is found at depths between 20 and 42 feet bgs, corresponding to elevations ranging from 323 feet above mean sea level at the northern end of the site's monitoring well network to 317 feet above mean sea level at the southern end of the Project site (WSP 2018a). These elevations place the top of the groundwater table parallel with the bottom of the River channel. The River channel in the Glendale Narrows has an unlined bottom due to upward pressure from the shallow groundwater. Local groundwater periodically interfaces with surface water along the portion of the River adjacent to the Project site because of a shallow impermeable geologic stratum forcing groundwater to the surface, which may reduce the potential for flood capture and groundwater recharge on the Project site. Perched groundwater has been encountered at depths of less than 5 feet bgs at the north and south ends of the site, indicating zones of limited infiltration of surface water (WSP 2018a). The groundwater is also known to contain contamination from historic industrial activities upgradient of the Project site, which is discussed further in Chapter 3, *Site Contaminants*, of this report.

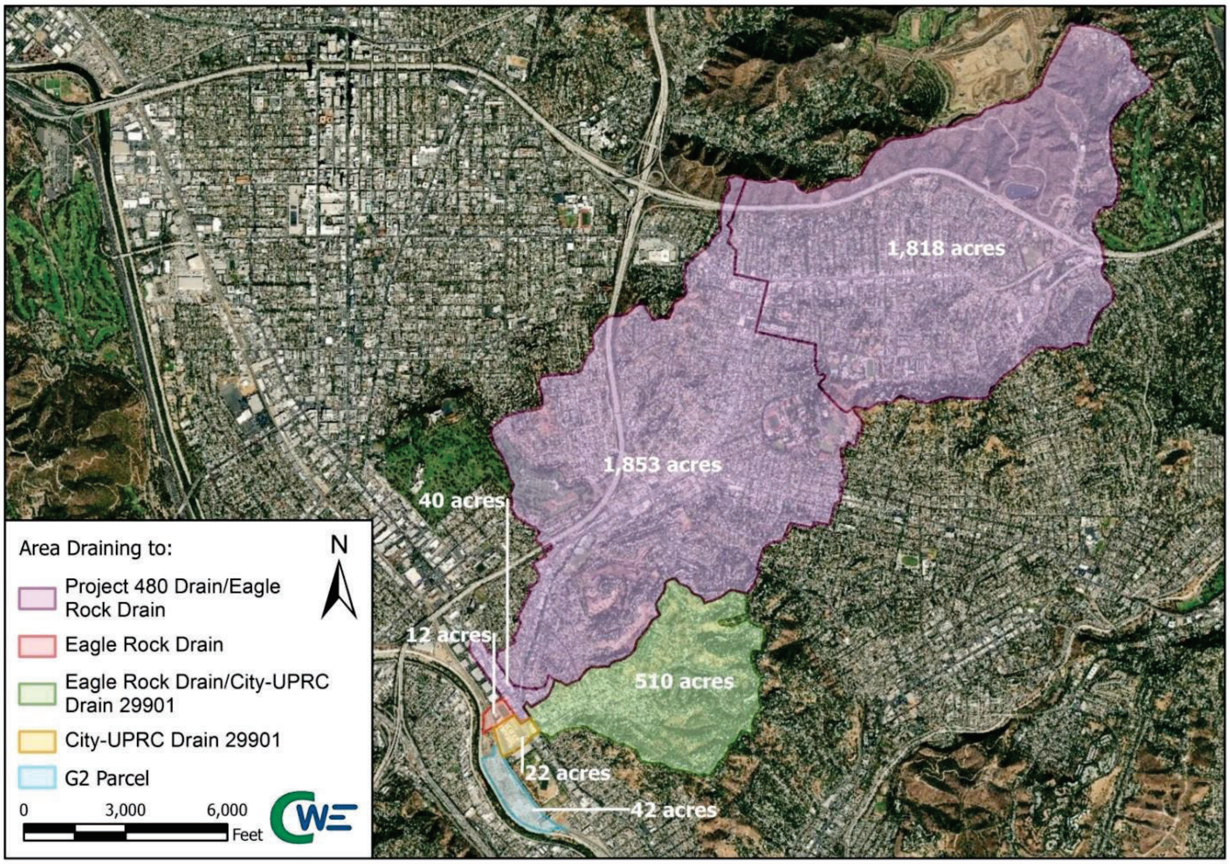
2.8 Utilities

This section describes the existing utilities near the Project site. Anticipated demand resulting from the Project and potential connection points are described in Chapter 12, *Evaluation of the Island Option*.

Storm Drains

Runoff from areas outside of the Project site, including the surrounding neighborhoods of Glassell Park, Cypress Park, and Mount Washington, is directed into storm drains running under and/or around the Project site. Figure 2-9 illustrates the watersheds draining near the Project site. These storm drains empty into the River through culverts along the channel edge.

Figure 2-9. Watersheds Draining Near the Project Site



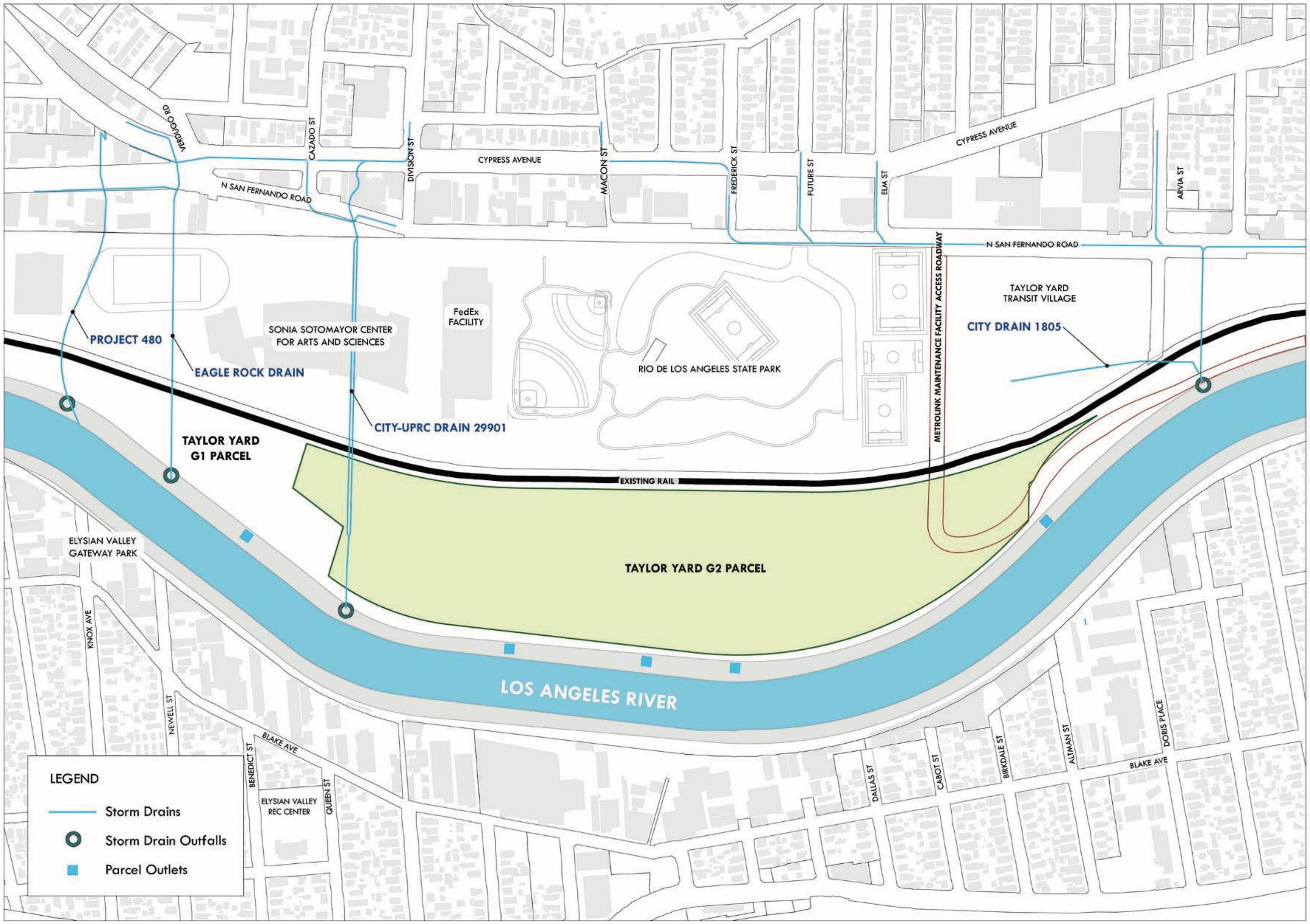
Four major storm drains discharge into the River near the Project site, one of which crosses beneath the Project site. Figure 2-10 shows these storm drains, which are described as follows:

- **Project 480, Unit 3, Portion of Line B** – This County-owned drainage facility consists of a 10-foot by 12-foot reinforced concrete box (RCB) (Project 479, Unit 1, Line F) that runs along Eagle Rock Boulevard then transitions to an 11.5-foot horseshoe arch tunnel. The arch tunnel begins as the box culvert curves away from Eagle Rock Boulevard, continuing under San Fernando Road, the railroad tracks, and the G1 parcel to the River. The capital discharge for this storm drain is 2,550 cubic feet per second (cfs) (City of Los Angeles, Bureau of Sanitation [LASAN] 2007).

- **Eagle Rock Drain** – This City-owned drainage facility consists of a 14-foot by 8-foot RCB that runs along Eagle Rock Boulevard. As it curves towards the River, the culvert transitions to an 8.5-foot by 10.5-foot arch section. It transitions to a 10-foot by 10-foot RCB for a length of approximately 1,000 feet under the G1 parcel. The capital discharge for this storm drain is 4,550 cfs (LASAN 2007).
- **City-UPRC Drain 29901** – Running beneath the Project site, this City-owned drainage facility consists of a 48-inch reinforced concrete pipe (RCP) that transitions to a 42-inch RCP as it nears San Fernando Road transitioning again to a 30-inch RCP as it crosses San Fernando Road. The pipe splits into two 48-inch RCPs for the next 1,250 feet and then transitions to a 72-inch by 67-inch RCB before transitioning into a 78-inch corrugated metal pipe for the last 100 feet before emptying into the Los Angeles River. The capital discharge for this drainage facility is 130 cfs (LASAN 2007).
- **City Drain 1805** – Running beneath the Metrolink CMF, this City-owned drainage facility runs along San Fernando Road near Rio de Los Angeles State Park and captures flows that are carried through a 48-inch RCP that discharges into the River just downstream of the Project site.

The land to the east of the railroad slopes east, while the land west of the railroad slopes west towards the River. The railroad embankment isolates the site from runoff generated by adjacent parcels. Water from the River is kept out of the property by the levee and ground surface elevations. Direct runoff from the site is routed to parcel outlets along the River levee along the top of the eastern Riverbank as shown in Figure 2-10. Further refinement will be required to determine where these storm drains originate, verify that it is stormwater in the storm drains, and identify where stormwater is entering.

Figure 2-10. Storm Drain Locations



Water Supply

A potable water main and a recycled water main exist in San Fernando Road. Size and location of the existing water mains are as follow:

- The existing 16-inch recycled water main is located 9 feet west of centerline of San Fernando Road.
- The existing 8-inch potable water main is located 23 feet east of centerline of San Fernando Road.
- The availability and capacity of the existing water mains would be confirmed by conducting fire flow tests. Stormwater and River water are also potential sources of water, discussed further in Chapter 12, *Evaluation of the Island Option*.

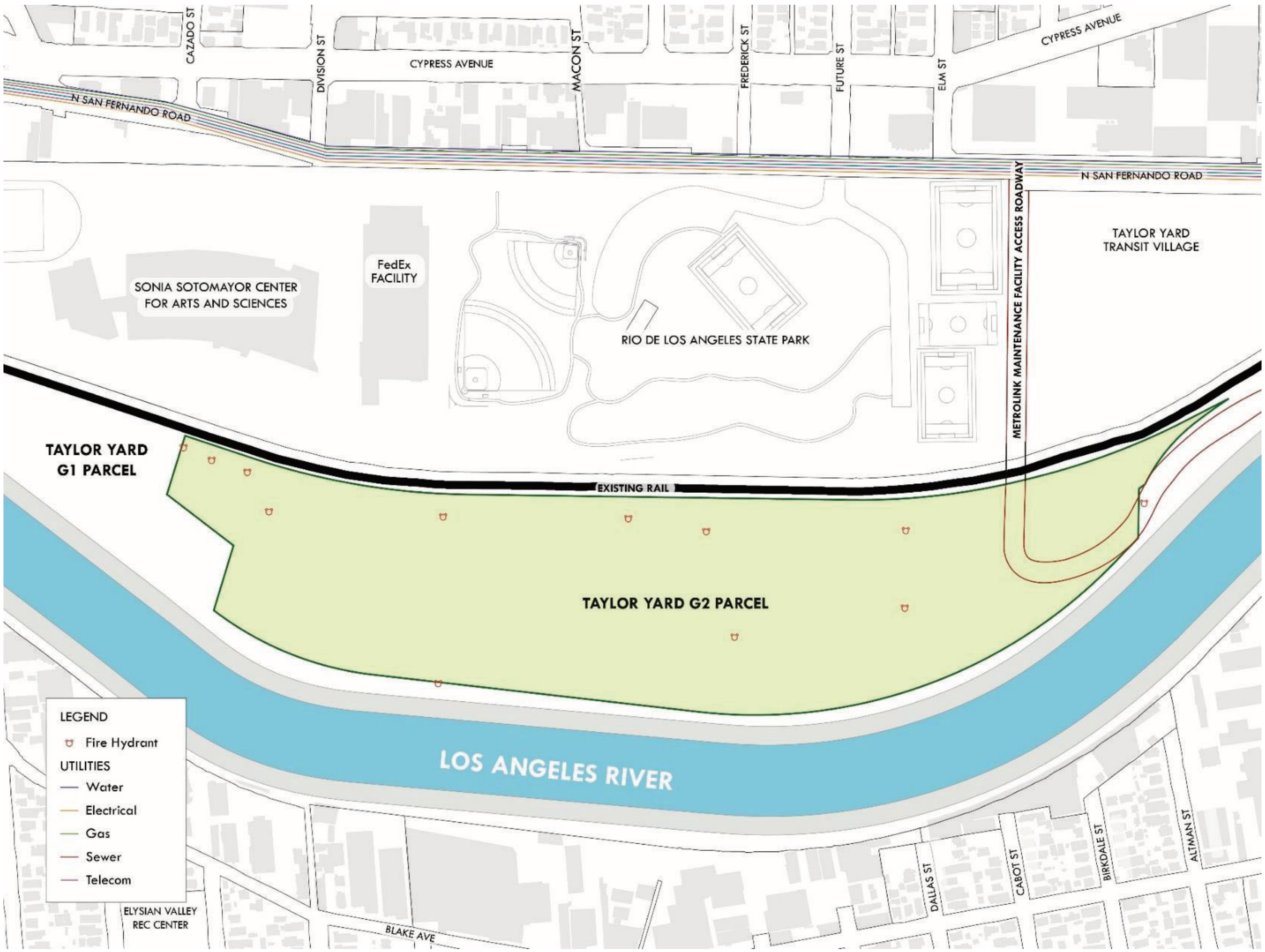
Sanitary Sewer

An existing 18-inch sewer main runs along San Fernando Road to which the Project would likely connect. The 96-inch Northeast Interceptor Sewer also runs along San Fernando Road. Within the Project site, there are possible abandoned sewers because of past uses on the site.

Dry Utilities

The approximate locations of existing dry utilities, such as gas and communications, are similar to the locations of the water and sewer mains along San Fernando Road. For electrical, the potential point of connection is anticipated to be at an existing power pole at the southeast corner of the intersection of San Fernando Road and the access roadway. Although existing 230-kilovolt (kV) electric power transmission lines traverse the Project site, it would not be feasible to draw power directly from these lines. Connecting to the existing 230-kV transmission lines would require significant transformers and related equipment to step down the electrical currents to manageable levels at the site.

Figure 2-11. Existing Utility Locations



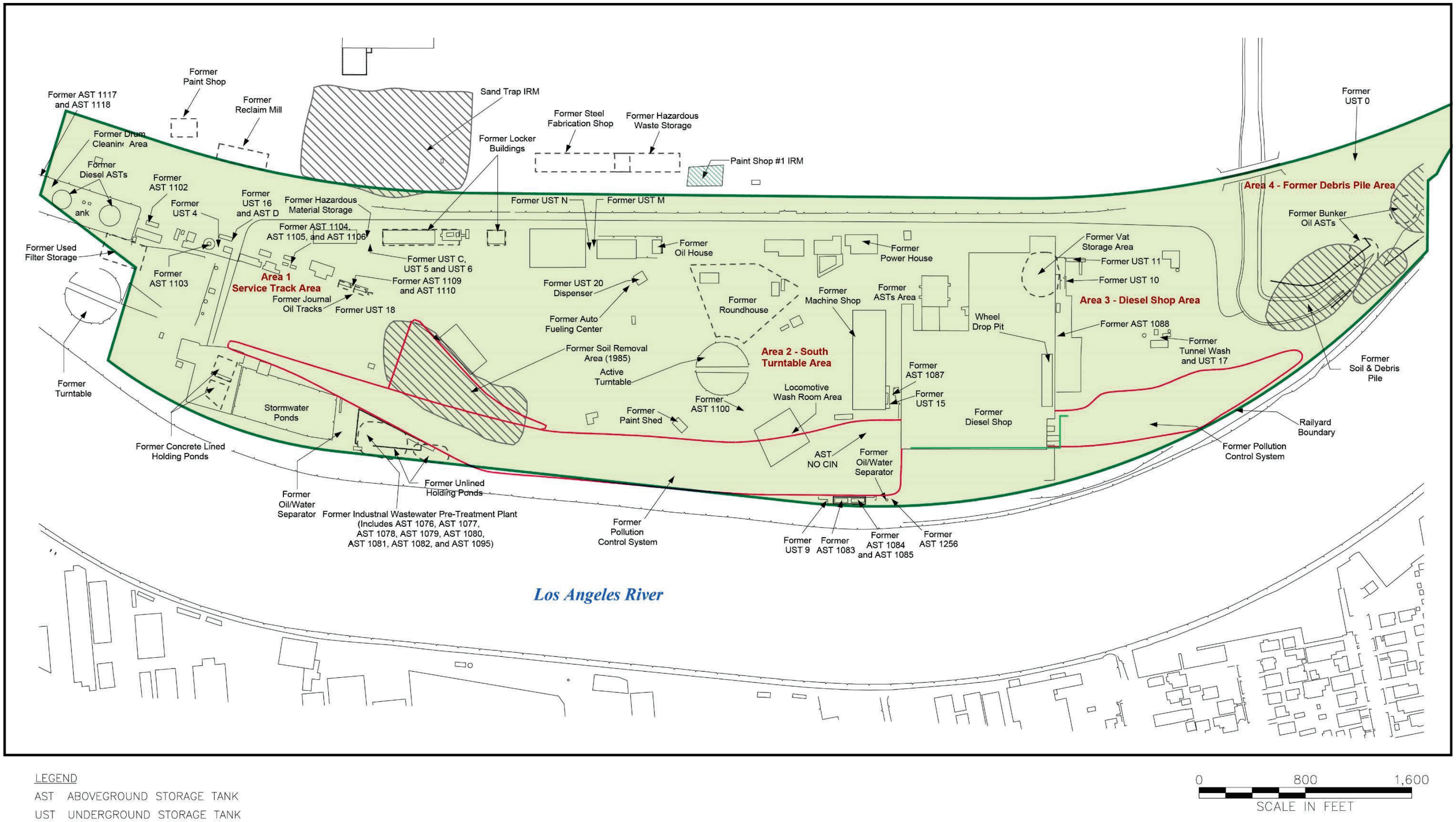
3 SITE CONTAMINANTS

3.1 Site History and Overview of Past Studies

The former Taylor Yard rail complex was owned by UPRR and its predecessors beginning around 1900. Prior to 1927, the property was vacant and occupied by partially vegetated fields. From the early 1930s to 2006, the complex was an operating rail yard used for maintenance and fueling operations. The Project site was in the area of the complex known as the Active Yard. Figure 3-1 shows the facilities from the Project site's previous rail use. Because of its previous use as a rail yard, the Project site is a designated brownfield, which USEPA defines as a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. It is estimated that there are more than 450,000 brownfields in the United States. The site is under DTSC's regulatory authority.

Environmental assessments to characterize contamination of the larger Taylor Yard rail complex began in 1985. In 1990, UPRR, then the Southern Pacific Transportation Company, entered into an Enforceable Agreement with the State of California. The purpose of the agreement was to ensure that the nature and extent of releases of hazardous substances from the site are thoroughly investigated and that appropriate remedial actions are taken. Documented remedial activities at the Project site also began in 1985 with the removal of petroleum-impacted soil and ballast. A soil washing remediation system was purchased to clean this removed soil on-site, but after 6 months of operation, it was deemed ineffective and operation of the system was discontinued in 1987. In 1988, one aboveground storage tank (AST) and several underground storage tanks were removed from the Project site along with the petroleum-affected soil in each of the tank cavities. In 1990, two wastewater holding ponds were decommissioned, contaminated soil removed, and the excavations were filled with imported fill. Beginning in 2000, a pilot study on the effectiveness of Vapor Extraction Systems (VESs) began on the Project site, which resulted in DTSC's approval of the performance of the VES systems to remove volatile organic compounds (VOCs) from the soil (Camp, Dresser, and McKee, Inc. [CDM 2014a]). Additional localized remedial actions that have occurred at the Project site include storage tank removals, soil removal, and other interim remedial measures, also shown in Figure 3-1.

Figure 3-1. Previous Project Site Uses and Removal Actions

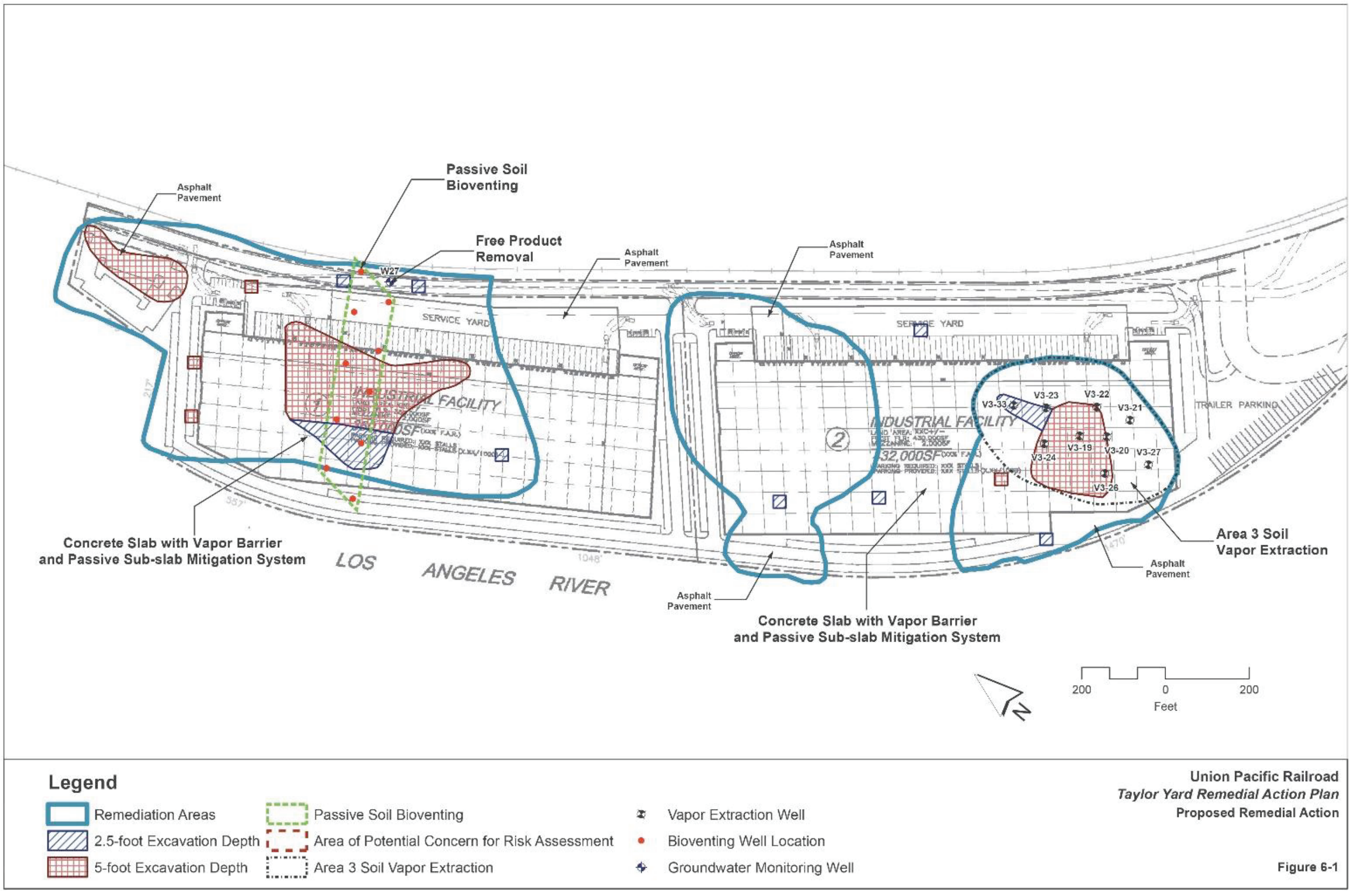


Source: CDM 2011

A plan to privately develop the Project site into industrial warehouses emerged in the late 1990s, which was ultimately unsuccessful. It consisted generally of two large industrial facilities and paved parking lots over the entire site. In 2004, UPRR completed the first major milestone in satisfying the requirements of the Enforceable Agreement by conducting a focused remedial investigation to delineate the lateral and vertical extent of Contaminants of Potential Concern (COPCs) in soil at the Project site (CDM 2004). That data was used in preparation of a Human Health Risk Assessment (CDM 2007), which evaluated the COPCs and determined a subset to be Constituents of Concern (COCs) for the Project site that included total petroleum hydrocarbons (TPH), metals, VOCs, and semi-volatile organic compounds (SVOCs). The Human Health Risk Assessment determined that, if the site were developed into industrial warehouses as proposed without remedial action, the COCs at the Project site posed an unacceptable risk to human health under appropriate exposure scenarios and pathways.

A Feasibility Study (CDM 2011) was prepared as a result of the CERCLA process for the proposed industrial facility in which areas of potential concern were identified for remedial action. These were areas with COCs present at concentrations above the threshold for industrial preliminary remediation goals. The Feasibility Study evaluated remedial approaches for the site and proposed a solution. There was a public comment period to present the remedial alternatives reviewed in the Feasibility Study and receive feedback. In response to the comments received, a new remedial alternative was developed, which is detailed in the 2014 UPRR Remedial Action Plan (CDM 2014a). This alternative involved excavating shallow soil “hot spots” in areas 2.5 to 5 feet bgs within those previously identified areas of potential concern, in addition to installing a soil VES, carrying out a passive bioventing soil treatment program, and capping the remainder of the site. Figure 3-2 illustrates the remedial activities recommended in the Remedial Action Plan, which is the current DTSC-approved plan for remediation of the Project site.

Figure 3-2. Proposed Remedial Action from 2014 UPRR Remedial Action Plan



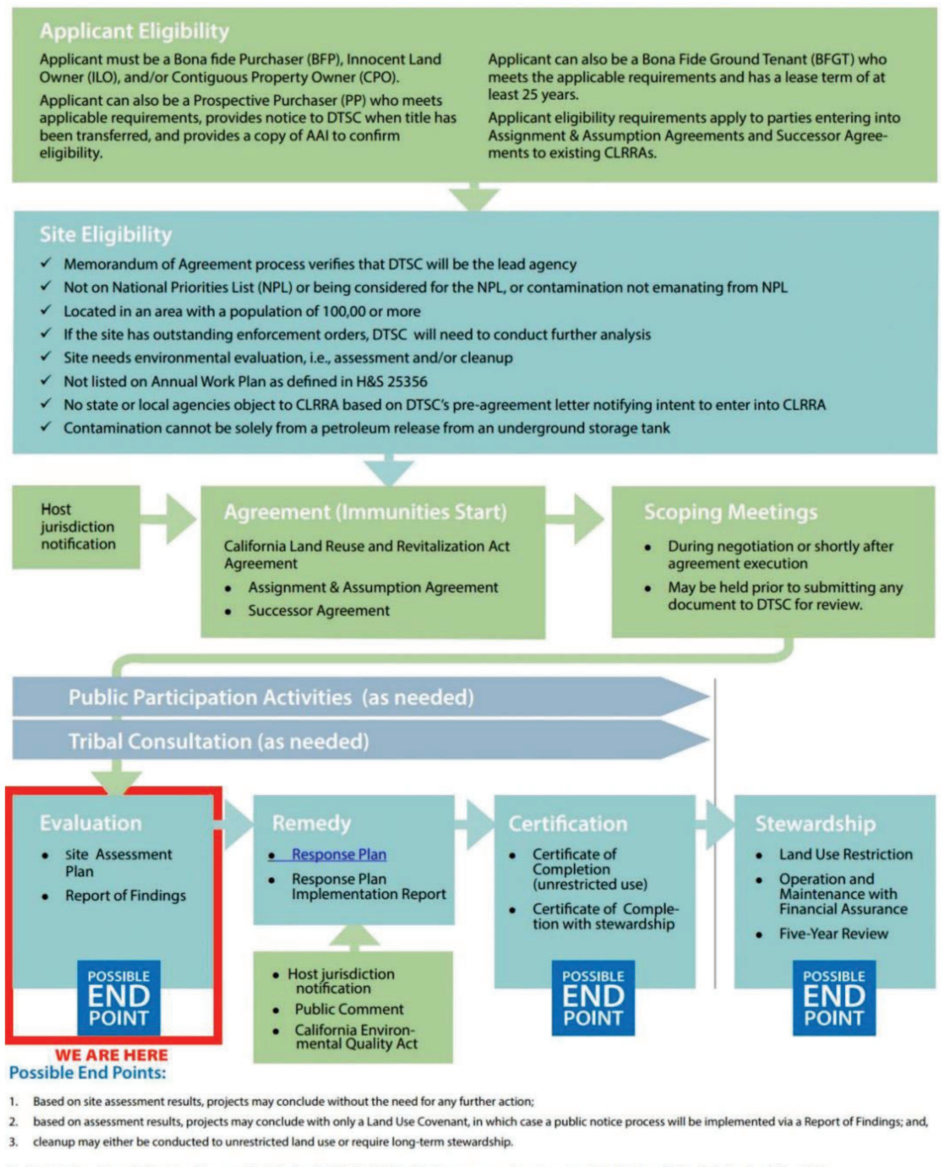
Source: CDM 2014a

The Remedial Action Plan recommended additional data collection in four areas of the Project site. In 2014, once purchase negotiations with UPRR were underway, the City initiated a data gap investigation in those four areas. As seen in Figure 3-1, Data Gap 1 Area consisted of the former stormwater collection basin, Data Gap 2 Area was the location of the former diesel shop, Data Gap 3 Area was the former south turntable area, and Data Gap 4 Area included a site-wide area of individual sampling. The results of the data gap investigation helped confirm contaminant concentrations, define the limits of the COCs in the soil, and identified areas recommended for further investigation (Tetra Tech 2014).

The City used the findings of the data gap investigation to negotiate the establishment of a remediation escrow account into the purchase and sale agreement with UPRR. Upon close of escrow, $14,715,000 was placed in the remediation escrow account and will reimburse the City for costs associated with remediation to industrial standards based on the current Remedial Action Plan. Within the MRCA easement, the City is obligated to remediate per the existing Remedial Action Plan to industrial standards, as agreed upon in the terms of the purchase and sale agreement for the easement. Any remediation expenses beyond that are MRCA's responsibility. The City and MRCA are working closely together to achieve mutual remediation goals.

After the Project site was purchased, the City and DTSC entered into a voluntary cleanup agreement under the CLRRA to investigate and remediate the Project site to levels beyond industrial standards and suitable for habitat restoration and park uses. Figure 3-3 shows an overview of the assessment and cleanup process under a DTSC voluntary agreement. Evaluation activities are discussed further below. To date, the applicant eligibility, site eligibility, agreement (immunities start), scoping meetings, and evaluation activities have been completed for the Project. Public participation activities are ongoing.

Figure 3-3. Assessment and Cleanup Process for DTSC's Voluntary Agreements



Source: DTSC 2018

A detailed, site-wide remedial investigation directed by the City, under work plans approved by DTSC, was carried out in the spring and summer of 2018. Samples were collected from soil media down to depths of 80 feet bgs and soil gas down to 20 feet bgs across the site. Sample locations were distributed to account for data gaps from previous investigations and to confirm previously identified areas of potential concern. The results of the investigation were compared to residential and industrial risk-based screening levels to determine compounds that might be of concern for redevelopment of the site as a public park. The remedial investigation report, called the Report of Findings, was submitted as a draft to DTSC and posted publicly on DTSC's website, EnviroStor, in November 2018. Comments were received from DTSC in March 2019 and incorporated. The final Report of Findings was submitted to DTSC in June 2019, conditionally approved by DTSC in November 2019, and is included in this report in Appendix A. This remedial investigation of the site identified in detail the extent and types of contaminants on the site; the following sections summarize the assessment. Table 3-1 contains a list of the contaminants found out at the Project site.

Table 3-1. Soil and Soil Gas Contaminants on the Project Site

Media	Contaminant Category	Specific Contaminant	Possible Historical Sources	Source
Soil	TPH	Diesel-range (carbon chain 12-35+)	Diesel fuel, gasoline, engine oil, grease	CDM 2011, 2014a; WSP 2019
Soil	Metals	Arsenic, lead	Batteries, truing (grinding) for train wheel and track maintenance, treated wood (rail ties)	CDM 2011, 2014a; WSP 2019
Soil	VOCs	Tetrachloroethene (PCE)	Solvents, degreasers, painting products (resins, sealants, solvents, lacquers, varnish)	CDM 2011, 2014a; WSP 2019
Soil	SVOCs	Benzo (a) pyrene equivalents	Paint strippers, resins, adhesives, degreasers	CDM 2011, 2014a; WSP 2019
Soil	Asbestos	Asbestos-containing material	Building materials, utility materials, protective coatings	WSP 2019
Soil Gas	VOCs	Benzene, (cis and trans) 1,2-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethane, ethylbenzene, naphthalene, PCE, trichloroethene (TCE), vinyl chloride	Solvents, paint strippers, resins, adhesives, degreasers	CDM 2011, 2014a; WSP 2019

3.2 Soil and Groundwater Conditions

3.2.1 Soil Conditions

As summarized in the Report of Findings, the contaminants at the Project site generally include the following categories: heavy metals in shallow soil, including lead, arsenic, cadmium, and antimony; TPH as diesel in soil, present down to 30 feet bgs in some areas; and chlorinated and fuel-related VOCs in soil gas, including PCE, TCE, vinyl chloride, and benzene.

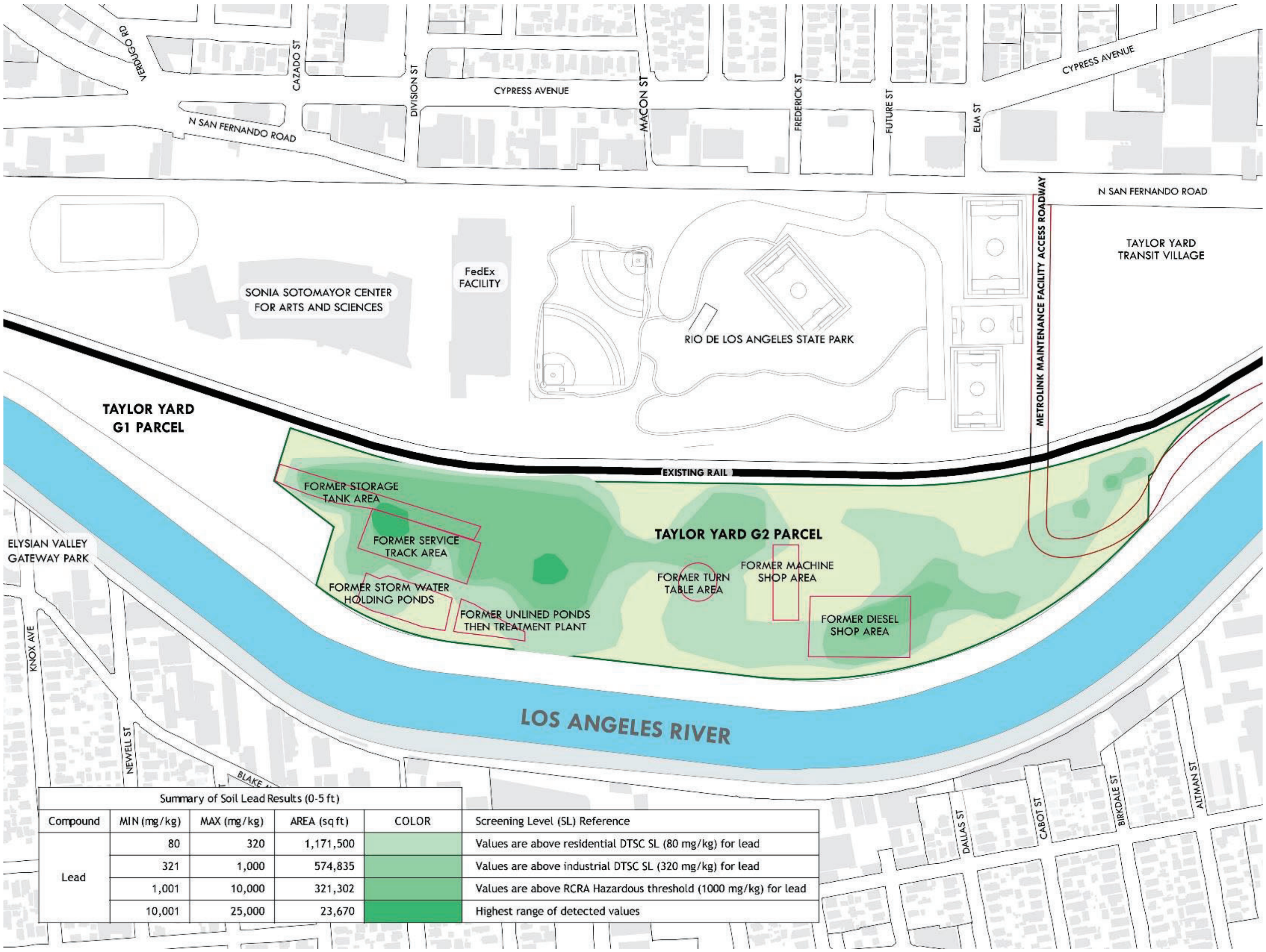
The most prevalent contaminants exceeding risk-based residential health screening levels are lead and TPH as diesel in soils, and VOCs including PCE, vinyl chloride, and benzene in soil gas. These contaminants are spatially associated with four main areas of former UPRR operations: the former service track area, the former diesel shop area, the former aboveground and belowground storage tank area, and the former machine shop building. These four areas roughly coincide with those areas of concern identified in the UPRR reports and are slightly more extensive due to the more comprehensive level of testing conducted by the City in 2018.

In soil, lead is generally found at its highest concentrations in the surface to 5-foot range, with some detections above screening levels down to 15 feet bgs. Figure 3-4 shows lead concentrations at depths from 0 to 5 feet bgs. In areas without any shade of green, lead contamination was tested below the residential screening levels. The lightest shade of green coincides with lead concentrations that tested higher than residential screening levels, but lower than industrial/commercial screening levels. The next shade of green indicates exceedances of the commercial/industrial screening levels. Other, darker shades are depicted to help indicate areas of further elevated concentrations. TPH in the diesel range was generally found site-wide from the surface to 5 feet bgs (Figure 3-5), with deeper TPH present in discrete areas associated with the service track area, diesel shop, and specific storage or refueling areas. The shades of red in the figure are drawn to depict exceedances of screening levels similar to those shown in Figure 3-4.

In soil gas, PCE, its degradation products, and other chlorinated solvents (e.g., TCE, cis and trans-1,2-dichloroethene, and vinyl chloride) were observed at concentrations exceeding risk-based residential screening levels generally across the southern half of the site, measured down to 20 feet bgs. An additional discrete zone of vinyl chloride is present beneath the service track area on the northern portion of the site. Fuel-related soil gas compounds such as ethylbenzene, benzene, and naphthalene are also present in those same areas. Figure 3-6 shows the presence of PCE, vinyl chloride, and benzene between 0 and 10 feet bgs.

Asbestos was found on the site as well, in the form of surface-exposed asbestos mastic-wrapped transite steel piping in the vicinity of the former service track areas and a sub-grade pipe near the former diesel shop. The exact distance and extent of these pipes is unknown, however, because they may continue underground. Superficial asbestos debris also was identified in the vicinity of the former diesel shop (Figure 3-7).

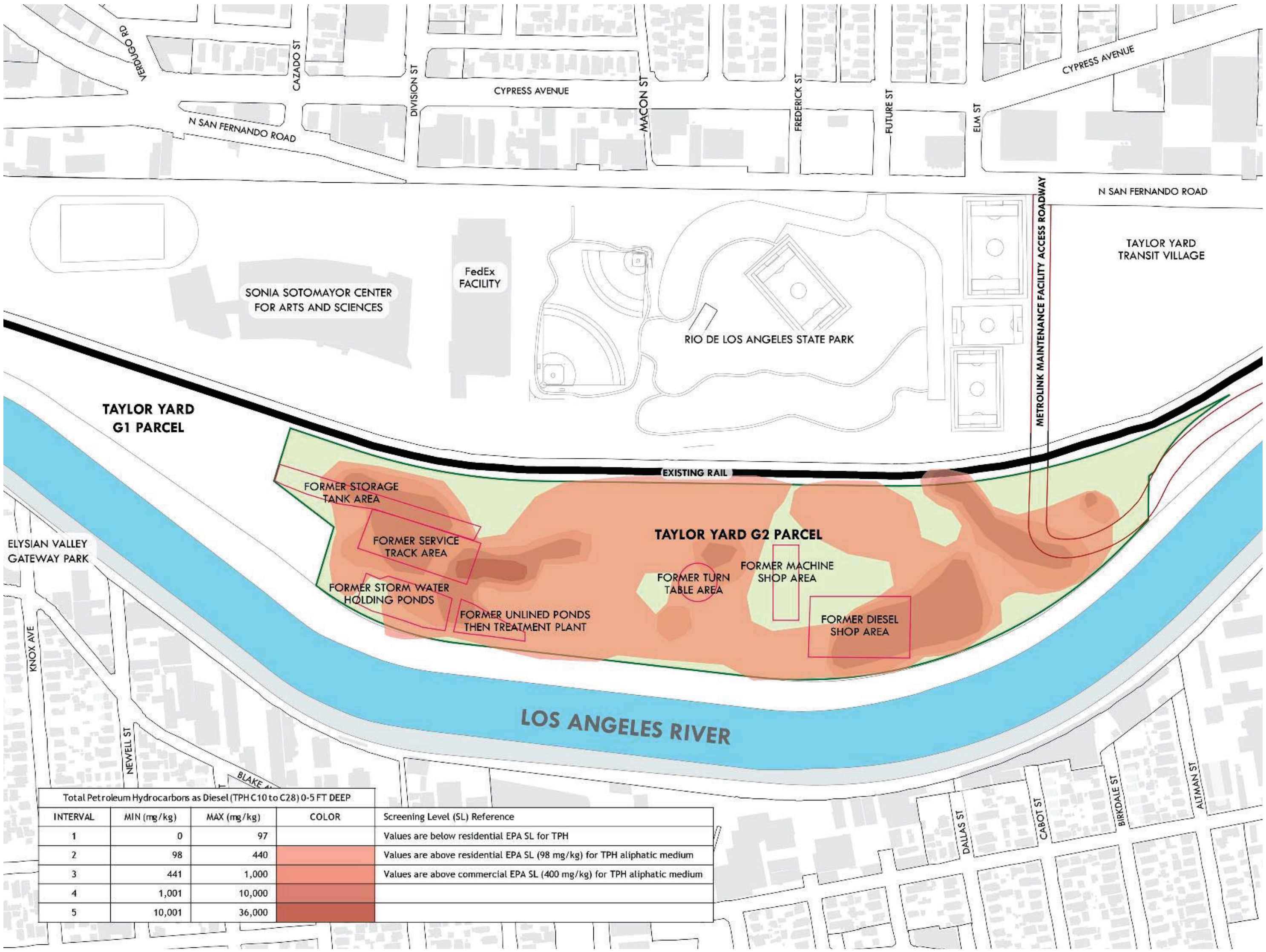
Figure 3-4. Summary of Soil Lead Results (0–5 feet bgs)



Summary of Soil Lead Results (0-5 ft)

Compound	MIN (mg/kg)	MAX (mg/kg)	AREA (sq ft)	COLOR	Screening Level (SL) Reference
Lead	80	320	1,171,500		Values are above residential DTSC SL (80 mg/kg) for lead
	321	1,000	574,835		Values are above industrial DTSC SL (320 mg/kg) for lead
	1,001	10,000	321,302		Values are above RCRA Hazardous threshold (1000 mg/kg) for lead
	10,001	25,000	23,670		Highest range of detected values

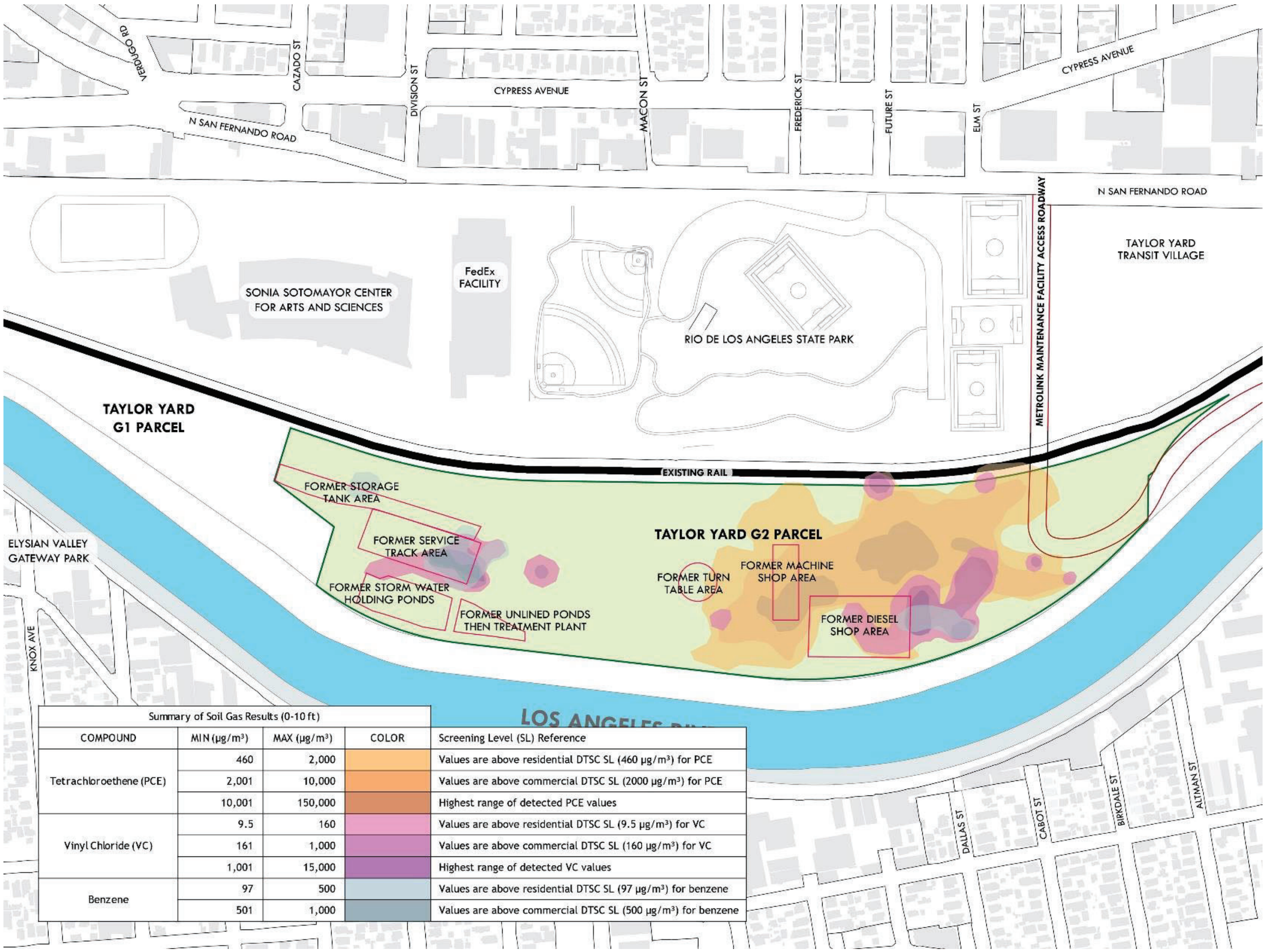
Figure 3-5. Summary of Soil Diesel Results (0–5 feet bgs)



Total Petroleum Hydrocarbons as Diesel (TPH C10 to C28) 0-5 FT DEEP

INTERVAL	MIN (mg/kg)	MAX (mg/kg)	COLOR	Screening Level (SL) Reference
1	0	97		Values are below residential EPA SL for TPH
2	98	440		Values are above residential EPA SL (98 mg/kg) for TPH aliphatic medium
3	441	1,000		Values are above commercial EPA SL (400 mg/kg) for TPH aliphatic medium
4	1,001	10,000		
5	10,001	36,000		

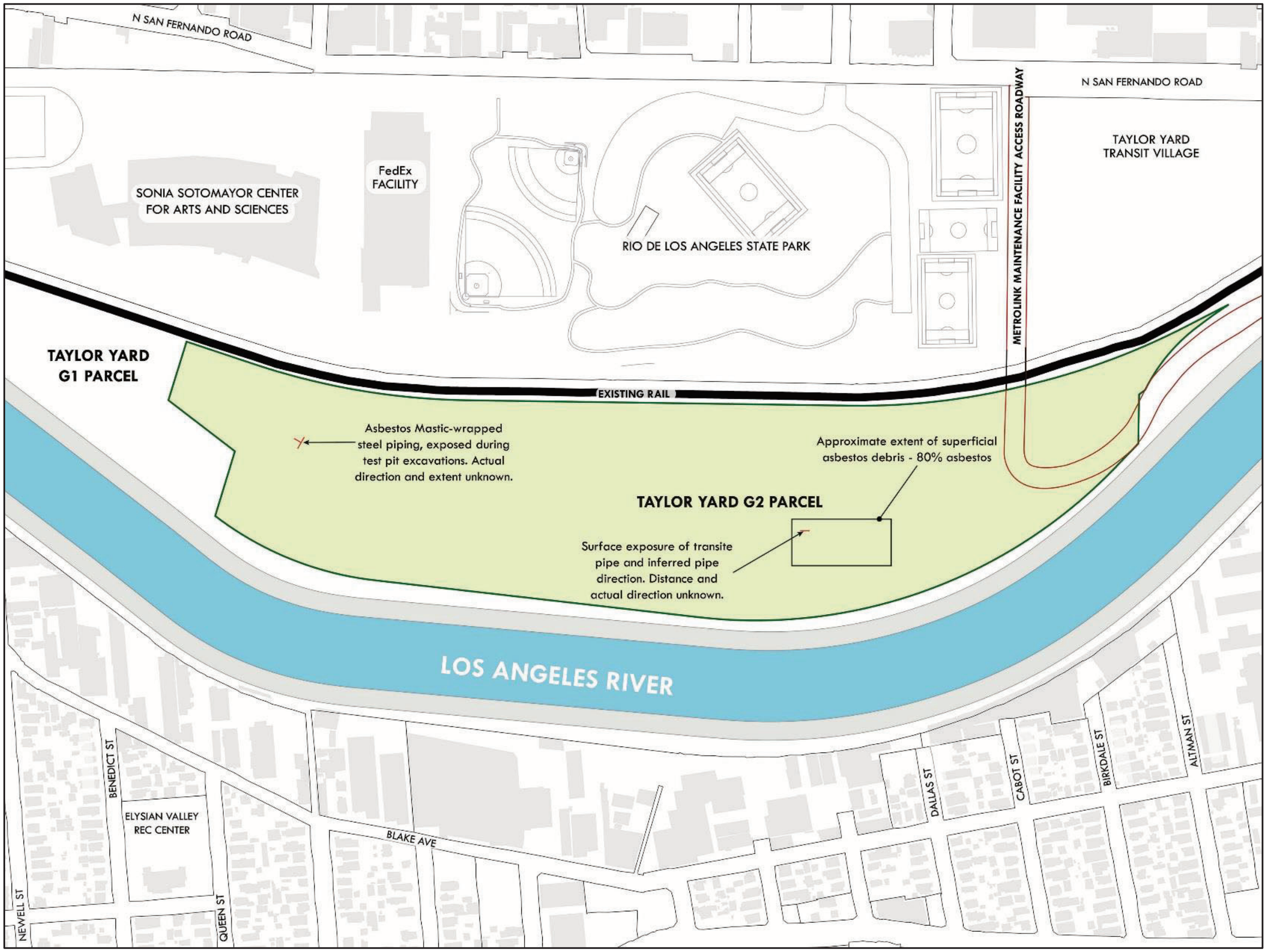
Figure 3-6. Summary of Soil Gas Results (0–10 feet bgs)



Summary of Soil Gas Results (0-10 ft)

COMPOUND	MIN (µg/m³)	MAX (µg/m³)	COLOR	Screening Level (SL) Reference
Tetrachloroethene (PCE)	460	2,000		Values are above residential DTSC SL (460 µg/m³) for PCE
	2,001	10,000		Values are above commercial DTSC SL (2000 µg/m³) for PCE
	10,001	150,000		Highest range of detected PCE values
Vinyl Chloride (VC)	9.5	160		Values are above residential DTSC SL (9.5 µg/m³) for VC
	161	1,000		Values are above commercial DTSC SL (160 µg/m³) for VC
	1,001	15,000		Highest range of detected VC values
Benzene	97	500		Values are above residential DTSC SL (97 µg/m³) for benzene
	501	1,000		Values are above commercial DTSC SL (500 µg/m³) for benzene

Figure 3-7. Summary of Asbestos Results



3.2.2 Groundwater Conditions

Historically, groundwater at the Project site was impacted by a regional contaminant plume. Land use upgradient of the Project site in the San Fernando Valley led to groundwater contamination and USEPA designation of regional groundwater contamination as a Superfund site. In general, USEPA oversees the cleanup of sites contaminated with hazardous substances under CERCLA, commonly known as Superfund. The Project site is located within the regional 5,860-acre Superfund site known as San Fernando Valley Area 4 (SFV Area 4), which is contaminated primarily with VOCs and metals. The primary treatment for SFV Area 4 is the Pollock Well Field, which is located approximately 0.5 miles northwest of the Project site. Based on recent trends, the Pollock Well Field appears to be adequately addressing migration of the regional groundwater plume to the Project site. A network of groundwater monitoring wells that are sampled annually is present on the Project site and nearby properties. Recent sampling results indicate the groundwater impacts are limited to a select few locations and contaminants. Therefore, the groundwater beneath the Project site is no longer significantly impacted by the SFV Area 4 VOC plume.

As discussed, historical use of the Project site has resulted in soil and soil gas contamination in the form of heavy metals, TPH, and VOCs. These contaminants are also present at low levels in groundwater beneath the Project site. The April 2019 sampling for groundwater beneath the Project site showed VOCs and TPH at low levels in several groundwater monitoring wells; however, only one VOC in one on-site well exceeded its California drinking water standard (i.e., maximum contaminant level). Arsenic and cadmium also exceeded their respective maximum contaminant levels in one monitoring well each on the Project site (SCST 2019).

Although the current groundwater impacts are limited, the contaminated soil conditions on the Project site raise concerns that infiltration of surface water (natural or engineered) could result in downward migration of contaminants to groundwater.

3.3 Potential Remedial Approaches

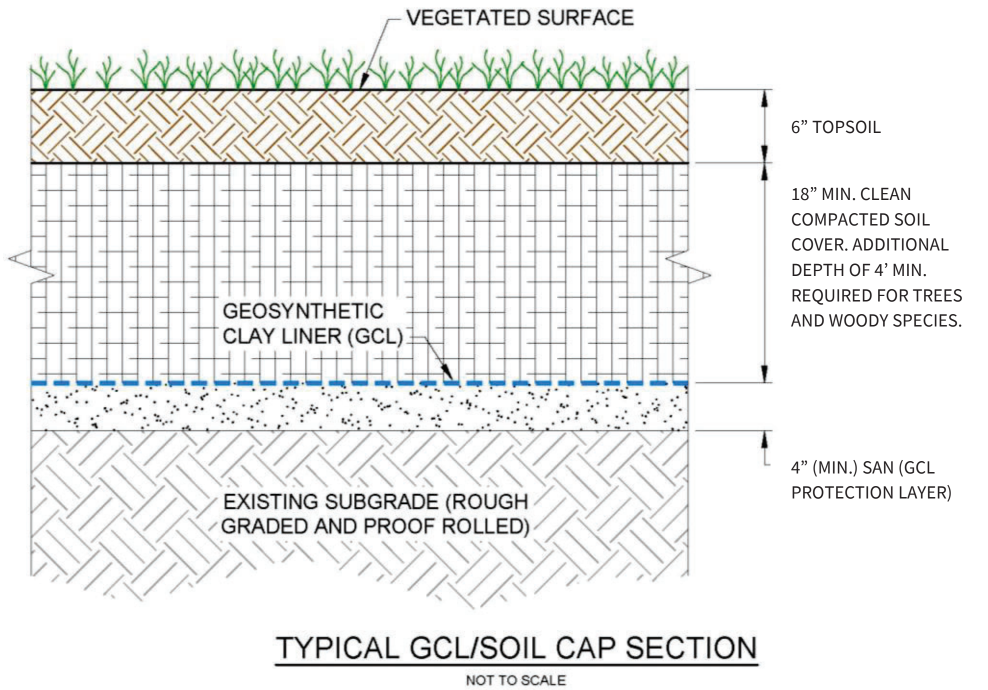
To proceed with development of the Project site that incorporates wildlife habitat, recreational open space, and water quality improvement, the City must prepare a revised cleanup plan, called a Response Plan under CLRRA, to replace the existing Remedial Action Plan. The Response Plan will identify remedial measures to eliminate and mitigate any possible human health and safety risk or exposure to the noted contaminants that best achieve the Project goals. The Response Plan will be released for public comment prior to finalization and submitted to DTSC for review and approval.

The City will work with DTSC to develop remedial approaches to achieve appropriate remediation targets suitable for future site uses, which may include:

- **Soil Removal and Disposal** – Contaminated soil is removed and transported by covered truck or train to an appropriate regulated disposal site.
- **Engineered Cap** – Contaminated soil is typically covered with clean sand, an impermeable liner, and several layers of clean soil to allow for vegetation (Figure 3-8).
- **Soil Treatments** – Contaminated soil is treated to either transform, capture, or stabilize target contaminants in-place or following excavation (e.g., microbial degradation, chemical oxidation, stabilization/solidification, phytoremediation).

- **Soil Gas Mitigation** – Mitigation of soil gas impacts using active and/or passive measures (e.g., vapor barrier, ventilation system, vapor extraction).

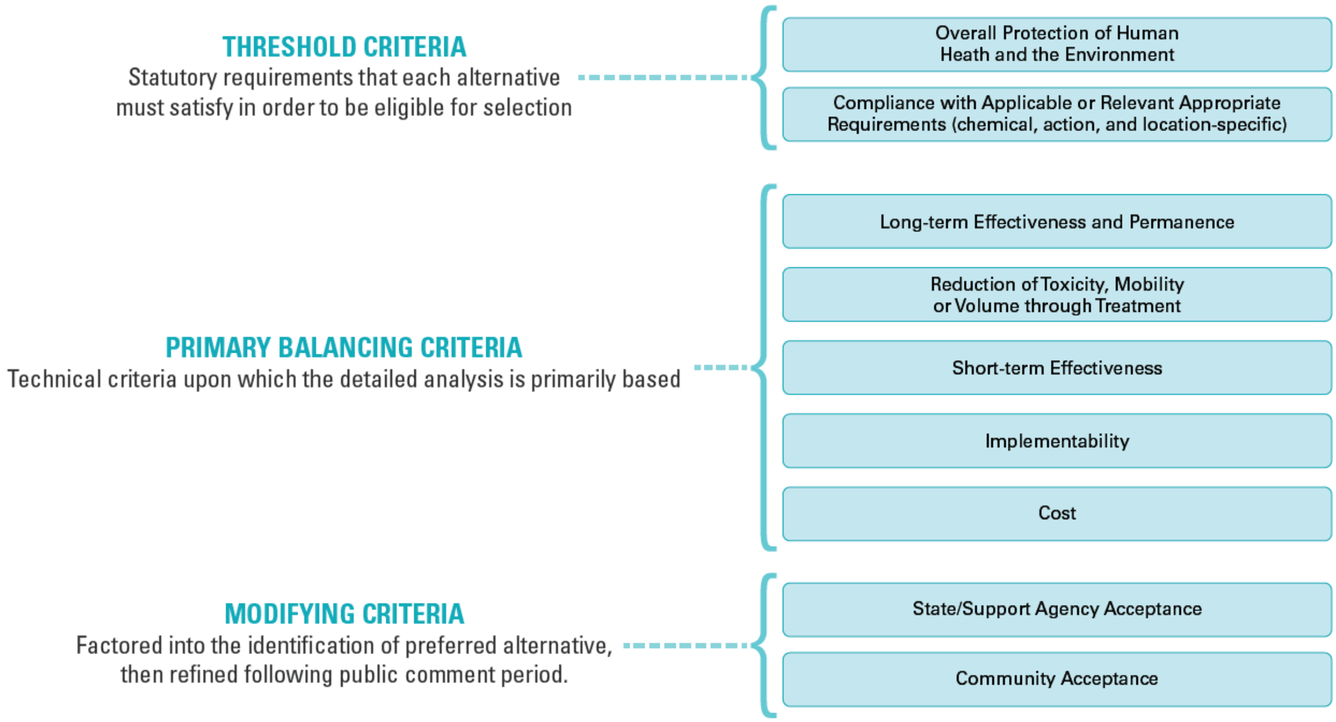
Figure 3-8. Example of Typical Engineered Cap



As a part of the Feasibility Study and development of the Response Plan for the Project, the ultimate remedial strategy will be weighed against nine USEPA-established criteria in the following categories to consider the relative benefits of each approach (also shown in Figure 3-9):

- Protection of human health and the environment
- Community acceptance
- Compliance with site-specific applicable or relevant and appropriate requirements
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume through treatment
- Short-term effectiveness
- Ability to be implemented
- Cost
- Oversight agency acceptance

Figure 3-9. Nine Factors Considered in Selecting a Preferred Remedial Alternative



Source: USEPA 1990

Each remedial approach presents a unique set of benefits and challenges. Soil removal and disposal is an effective method for remediating contaminated sites because it ensures the contaminants are removed from the site, but it is often the most expensive approach. It requires hauling the soil off-site, increasing heavy duty truck traffic in the surrounding communities, possibly for several months. Furthermore, soil removal can shift the hazard to an off-site disposal destination.

Engineered caps are designed to meet specific performance criteria and can create an effective barrier over the soil that prevents contact and stabilizes the contaminants below. The cap can include an impermeable layer that reduces water infiltration, preventing contaminant mobility and protecting the groundwater. Engineered caps require ongoing maintenance of the cap and monitoring. They also have the potential to restrict future land use.

Soil treatments can be carried out either in-situ, by leaving contaminants in place, or ex-situ, by first excavating then treating impacted site media. Treatments can be designed to either degrade, remove, or otherwise stabilize contaminants. One example of a treatment technology that may be evaluated is phytoremediation, which is the process of using living plants to stabilize, accumulate, transform, or otherwise mitigate specific contaminants. Phytoremediation has certain advantages for low to moderate levels of contamination; however, applicability and performance vary widely. Other considerations include the limited rooting depth of plants relative to vertical distribution of contaminants, the long time period and uncertainty of success, and the potential for limited access and use of a phytoremediation area during the treatment period. As with all remedial technologies, site-specific conditions must be considered holistically to determine what remedial technology or combination of technologies is best-suited to achieve the cleanup goals.

Development of the Response Plan will incorporate the most feasible, safe, and prudent approach to remediation. Remedial strategies that coincide with integral parts of the site's development, such as the foundation of a restroom building or parking lot acting as an engineered cap, may be explored further into the design phase to create efficiencies. Ultimately, the selected site design will use remedial measures that address potential human and ecological health risks from contaminants, including the potential risks to the surrounding community, future park visitors, and workers. The remedial strategy will be developed in coordination with and subject to DTSC approval. Chapter 6, *Site Planning Options*, describes possible remedial scenarios for the three site planning options.

Remediation of the Project site will represent the next phase of continuing efforts to clean up the former Taylor Yard rail complex. Subdivision, remediation, and development of parcels within the complex has allowed for continuous safe use of a school, a park, and residential and commercial facilities. Because schools and residences now surround the Project site, and the potential future site use includes a park where children and families will gather, it is imperative that the Project is designed, constructed, and operated to protect site users, the surrounding community, and ecological receptors from any negative impacts from contaminants. Future remediation of the existing contaminated soil, and how that soil contamination is addressed, are crucial Project components.

4 HIGH VOLTAGE ELECTRICAL TRANSMISSION LINES

The Project offers an outstanding opportunity to potentially remove existing concrete on the site and naturalize a significant stretch of the River's edge (City of Los Angeles 2007). A major constraint in realizing this opportunity, however, is a corridor of three, high voltage electrical transmission lines adjacent to the Project site's western edge, immediately adjacent to the River. LADWP owns and operates the power lines that are mounted on lattice towers that are approximately 100 feet tall, set back about 62 feet from the River, and include bases that are elevated about 20 feet from the River bottom. The voltage of each of the lines is 230 kilovolts (kV). These lines form one of two LADWP power corridors connecting the San Fernando Valley and the Los Angeles Basin, serving as a key connection between Los Angeles and power sources in the high desert, which include numerous wind and solar power sources that are critical in meeting the City's sustainability goals. This set of lines provides power to downtown Los Angeles. Figure 4-1 shows a segment of the existing power lines and towers at the Project site.

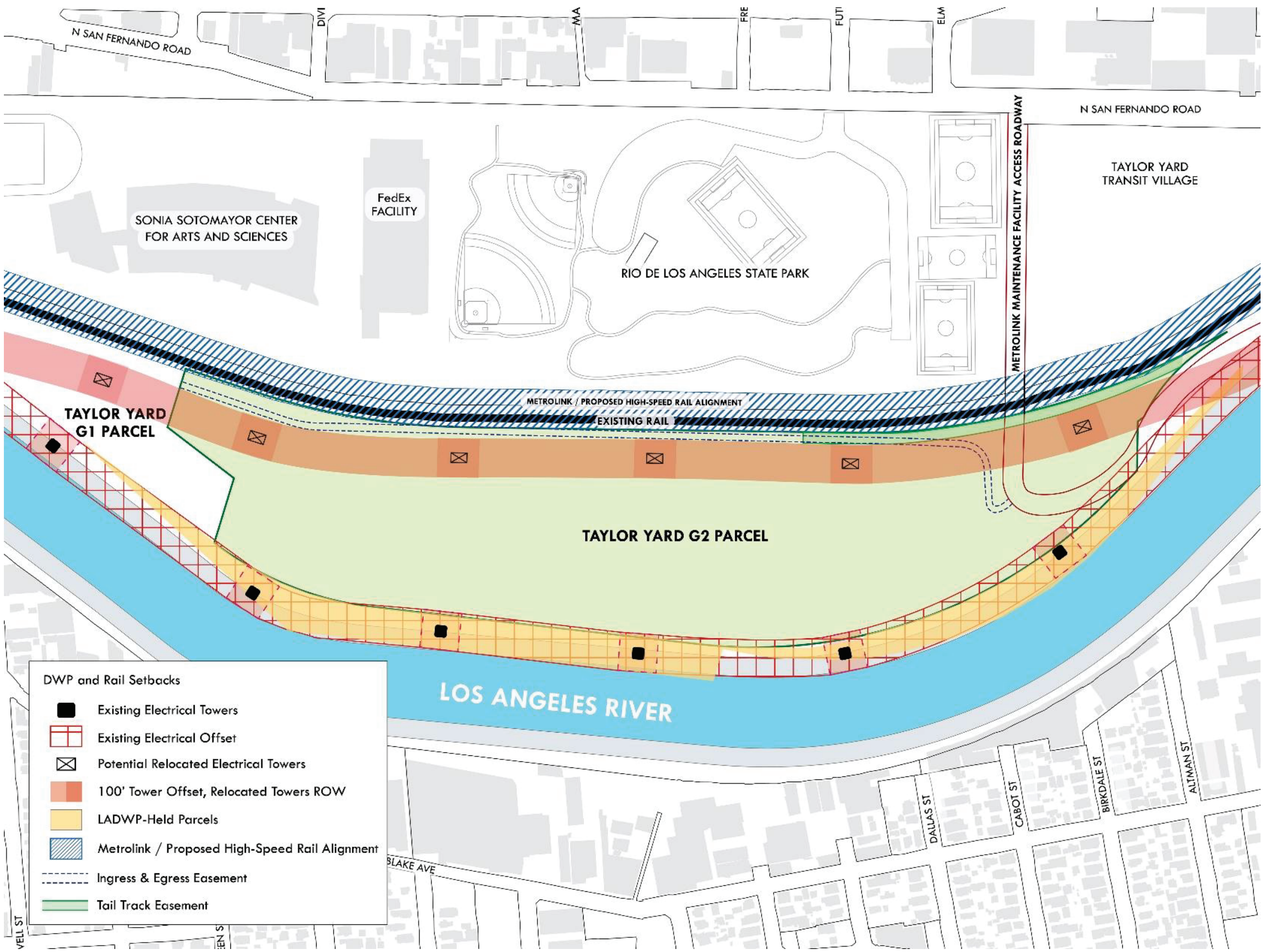
Figure 4-1. Picture of Existing Power Lines at the Project Site

Based on safety and maintenance access needs, LADWP has established guidelines and setback requirements for improvements under and around its power lines and the towers. If the power lines are maintained in their current position, access to the River from the Project site would be limited. Because the primary goals of the Project are to reestablish direct access to the River and revitalize natural habitats, the power lines likely must be relocated. BOE held several meetings with LADWP to determine the feasibility of relocating the power lines away from the River's edge. In discussing possible scenarios, it was determined that eliminating the power lines entirely would not be possible because of their crucial role in supplying renewable energy to the central City. Relocation either to the east or the west of the Project site also would be infeasible because there are no other corridors of adequate width in the vicinity to accommodate power lines and towers of this size and would require the acquisition of several private properties. Therefore, relocating the power lines to the eastern edge of the Project site appears to be the most feasible option to allow for modifying the River's edge.

Figure 4-2 shows the potential alignment for relocation of the power lines to the eastern edge of the Project site with the required offsets. This scope would involve the relocation of six towers, five relocated onto the Project site and one relocated onto the G1 parcel. It could also include replacing the aerial transmission segment with another, more compact technology. In addition to the six relocated towers, the two towers on either side of the relocated alignment would need to be reconfigured to adjust for the change in angle. The eight towers to be replaced for this potential realignment are Towers H420 through H427. Lattice (BR3-type) towers are required for the new towers because of the number of circuits and power load of this utility corridor. The alternative of using monopoles is not currently possible because current monopole designs can accommodate up to only two circuits.

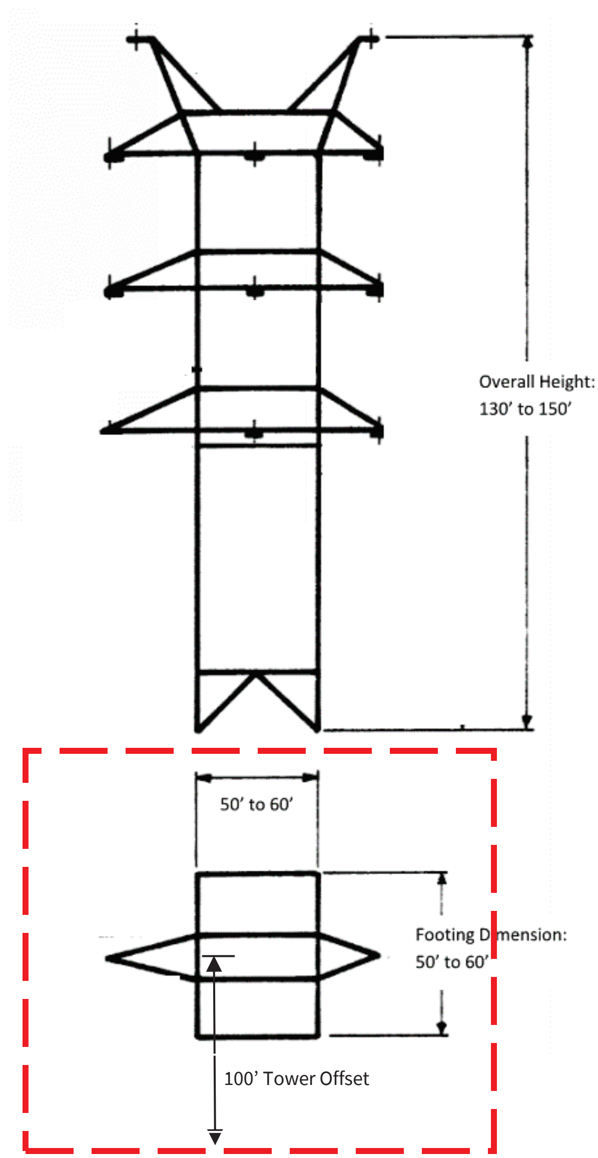
The option to underground the power lines through this stretch was also considered. Cross-linked polyethylene (XLPE) is a thermoset insulation material cable that is used for similar installations, but, according to LADWP, is nearly three to four times as expensive as maintaining overhead transmission. Access to the underground lines for regular maintenance or in an emergency is also a concern, as well as conflicts with underground utilities such as electric, gas, and water lines; existing oil and fiber optic installations; and storm drainage and sewer lines. Additionally, the size of the vault housing the underground lines would dictate, and potentially limit, the ability to make future upgrades to lines that serve as a primary backbone to the entire power distribution system for the City.

Figure 4-2. Existing and Potential Power Corridors



The approximate length of the relocated segment would be just under one mile. The relocated towers would be taller than the existing towers, about 130 to 150 feet in overall height, due to the vicinity of the rail tracks and new standards with larger ground clearance in place. The distance between towers would be 600 to 700 feet (center-to-center), and power lines could sag up to 40 feet between the towers. The footings for the new towers would extend to a depth of at least 30 feet, subject to detailed engineering design. The new lines would be constructed and established before the existing towers could be decommissioned and removed to minimize outage durations and system impacts. Figure 4-3 depicts the likely configuration of new, three-circuit lattice towers at the Project site.

Figure 4-3. Typical Three-Circuit Tower at the Project Site



The Department of Water and Power Standard Conditions for Construction provides general conditions for construction activities within LADWP ROW. Additionally, LADWP released Water and Power General Property Use Guidelines for LA River Revitalization Projects, providing common guidelines for the implementation of River projects in and around its facilities, in October 2017. Requirements for ROW and access as outlined in these documents are as follows. Tower offset requirements are measured from the edge of the nearest existing utility easement or ROW. The minimum offset is a 100-foot radius from the tower center. LADWP access road ROW must be unfettered with a minimum drivable width of 20 feet. Designs within those boundaries must be suitable to accommodate heavy machinery and equipment in compliance with American Association of State Highway and Transportation Officials (AASHTO) standards for vehicular loading H-20-44 and HL-93 (LADWP 2014).

Permanent park improvements within LADWP ROW require LADWP review and approval. Generally speaking, landscaping and walkways are permittable. Trees, if allowed, must provide 35 feet of clearance between the lowest sag point of the power lines and the top of the tree. Other fixtures such as picnic tables, fitness areas, benches, and playground equipment with a height limit of 12 feet can be considered and must be constructed of non-combustible and non-conductive materials. Stormwater or River water features may be allowed in the mid-space areas between the towers and would require a design that promotes no impounded water, soil erosion, or soil contamination in these areas and maintenance of positive drainage away from the towers (LADWP 2017).

The project to relocate the power lines, once approved, would be carried out by LADWP in coordination with BOE. Upon funding and approval of an LADWP project to relocate the power lines and towers, the project duration is estimated at two years including design and construction.

The Project site represents a unique opportunity to showcase urban River revitalization by removing the concrete and reclaiming part of the site for riverine habitat. BOE and LADWP have determined that relocating the power lines away from the River's edge to achieve that goal is feasible. The possibility of relocated power lines was therefore considered for some options during site planning option development for the Project.

5 COMMUNITY AND STAKEHOLDER ENGAGEMENT

From the start of the Project, BOE has aimed to achieve a high level of engagement by implementing a strategy to inform, educate, and engage members of the community early and often. Because of its potential to influence both the local community and the Los Angeles region, site planning option development for the Project has included a robust community and stakeholder engagement plan. A wide range of techniques was employed from traditional community and Neighborhood Council meetings to informal one-on-one or small group discussions. The formation of two Project Advisory Stakeholder Committees was an asset to the Project team by facilitating discussions with and among engaged stakeholders. Digital outreach included the development of a Project website and regular email communications to a growing stakeholder database. As a first for BOE, the team partnered with non-governmental organizations (NGOs) Mujeres de la Tierra, Friends of the Los Angeles River (FOLAR), and the Council for Watershed Health to learn and benefit from their intimate knowledge of the local and River communities. The scale of outreach achieved at this early phase of the Project has proven greatly beneficial in informing site planning option development. This chapter details the community and stakeholder engagement efforts on the Project to date.

5.1 Engagement Strategy

The community and stakeholder engagement strategy developed for the Project had the goal of connecting neighborhood, River, and watershed entities to the Project including community leaders, public interest groups, technical advisors, government agencies, environmental groups, conservancies, NGOs, and business owners. The local communities adjacent to the Project site are very engaged. Many are aware of the proposed site development and understand the impacts the Project may have in their community. River stakeholders have been defining and advancing the vision of a revitalized River for over 30 years. They have focused ideas of what that vision looks like that can sometimes diverge from one another. That said, transforming the River into an asset for the City by improving access, recreation, habitat, education, and water quality are common goals. Watershed stakeholders represent the broader Los Angeles region, including technical, political, and visionary views about the Project as a placemaking opportunity, and a major step towards creating a more livable and resilient City. Key interests for watershed stakeholders include River access, advancement of the River revitalization visions, habitat restoration, and creating a place that is uniquely Los Angeles.

A key outreach strategy was to team with NGOs that have deep roots in the local community and support the stewardship of the River and the health and resiliency of Los Angeles watersheds. These NGOs include Mujeres de la Tierra and FOLAR, organizations that understand the importance of the history of stakeholder groups and the potential synergies and conflicts among them. The execution of innovative, grassroots engagement techniques by Mujeres de la Tierra and FOLAR has been integral in creating a dialogue among community leaders and engaging interested stakeholders “where they are” in the community. A third NGO with deep ties to the River, the Council for Watershed Health, was also engaged to assist in noticing for public community events via its robust email list and website. In an additional capacity, the Council for Watershed Health identified grant opportunities for Project funding and assisted in the preparation of quarterly reports on the availability of grant funding.

Drawing from experience on other successful major projects, including development of the LARRMP, BOE understood the value of compiling a key group of stakeholders to advise the Project team through all stages of development. For this Project, two Advisory Stakeholder Committees were established: the Community Leadership Committee (CLC) and the Technical Advisory Stakeholder Committee (TASC). The purpose of the committees is to engage key interested stakeholders with the Project, benefit from the expanse of expertise represented by the members, and give members the opportunity to report Project progress back to their respective organizations. CLC comprises community leaders including representatives of surrounding Neighborhood Councils, advocacy groups, schools, athletic organizations, and other volunteer-based groups. TASC comprises primarily staff representing agencies and technical organizations relevant to Project development and representatives from local, State, and federal elected offices. The initial composition of the committees was based on input from Mujeres de la Tierra, FOLAR, Council District 1, and the Mayor's Office. Once formed, committee members were also asked to nominate additional participants. The first two committee meetings were held in separate sessions on the same day, and the content reviewed by both committees was identical. It became clear that allowing the groups to engage together would be beneficial, so the remainder of the meetings were held in a combined setting. After receiving feedback from the committees, the meetings were often followed by a general community meeting where the same information was shared with the public.

A series of community meetings, workshops, and site tours became the major touch points with the public throughout site planning option development. These engagement events were typically held to share new information or to gather feedback at decision points. In some cases, meetings were held in response to a specific request from the community. Noticing for the events was done through community canvassing with flyers and door hangers, posting flyers at local businesses and schools, digital notifications on the Project website and to the project email list, and amplification by NGO team members. The community surrounding the Project site is largely Spanish speaking so noticing efforts were conducted in both English and Spanish. Live Spanish-language interpreting was offered for all public events, and additional language accommodation was made available upon request. Further detail on each of the events is provided in the following section.

Additionally, stakeholder engagement has included coordination with key agency partners to gain technical insight, understand regulatory and permit requirements, and garner support for the Project. Regular meetings are held with DTSC at the staff and executive levels to discuss future activities at the Project site and coordinate outreach efforts. Consultations with USACE are ongoing regarding site planning option development to confirm consistency with the objectives of the Ecosystem Plan and discuss potential approval requirements. The Project team has also had several discussions with the County of Los Angeles regarding flood risk management within the Glendale Narrows. Discussion and coordination with State Parks began early to ensure a consistency in planning efforts with the G1 parcel and Rio de Los Angeles State Park. Discussions on ways to more formally coordinate the development of nature-focused open space and facilities in the larger Taylor Yard area are ongoing with State Parks and MRCA which, as an easement holder with goals closely aligned with the City's goals, has been an integral member of the Project team.

5.2 Engagement Events

To date, a total of five community meetings, five TASC and CLC meetings, and nine site tours have been held for the Project. Additionally, representatives from the Project team have attended a total of 18 Neighborhood Council meetings for adjacent communities and three Alliance of River Communities meetings to provide periodic Project updates.

Table 5-1 includes a summary of the community and stakeholder engagement events. Additionally, Appendix B of this report provides a detailed list of the canvassing efforts, Project emails, events hosted in partnership with NGO team members, and other Project communications.

Table 5-1. Engagement Events for the Project

Event Type	Date	Subject	Participants (approx.)
Community Meeting	09/13/17	Consultant team selection	200
TASC Meeting	12/06/17 (afternoon)	TASC kick-off	30
CLC Meeting	12/06/17 (evening)	CLC kick-off	20
Community Site Tour	01/20/18	Self-guided public site tour	250
Community Meeting	01/24/18	Site planning option workshop	300
Community Survey	01/24/18 – 03/09/18	Online and print survey of community expectations and desires for the Project	1,300
TASC Meeting	09/06/18 (afternoon)	Project update, community survey results, site assessments update, water quality, site planning options	15
CLC Meeting	09/06/18 (evening)	Project update, community survey results, site assessments update, water quality, site planning options	10
Community Meeting	10/04/18	Project update, community survey results, site assessments update, water quality, site planning options	300
Neighborhood Council Meeting	10/09/18	Project updates to the Greater Cypress Park Neighborhood Council	20
Neighborhood Council Meeting	10/10/18	Project updates to the Elysian Valley Riverside Neighborhood Council	20

Event Type	Date	Subject	Participants (approx.)
Neighborhood Council Meeting	10/11/18	Project updates to Atwater Village Neighborhood Council	30
Neighborhood Council Meeting	10/16/18	Project updates to the Glassell Park Neighborhood Council	30
Neighborhood Council Meeting	10/18/18	Project updates to the Lincoln Heights Neighborhood Council	50
Combined TASC/CLC Meeting	11/06/18	Habitat, Ecosystem Plan objectives, draft Los Angeles Biodiversity Index	40
Update to the Alliance of River Communities	11/19/18	Project update to the Alliance of River Communities	20
Community Meeting	12/05/18	Site assessments	70
Neighborhood Council Meeting	01/09/19	Project updates to the Greater Cypress Park Neighborhood Council	20
Neighborhood Council Meeting	01/10/19	Project updates to the Elysian Valley Riverside Neighborhood Council	20
Neighborhood Council Meeting	01/11/19	Project updates to Atwater Village Neighborhood Council	30
Neighborhood Council Meeting	01/16/19	Project updates to the Glassell Park Neighborhood Council	30
Neighborhood Council Meeting	01/18/19	Project updates to the Lincoln Heights Neighborhood Council	50
Update to the Alliance of River Communities	02/25/19	Project updates to the Alliance of River Communities	20
Combined TASC/CLC Meeting	03/07/19	Site assessments, remediation options, stormwater, River hydrology and hydraulics, ecology/habitat restoration	40
Neighborhood Council Meeting	03/12/19	Project updates to the Greater Cypress Park Neighborhood Council	30
Neighborhood Council Meeting	03/14/19	Project updates to Atwater Village Neighborhood Council	20
Neighborhood Council Meeting	04/09/19	Project updates to the Greater Cypress Park Neighborhood Council	30
Neighborhood Council Meeting	04/11/19	Project updates to Atwater Village Neighborhood Council	20

Event Type	Date	Subject	Participants (approx.)
Neighborhood Council Meeting	04/17/19	Project updates to the Glassell Park Neighborhood Council	30
Combined TASC/CLC Meeting	04/29/19	Review of refined site planning options	20
Site Tour	05/15/19	Spanish-language site tour for leaders from within the community	20
Community Meeting	05/18/19	Results of site assessments, workshop on refined site planning options	200
Site Tour	06/19/19	Site tour for members of local Neighborhood Councils	6
Site Tour	07/17/19	Site tour for members of local youth sports organizations	6
Site Tour	08/21/19	Site tour for members of TASC and CLC	9
Site Tour	09/25/19	Site tour for members of the local indigenous tribes	30
Neighborhood Council Meeting	10/08/19	Project updates to the Greater Cypress Park Neighborhood Council	30
Neighborhood Council Meeting	10/10/19	Project updates to Atwater Village Neighborhood Council	20
Neighborhood Council Meeting	10/15/19	Project updates to the Glassell Park Neighborhood Council	30
Site Tour	10/30/19	Site tour for City's Municipal Facilities Committee	20
Site Tour	11/07/19	Site tour for State representatives and staff	20
Update to the Alliance of River Communities	11/18/19	Project updates to the Alliance of River Communities	30
Site Tour	12/12/19	Site tour for National Brownfields Training Conference	50

Various Dates – Neighborhood Council and Alliance of River Communities Meetings

Throughout the Project process, BOE periodically attended Neighborhood Council meetings and provided Project updates for the adjacent communities of Cypress Park, Glassell Park, Atwater Village, Lincoln Heights, and Elysian Valley. BOE also provided updates at meetings for the Alliance of River Communities, a regional alliance of 14 East and Northeast Los Angeles Neighborhood Councils along the River. Table 5-1 lists these meetings.

September 13, 2017 – Community Meeting

Public participation began on the Project in September 2017 when BOE solicited community feedback in the selection of the consultant team that would assist in the initial technical studies and site planning option development. A meeting was held on the evening of September 13th at the Media Center for the three consultant team finalists to present their ideas and qualifications to the public, and 160 ballots were cast. The results of the polling were used by the selection panel in their deliberations. The selection panel consisted of representatives from five City agencies including BOE, LADWP, LASAN, RAP, and the Department of Cultural Affairs. MRCA and the State Coastal Conservancy were also on the selection panel.

December 6, 2017 – Advisory Stakeholder Committees Meetings

The kick-off meeting for the Advisory Stakeholder Committees was held on December 6, 2017. Members of TASC attended an afternoon session, and members of CLC attended the evening session. The presentation by BOE provided an overview of the Project including site history and context, the status of funding, the process for site planning option development, and a preliminary Project schedule. Committee members were made aware of the public community events that were scheduled for January.

There was also a discussion with committee members regarding the duties of their respective committees, which included regular meeting attendance, keeping the City aware of issues that need to be addressed, and reporting constituent's feedback and ideas back to the committee. The objective of the committees was to provide guidance and advice to the City on the progress of the Project and the development of the site planning options.

January 20, 2018 – Site Tour

The community site tour on January 20, 2018, was the first opportunity for members of the public to enter the site, learn about the Project, and become actively engaged in the visioning process for nature-focused development at the Project site. More than 250 community members attended the Saturday morning tour in which attendees visited five staffed stations at their own pace. Station 1 was for a check-in table to sign in, receive a Project fact sheet and tour map, and familiarize themselves with the disclaimers for entering the site. Station 2 was at the River's edge and focused on the background, geography, and history of River revitalization efforts. Station 3 discussed the history and characteristics of the Project site. Station 4 provided an overview of the contamination and possible remedial actions, and Station 5 discussed the next steps and schedule for the Project. Photos from the site tour are in Figure 5-1.

Attendees ranged from students, sports teams, families, industry professionals, business owners, advocacy groups, community leaders, and many others. The high attendance, support, and active engagement of participants at this public event set the tone for the engagement campaign that would follow.

Figure 5-1. Photos from the January 20, 2018, Community Site Tour

January 24, 2018 – Community Meeting

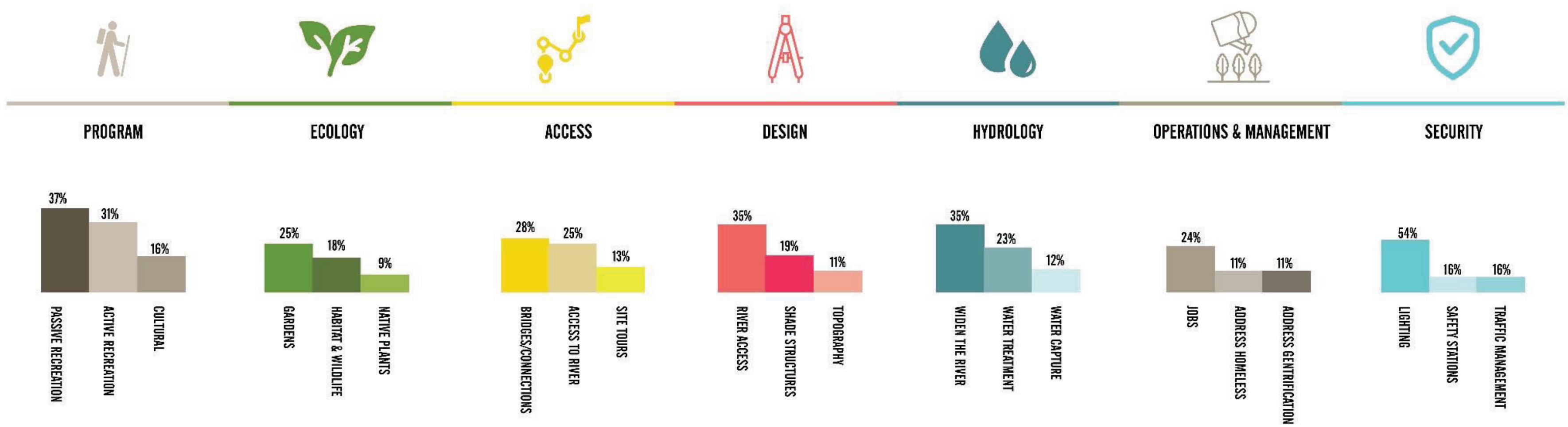
A community meeting and site planning option workshop was held on January 24, 2018, in the multi-purpose room at the Sonia Sotomayor Center for Arts and Sciences. More than 300 people attended the meeting. It started with an informative presentation that included site history, a recap of previous studies on the site, River revitalization efforts, and an overview of the Project process and goals.

Following the presentation, attendees were given the opportunity to engage in a hands-on workshop. They broke out into tables staffed by Project team members and shared ideas on what they would like to see at the site. At the end of the workshop, a representative from each of the break-out tables summarized the input from their discussions. Photos from the community meeting and workshop are in Figure 5-2.

The feedback from the table exercise was collected after the meeting and categorized by the Project team for incorporation into the development of the site planning options. Figure 5-3 shows a summary of the feedback received.

Figure 5-2. Photos from the January 24, 2018, Community Meeting

Figure 5-3. Summary of January 24, 2018, Community Workshop Feedback



* ABOVE CHARTS REPRESENT THE TOP THREE RESPONSE CATEGORIES

January 24, 2018, to March 9, 2018 – Community Survey

The community meeting and workshop on January 24th served as the kick-off for a community survey. Offered in print at many community events and online through the Project website in both English and Spanish, the survey sought to understand community expectations and desires for the Project with over 1,300 responses. More detail and the results of the community survey are found in Section 5.3.

September 6, 2018 – Advisory Stakeholder Committees Meetings

The Advisory Stakeholder Committees reconvened on September 6, 2018, for status updates on various Project activities. Members of TASC attended an afternoon session, and members of CLC attended the evening session. The presentation from the Project team discussed the site assessments field work, a preliminary analysis of stormwater quality improvement opportunities, a review of the findings of the community input received at the January 24th community meeting and workshop and through the community survey, and the first look at the three initial site planning options under development. There was open discussion on the topics at both the TASC and CLC meetings to provide feedback ahead of the upcoming public community meeting.

October 4, 2018 – Community Meeting

The community meeting on the evening of October 4, 2018, was held at the Los Angeles River Center and Gardens. The presentation by the Project team reviewed the information previously presented to the Advisory Stakeholder Committees including the initiation of site assessments field work, a preliminary analysis of water quality improvement opportunities, and an overview of the community input received to date.

Approximately 300 community members were in attendance including a large group from local youth athletic organizations. The open discussion at the meeting focused on two major community priorities: (1) concern surrounding site contamination, and (2) desire for additional and improved athletic fields in the community.

In response to the discussions at this meeting, BOE scheduled a follow-up community discussion in December specifically about site contamination and the site assessments field work. Additionally, BOE initiated coordination with Council District 1, State Parks, and RAP to find a way to respond to the community need for improved athletic fields. RAP and Council District 1 would later hold a series of meetings in June 2019 regarding improvements at the Rio de Los Angeles State Park as a potential solution.

November 6, 2018 – Advisory Stakeholder Committees Meeting

On November 6, 2018, the Project team held a combined Advisory Stakeholder Committees meeting to discuss the ecosystem, habitat, biodiversity goals, and the methods being used to evaluate those goals. USACE and LASAN's biodiversity team co-presented with BOE at this meeting.

Committee members were asked to come prepared with their primary questions and thoughts regarding habitat restoration at the Project site. Discussions included a diverse array of themes including site access, utility management, habitat evaluation, Project development cost and schedule, remediation, organized recreation, and other topics. The Project team made note of the discussions of the meeting to be able to review, analyze, and address further at subsequent meetings.

December 5, 2018 – Community Meeting

On the evening of December 5, 2018, approximately 70 people attended a community discussion at the Los Angeles River Center and Gardens on site contamination and the site assessments that were conducted at the Project site during the summer of 2018. DTSC co-presented with BOE at this meeting. Topics included details on the previous site use and history, legacy contamination, results of previous studies, an overview of the DTSC investigation and cleanup process, and a review of the safety precautions carried out during sampling. Results from the site assessments were not yet available at the time of this meeting, so the Project team noted that the results would be presented at a subsequent meeting.

In addition to the presentation by the DTSC and City teams, open-house style sessions before and after the presentations allowed attendees to speak individually with experts and view exhibits of the equipment used onsite during sampling, maps of the sampling locations, and videos of soil sampling techniques. The meeting resulted in in-depth discussions regarding the site assessments and a better overall understanding of the process.

March 7, 2019 – Advisory Stakeholder Committees Meeting

On March 7, 2019, TASC and CLC met in a combined meeting to review the latest Project information including the sequencing of site development, the results of the site assessments, potential site remediation options, stormwater quality improvement opportunities, river hydrology and hydraulics, and habitat restoration and ecology.

River hydrology and hydraulics and site remediation options were the primary focus during open discussion. Committee members had a clear understanding of the flood management and hydrology and hydraulics challenges of this location along the River and offered their suggestions. The main comments regarding the options for site remediation were to ensure the health and safety of the surrounding communities, and to make sure the site is remediated in a way that allows for nature-focused open space. Comments from the committee members were noted and considered further by the Project team.

April 29, 2019 – Advisory Stakeholder Committees Meeting

On April 29, 2019, another combined meeting of TASC and CLC was held to preview the three refined site planning options being considered for the Project, ahead of a larger community workshop scheduled in May. The Project team gave a presentation detailing the background and considerations that went into the refined site planning options. The meeting then broke into three tables, one table per site planning option, for a closer review and to provide input on each option. This allowed Project team members and the committee members to engage in smaller discussions to gain more focused feedback. Key feedback revolved around maintenance, safety, and security of the park and affordable programming. Photos from the meeting are in Figure 5-4.

Figure 5-4. Photos from the April 29, 2019, Advisory Stakeholder Committees Meeting

May 15, 2019 – Site Tour

On May 15, 2019, BOE kicked off a series of small site tours aimed to familiarize targeted groups with the Project site. The series began with a Spanish-language tour for community leaders primarily based out of the adjacent Cypress Park and Glassell Park neighborhoods. Participants entered the site from the access roadway and walked approximately 500 feet into the site, then down to the River's edge. Discussions focused on general visioning for site development, the timeline for the Project, and reiterated concerns regarding site contamination and remediation. The tour was a good opportunity for community leaders to either visit or revisit the Project site prior to a community meeting scheduled for the following weekend. Photos from the tour are in Figure 5-5.

Figure 5-5. Photos from the May 15, 2019, Site Tour

May 18, 2019 – Community Meeting

On Saturday morning, May 18, 2019, a community meeting was held in the multi-purpose room at the Sonia Sotomayor Center for Arts and Sciences. The meeting, which included approximately 200 attendees, was split into two sessions. At 9:00 AM, BOE and DTSC co-presented the results of the site assessments, discussed potential options for site remediation, and answered community questions. At 10:00 AM, the meeting transitioned into a presentation and workshop on the refined three site planning options. Comments received from the interactive workshop and comment cards were largely supportive of the Project with many asking for specific features and design considerations to be included. Comments included the desire for contiguous open space and connections with the G1 parcel and Rio de Los Angeles State Park, requesting further analysis on the location of access bridges, and questions regarding remediation and River hydrology and hydraulics. Figure 5-6 shows photos from the community meeting.

Figure 5-6. Photos from the May 18, 2019, Community Meeting

June 19, 2019 – Site Tour

On June 19, 2019, a site tour was held for members of the adjacent Neighborhood Councils. A small group of representatives walked the tour route and discussed Project visioning and concerns.

July 17, 2019 – Site Tour

On July 17, 2019, a site tour was held for members of the local youth athletic organizations. A small group of leaders, coaches, and parents walked the tour route and discussed Project visioning and concerns.

August 21, 2019 – Site Tour

On August 21, 2019, a site tour was held for members of the Advisory Stakeholder Committees. A group of committee members walked the tour route and discussed Project visioning and concerns.

September 25, 2019 – Site Tour

On September 25, 2019, a site tour was held for members of the local indigenous communities. A small group of representatives walked the tour route and discussed Project visioning and concerns. A blessing of the land was performed (Figure 5-7).

Figure 5-7. Photo of Aztec Dancers Blessing the Land

October 30, 2019 – Site Tour

On October 30, 2019, a site tour was held for members and staff of the Project's City oversight committee called the Municipal Facilities Committee to discuss the Project and upcoming needs.

November 7, 2019 – Site Tour

On November 7, 2019, a site tour was held for members and staff of the State legislature to discuss the Project, identify challenges, and garner support.

December 12, 2019 – Site Tour

On December 12, 2019, a site tour was held as part of the National Brownfields Training Conference co-hosted by USEPA and the International City Managers' Association.

Site tours continue monthly for community and stakeholder groups with interest in the Project.

BOE intends to continue to interact and engage the community as the Project progresses into future phases of development. In addition to the events discussed in this section, many other small focus group meetings have been held since site planning option development began to discuss specific issues such as athletic field improvements, contamination and site assessments, design, and the Project's community engagement strategy.

5.3 Community Survey

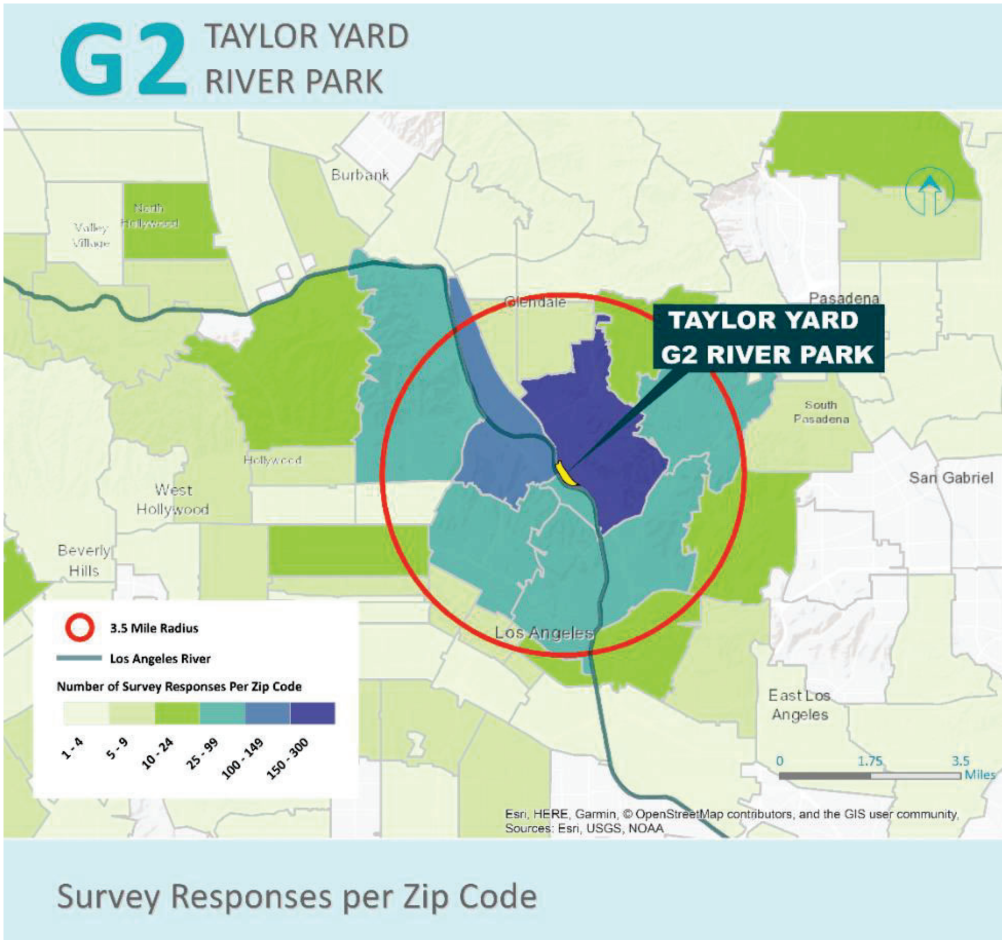
5.3.1 Survey Implementation

Between January and March 2018, the Project team administered a print and online survey focused on gathering the community's input and ideas on design components for site development and Project implementation. The survey, provided in English and Spanish, contained 23 questions that were a combination of multiple choice, yes/no, and open-ended questions.

The survey results were used to help the Project team understand the type of park features and activities most important to the community and guide site planning option development of the Project site. The survey was first distributed at the January 24, 2018, community meeting. Shortly after the meeting, the survey was made available online on the Project website, emailed to the Project's contact database, promoted on the Project team members' social media platforms, and taken to several community events. The survey was originally set to close on March 1, 2018, but due to high demand, BOE extended the deadline to March 9, 2018. In total, the survey received 1,321 responses.

Zip code data were collected to track the responses by area and vicinity to the Project site. Of the 1,321 responses, 290 individual responses (or 22% of the total response pool) were located within the Project's zip code, 90065. Approximately 500 additional surveys were gathered from zip codes within a 3.5-mile radius of the Project site. When combined with the zip code 90065, 59% of total responses received were reported from within a 3.5-mile radius of the Project site (Figure 5-8). Overall, 189 unique zip codes were represented, indicating a broad interest in the Project. Appendix C of this report has the full Community Survey Summary Report.

Figure 5-8. Community Survey Responses by Zip Code (3.5-Mile Radius)

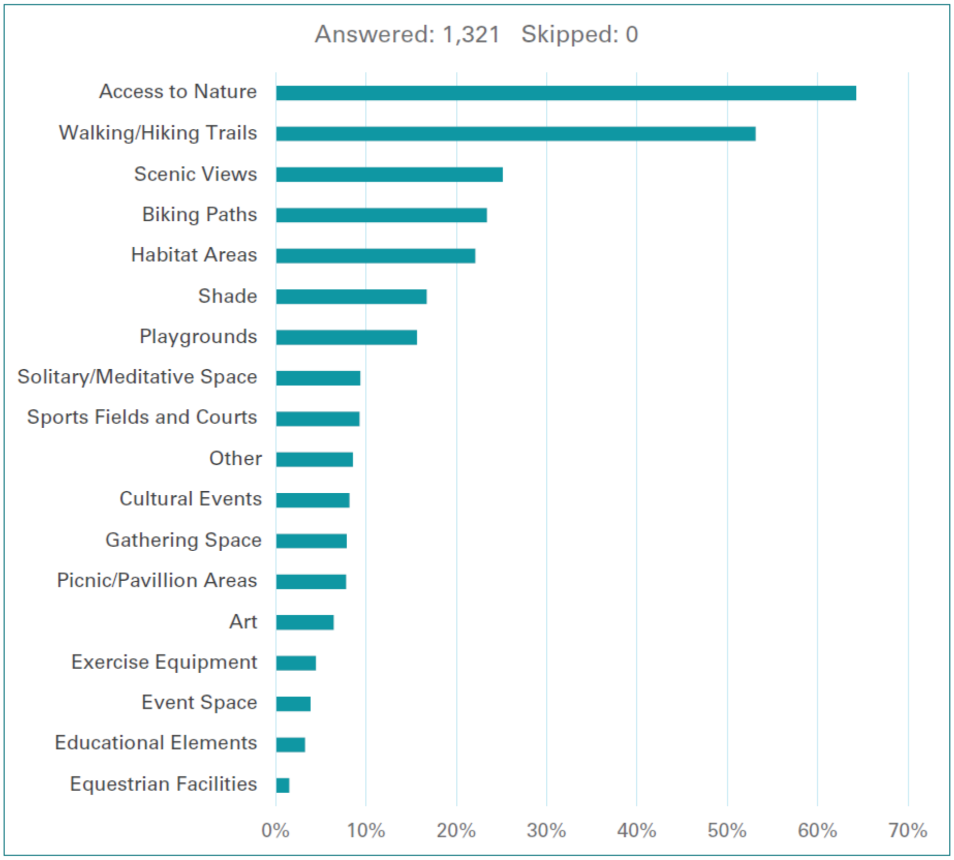


5.3.2 Survey Results

The survey aimed to understand the community's expectations and desires for the Project site. The following is a selection of response data that highlights preferred features, natural space and wildlife habitat, activities and recreational elements, and structures.

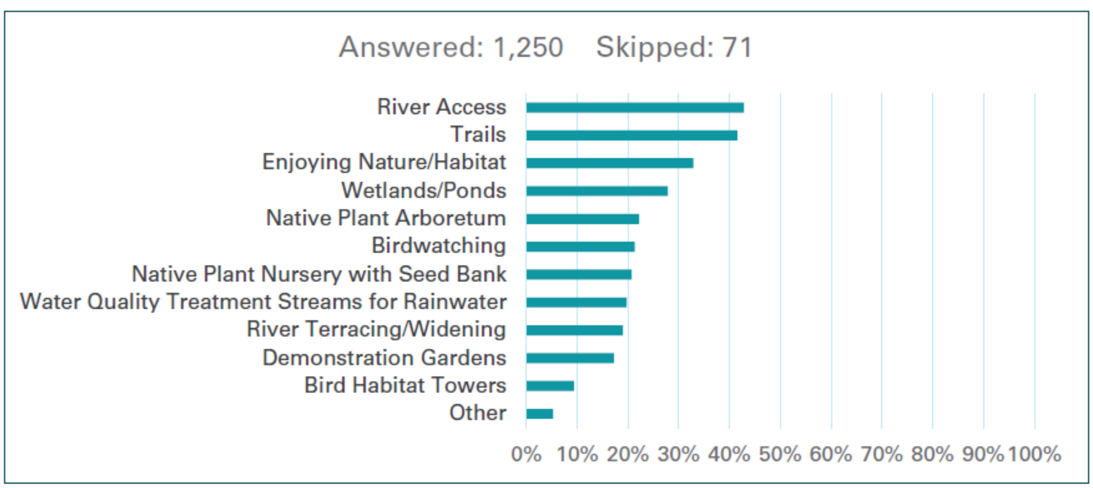
Respondents were asked to select their top three favorite features of existing parks they visit. Answers indicated a preference for passive-type recreation that provides opportunities to access nature, trails for walking and hiking, and wildlife observation. Figure 5-9 illustrates the responses received.

Figure 5-9. Survey Responses – Favorite Park Features



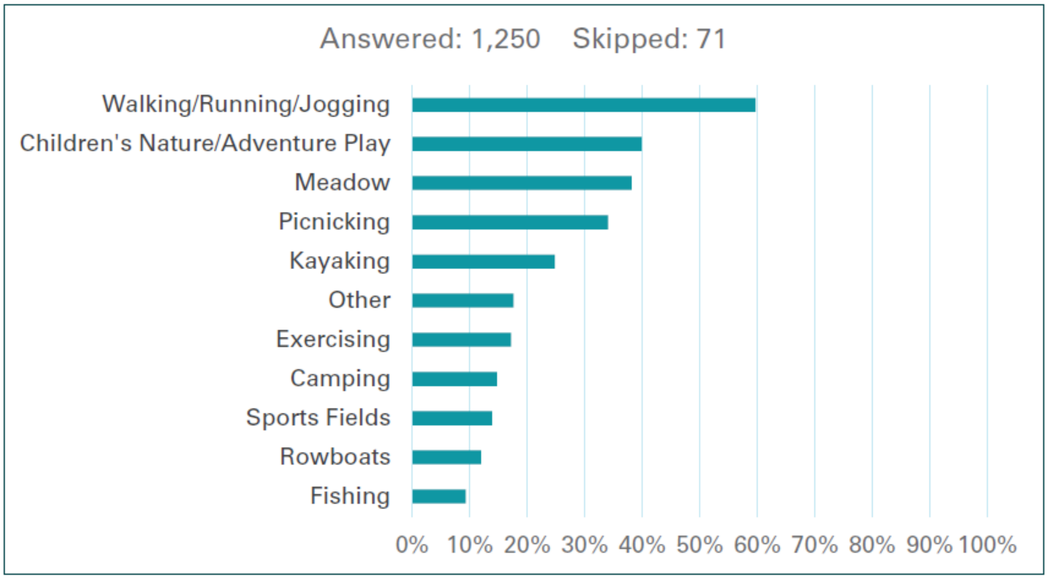
In a question that asked the type of natural space and wildlife habitat features respondents would like to see for this Project, answers demonstrated an understanding of the importance of the site's location on the River; access to the River and a focus on the history of the River ranked very high in survey results (Figure 5-10).

Figure 5-10. Survey Responses – Natural Space/Wildlife Habitat



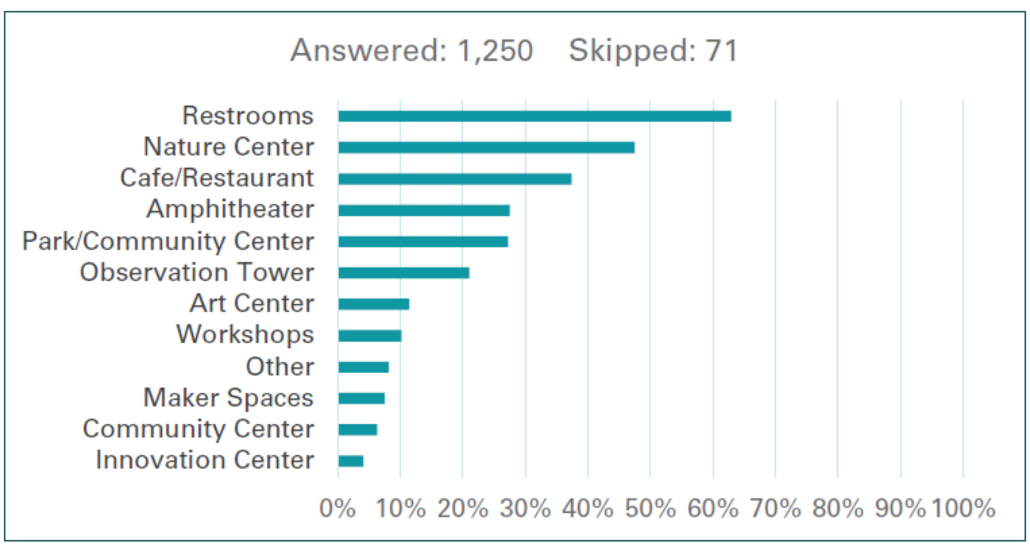
When respondents were asked to select preferred activities and recreation elements for the Project, walking/running/jogging, children's nature and adventure play, meadow, and picnicking spaces were among the top selections (Figure 5-11).

Figure 5-11. Survey Responses – Recreation Elements



Preferred structures for the Project include restrooms with a notably high selection with 63% of responses, followed by a nature center at 48%, and café/restaurants at 37% (Figure 5-12).

Figure 5-12. Survey Responses - Structures



The community survey demonstrated the following key findings:

- **Nature** – Respondents have a high interest in natural components such as open space, trails, and habitat.
- **Recreation** – Outdoor recreation including walking, hiking, and cycling ranked high.

- **River** – Respondents overwhelmingly reported familiarity with the River, and results showed a high interest in River interactions and education.
- Overall, the robust amount of input provided by the community through this survey gave the Project team clear insight into community expectations and desires for features, activities, and site uses. The responses have been referenced to guide the Project team throughout site planning option development.

5.4 Digital Communications

5.4.1 Project Website

BOE created a dedicated Project website, which was established and launched in early 2018. TaylorYardRiverProjects.LAcity.org functions as a hub for Project information and relevant links and currently hosts all public documents created for the Project, including fact sheets, meeting notices, news releases, and digital versions of all presentation materials from past stakeholder and community meetings. An online photo gallery shares photos from community events. The website also includes a form that allows users to self-subscribe to the Project's email list. According to the web analytics, the Project website averages approximately 350 active users per month.

5.4.2 Project Email Database

BOE created an email database to establish regular email communications with members of the community who have engaged with the Project either by attending a community meeting, or by signing up for the email list through the Project website or at a community event.

Since creation of the database, more than 1,400 subscribers have been added. Consistent Project email updates and notifications have been sent to the entire list, and amplified by Mujeres de la Tierra and FOLAR, including meeting notices, community survey information, notifications about activities at the site, and other information relevant to the Project. Email communications are also the primary contact medium for coordination with the Advisory Stakeholder Committees.

5.5 Grassroots Outreach

In addition to the community and stakeholder engagement events, innovative, grassroots engagement techniques initiated by NGO team members have concentrated on creating a dialogue among community leaders and engaging interested stakeholders "where they are" in the community. Mujeres de la Tierra has spear-headed initiatives such as: Spanish-language pláticas; targeted community canvassing; pop-up events to provide Project information at local high-traffic locations, such as grocery stores and libraries; an exhibit at the Cypress Park Branch Library; and individual meetings with local indigenous tribes, school faculty, tenant organizations, and business owners. FOLAR conceptualized the use of its River Rover, a mobile classroom that educates youth about the River in a fun and hands-on manner, to distribute Project information at a variety of events. This type of engagement has been invaluable in spreading awareness throughout the community and making BOE aware of and accountable to community opinion. Figure 5-13 highlights some of the innovative engagement strategies used for the Project.

Figure 5-13. Photos of Innovative Engagement Strategies

Mujeres de la Tierra Día de los Muertos Community Procession

November 1, 2017

Canvassing by Bike on the River Bike Path

Pop-Up Event at Super A Foods in Cypress Park

May 31, 2019

Display at the Cypress Park Branch Library

5.6 Results

The Project has garnered and maintained a level of engagement rarely seen on public projects. Because of this high level of interest in the Project, BOE has developed an engagement approach that incorporates various strategies to foster consistent Project communication and a building of rapport with the community.

In advancing the Project to the next phases, BOE will rely on this network of community members, advocates, technical experts, agency partners, Neighborhood Councils, grassroots organizers, and other interested parties to ensure that the goals of the Project are met with the combined input of neighborhood, River, and watershed communities.

6 SITE PLANNING OPTIONS

6.1 Development of Site Planning Options

Within the context of the previous planning efforts for the Project site, BOE began this effort to understand the possibilities of the Project site in October 2017. In recognition of the historic and potentially catalytic nature of the Project, and the many goals and objectives identified, BOE used a collaborative approach to development of the site planning options. The initial goal of site planning option development was to explore three visionary opportunities for the Project site. Once on paper, the team would alter and refine the site planning options based on identified constraints and multiple feedback cycles to integrate community and stakeholder needs. The Project team tested ideas using this approach and hosted several design workshops with stakeholders. The goal of the workshops was to foster discussion, organize priorities, define and evaluate opportunities and constraints, test ideas and strategies, build preliminary tools, and develop three feasible site planning options. The entire multi-disciplinary team attended these workshops, including members of the NGO outreach team, to benefit from the full range of knowledge and experience represented.

The following methodology to develop site planning options was implemented using a collaborative approach with City staff and stakeholders:

- Develop statement of goals and objectives
- Generate ideas and concepts
- Identify and evaluate opportunities and constraints
- Develop initial site planning options for review and refinement

Each step of this methodology is described in the following sections.

6.1.1 Develop Statement of Goals and Objectives

The Project team started by developing a preliminary vision statement and organizing a preliminary set of goals and objectives to inform the site planning option development. The goals and objectives were largely derived from the long-established open space and River revitalization efforts in previous plans. Once compiled, the statement of goals and objectives, provided in Section 1.4, was shared widely among stakeholders and the public for comment.

6.1.2 Generate Ideas and Concepts

The Project team identified key design aspects to test how ideas and concepts could come together to achieve the Project's goals and objectives.

- **Landform/Topography** – There is a potential to create a series of high and low points, detention ponds, swales, and/or braided stream channels on the site to emulate the historical features that likely existed on the site. The team considered the Ecosystem Plan, which called for widening the River into the Project site approximately 300 feet, and the placemaking potential of the landform to create a destination. Using excavated soil to create a base for topographic features as a part of the soil remediation solution could also be incorporated.

- **Connectivity** – The Project team considered the benefits of the new Taylor Yard Bicycle and Pedestrian Bridge in connecting neighborhoods and wildlife across the River, and how those benefits could be further enhanced by another crossing at the north end of the site. Access to Rio de Los Angeles State Park and the G1 parcel is also key to connectivity. The connection to Rio de Los Angeles State Park could provide access to the Project for the students of the Sotomayor Center for Arts and Sciences; residents from the Taylor Yard Transit Village, which includes a senior housing complex; and other park patrons.
- **Water** – The Project team considered how to incorporate green infrastructure strategies, stormwater quality improvements to ensure compatibility with the City's Enhanced Watershed Management Program for the River, and how River water would interact with the site.
- **Ecology** – A variety of native plantings and habitats achieved through topography and terracing is essential to enhance ecosystem function, achieve the Ecosystem Plan's goals of a threefold improvement in habitat, and act as a steppingstone to connect the Project site to the surrounding ecosystems from the ocean to the mountains.
- **Experience** – The Project team explored opportunities to provide diverse user experiences to explore nature, relax, play, and learn by providing gathering spaces, promenades and trails, areas of shade and sun, River interaction, and places for play and education. Results from the extensive efforts of the community and stakeholder engagement efforts were prioritized including nature, recreation, River, and safety. Determining the types of facilities and programming necessary to accommodate those goals is key, and how spaces could have multiple functions. Creating a place that could draw repeated visits by incorporating a variety of activities or programming that can change at intervals was also a consideration.

6.1.3 Identify and Evaluate Opportunities and Constraints

The Project team developed a series of site maps and technical memoranda that evaluated the site constraints and considerations. The major considerations during site planning option development are summarized as follows and illustrated in Figure 6-1:

- Existing utility and rail easements along the east edge of the site that must remain accessible, and the multi-purpose easement owned by MRCA at the north end of the site
- The LADWP power lines that currently run along the Riverbank that would need to be relocated to lower the Riverbank
- The site remediation strategy to restore this blighted property by achieving cleanup standards approved by DTSC to be protective of human health and the environment for all site users, including park workers, visitors, and the surrounding residents
- River widening as conceptualized in the Ecosystem Plan
- Existing rail lines and future plans for CAHSR
- Limited pedestrian and vehicular access to the Project site and opportunities for connectivity (Figure 6-2)
- Soil and groundwater conditions that may reduce the effectiveness for flood storage and infiltration
- River hydrology and hydraulics that cannot be impacted by Project implementation

Figure 6-1. Map of Site Constraints

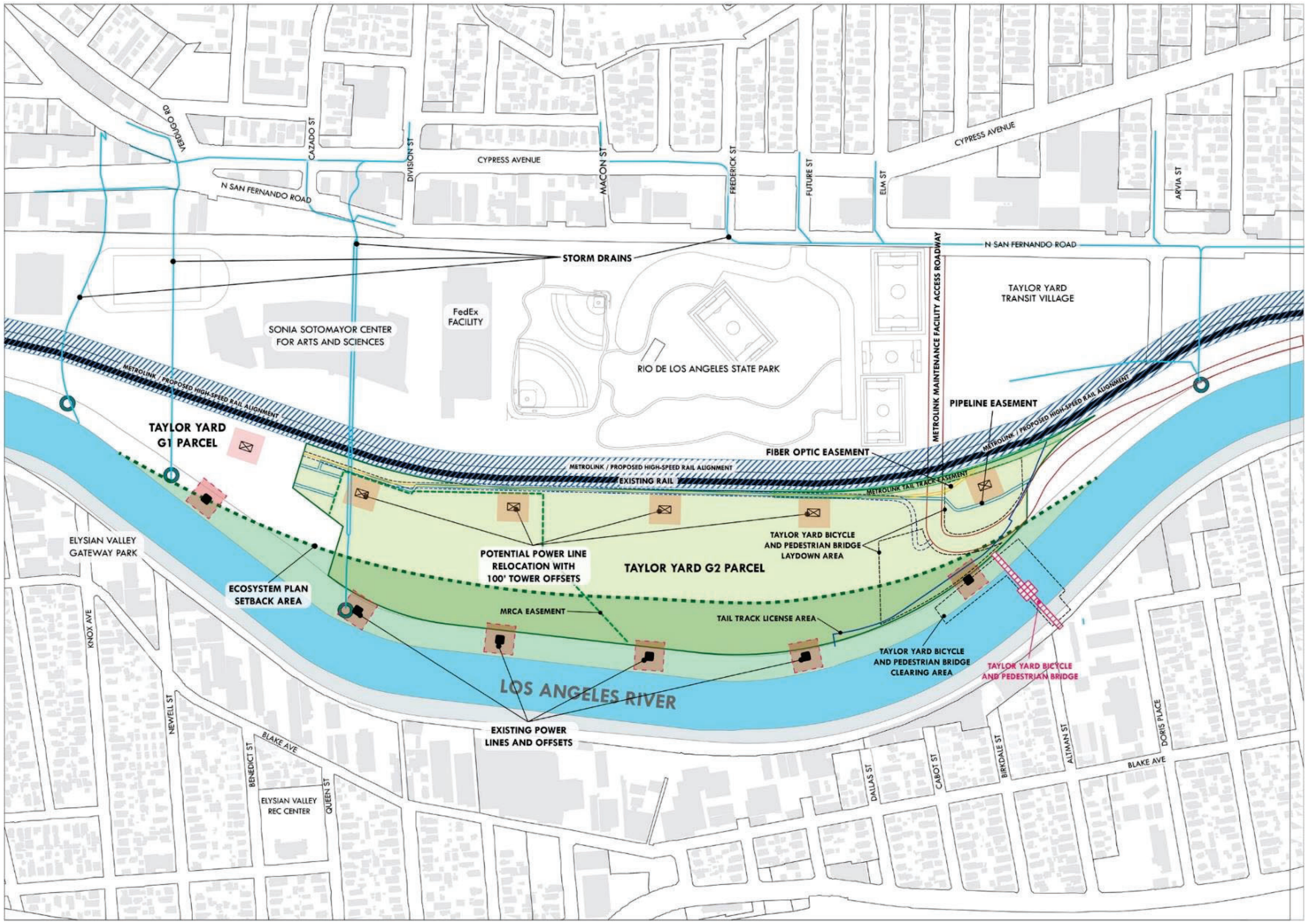
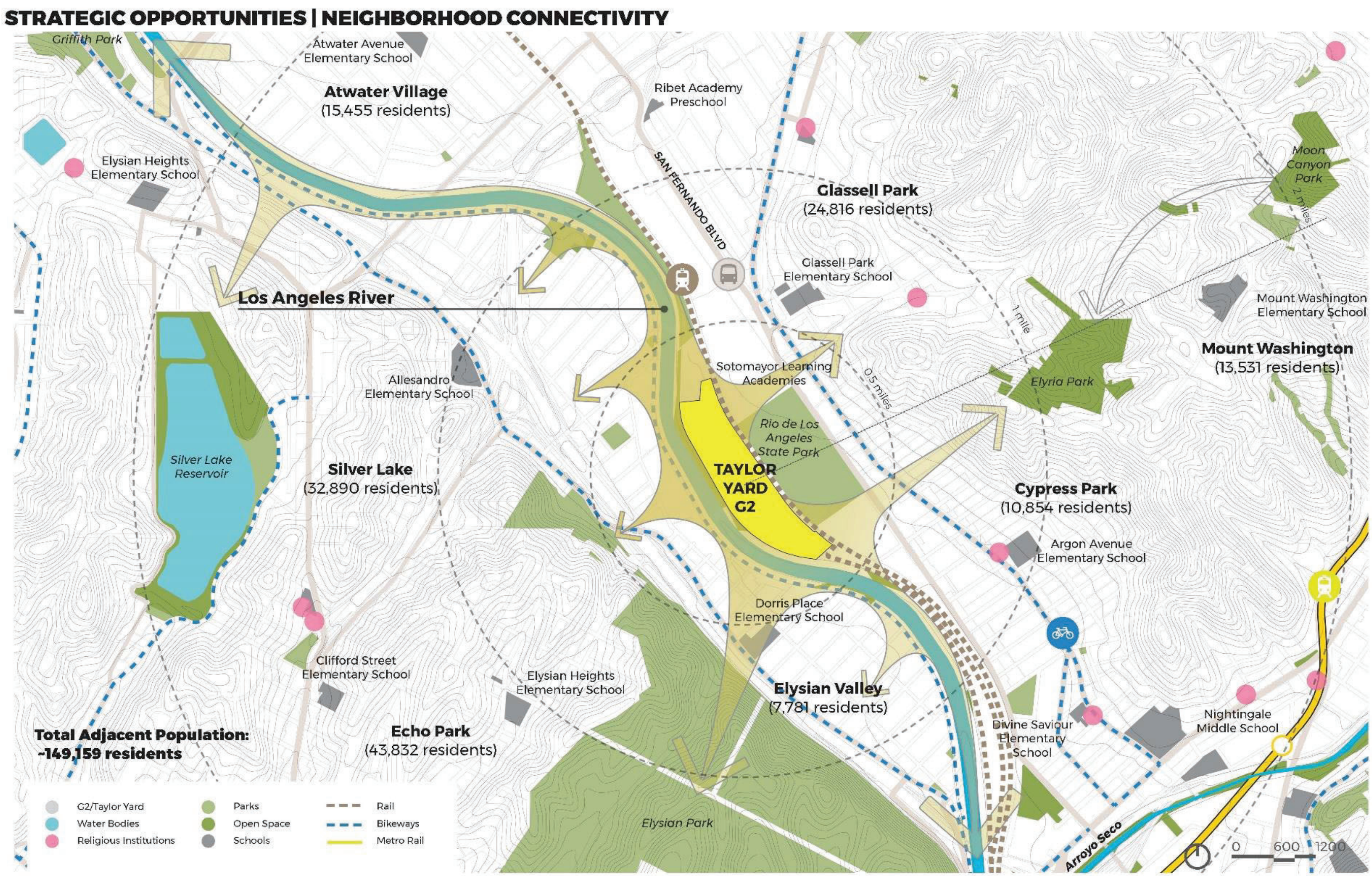


Figure 6-2. Opportunities for Connectivity Around the Project Site



In addition, the MRCA easement, which encompasses a 12.5-acre area on the northern end of the Project site, is dedicated to the purposes of environmental remediation, habitat restoration, public access and recreation, and open space preservation. All proposed uses on the MRCA easement must align with these goals.

Working with these constraints and opportunities in mind, the Project team developed and evaluated preliminary design ideas and elements to achieve the Project goals and objectives. During workshops, the Project team compared each of the design elements to help identify the most suitable uses and activities for the site. The overarching themes of urban ecology, people, and history were also used to help organize the elements and create three initial site planning options.

6.1.4 Develop Initial Site Planning Options for Review and Refinement

The Project team's first iteration of site planning option exploration resulted in three schemes that aligned with the Ecosystem Plan habitat goals, mimicked more natural River geomorphology, reflected input from the community and stakeholders, and responded to the site constraints and considerations. The Project team also identified opportunities to connect to Rio de Los Angeles State Park and the G1 parcel that were consistent with objectives to create 100 acres of open space. The three initial site planning options, shared publicly in October 2018, were called One Island, Soft Edge, and Three Islands.

One Island

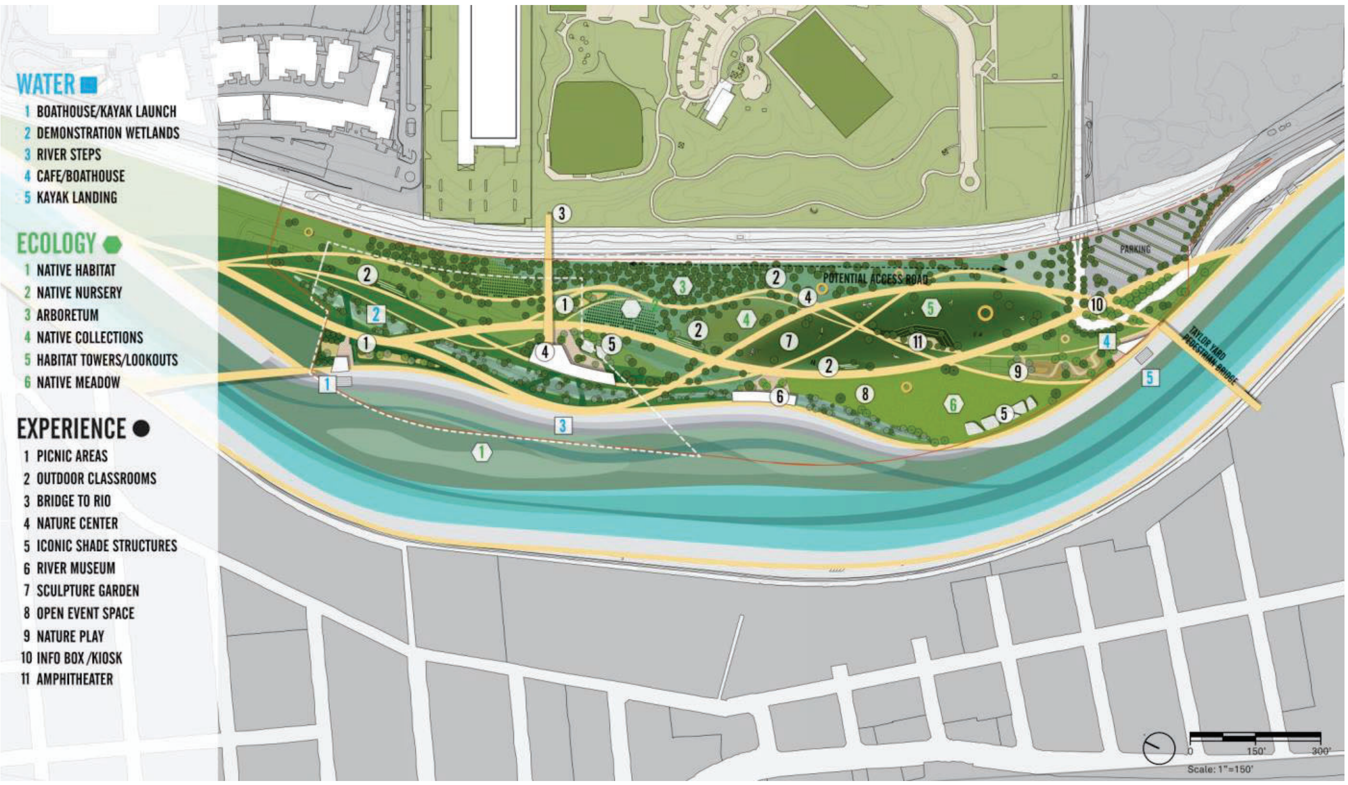
The initial One Island site planning option (Figure 6-3) imagines an ecological island in the River. In this scheme, the site is "re-engineered" to allow for recreation, development, and ecologies to establish and grow over time. Forms and geometries mimic the historic braided path formed by the natural flow of water in the River. The site planning option for One Island proposes breaking the channel edge at the upstream edge of the Project site's property line and creating an ecological island in the River, which can be viewed from an elevated pathway above, as a destination to remember. Most of the programmable space within the Project site remains, to allow for a balance in hydrologic benefit, habitat creation, and community parkland.

Figure 6-3. Initial Site Planning Option - One Island

Soft Edge

The initial site planning option for Soft Edge (Figure 6-4) mimics historic natural processes combined with the future resilient solutions. The park exposes traces of the River's historic natural processes (erosion, sedimentation, meandering water) and balances them with engineered solutions. A layered experience of the site's past, present, and future ecologies is interwoven with human programs. This scheme peels back the channel edge to create a series of floodable terraces and meandering pathways and focuses heavily on creating a gradient of riparian habitat to maximize biodiversity on the site.

Figure 6-4. Initial Site Planning Option – Soft Edge



Three Islands

The Three Islands site planning option (Figure 6-5) explores cutting back the channel edge to the line identified in the Ecosystem Plan and creating three in-channel armored habitat islands. Opening the channel and creating a series of ecological islands allows for multiple terraces for stormwater treatment. Although these islands are still iconic in nature, they are less programmed than other areas of the site. This option represents the most ambitious option to pull back the channel edge and greatly reduces the area of programmable space within the Project site.

Figure 6-5. Initial Site Planning Option – Three Islands

These three initial site planning options provided a basis to begin a technical vetting by the Project team and to present to stakeholders and the community for feedback. Based on initial evaluations, it was decided that Three Islands would not be feasible because of the capital cost of constructing three armored islands in the River, the hydraulic complexities of creating multiple split flows around the islands, and the space limitations for accommodating programming. The Three Island site planning option was therefore not further pursued.

6.2 Refined Site Planning Options

Based on the initial site planning option vetting, the Island and Soft Edge site planning options were further developed and refined with new technical data collected at the same time. A new option was conceived to replace the Three Islands scheme, known as The Yards. Acknowledging the complexities of modifying River hydrology and hydraulics (further discussed in Chapter 7, *River Hydraulics and Flood Management*, of this report) and relocating the power lines away from the River's edge, BOE used The Yards scheme to understand the possibilities of a nature-focused open space with the objective of meeting the habitat goals of the Ecosystem Plan without modifying the River's edge.

The refined site planning options presented in this section – Island, Soft Edge, and The Yards – are the result of an iterative and comprehensive planning option development process. As planning options, they are intended to provide a broad outline of the function and form of the Project and conceptualize how design elements might interact in different ways. The three refined site planning options vary in River's edge condition, topography, and the placement of programmable spaces. They each analyze circulation including connections to Rio de Los Angeles State Park, Elysian Valley, and the G1 parcel; incorporate a stormwater bioretention best management practice (BMP) feature; and include the same or very similar site features. Each refined site planning option also shows approximately 4.5 acres of building footprint of facilities for community-driven programming, including a park office and ranger station, kayak launch and small café, recreational camping and restroom, youth enrichment center, café, research building, museum/cultural center, public facility, restaurant, and kayak landing with another small café and information kiosk. The buildings incorporate sustainable and nature-friendly strategies such as green roofs, habitat towers, and native landscaping.

6.2.1 Island

The Island refined site planning option uses the creation of an island to provide a unique moment in the River where the public can experience the River up close. In this planning option, the existing power lines and towers are relocated to an alignment on the east side of the Project site to allow for the reshaping of the site's western edge. The River channel is then re-formed to create an island that separates River flows, mimics fluvial geomorphic processes of deposition and erosion, and provides multiple layers of riparian and upland habitat per the objectives of the Ecosystem Plan. The forms and geometries of this option reinterpret the City's historic modes of managing the River – channel, bridge, and a long paseo – and overlay those tools with a more porous and naturalized approach. From the island, the site moves eastwards as a series of ecologies that allow for the blending of scientific research, programmed areas, recreation, and habitat.

Island – Site Features and Program Elements

Site features and program elements for the Island option (shown in Figure 6-6) include:

- Sycamore Grove – Native sycamore grove located adjacent to the channel edge
- Discovery Play – Nature play area for children and youth
- Meadow – Open meadow area with large shade trees intended for flexible program use
- Willow Upland – A layer of the riparian woodland containing the greatest potential for biodiversity and providing critical habitat for migratory birds
- Low Flow Walkway – Seasonal access to the island dependent on water level
- The Island – Largely protected habitat island within the River channel with opportunities for ecological research
- River Exhibition Pavilion – Open air pavilion for River-related exhibitions and viewing
- Canal – Bioretention BMP with floating islands and flexible play areas

- River Deck – Series of occupiable terraces and plazas along the River's edge
- Native Plant Collections – Native plant collections and demonstration gardens
- Bridge – Central bridge and promenade through the site and crossing to Elysian Valley
- Sculpture Garden – Sculpture display along the banks of the canal linking the youth enrichment center with the research building and museum/cultural center
- Amphitheater – Indoor/outdoor amphitheater associated with the museum/cultural center
- Large Hill – A large landform providing a vista offering 360-degree views of the surrounding neighborhoods and City containing the arboretum and sculpture garden
- Vista – Viewing platform of the confluence of the canal and the River, one of the richest biodiversity locations at the site
- Parking – Parking lot that accommodates 400 parking spaces
- Taylor Yard Bicycle and Pedestrian Bridge – Bridge currently under construction from Elysian Valley to the Project site for bicycles and pedestrians

In this option, topography on the site is dramatically altered by using the excavation from the new island channel to construct a large hill at the south end of the site, creating an element of hide-and-reveal for visitors entering from the parking lot. Primary site circulation is through broad promenades that evoke a braided stream with the spaces between walkways containing varying types of habitat. The structures in this option explore a "bridging over" design strategy with a pathway connecting the youth enrichment center and river exhibition pavilion to the canal, island channel, and island to allow viewing with minimal habitat disruption. The rail crossing to connect the Project to Rio de Los Angeles State Park is a pedestrian overpass that connects one of the parking lots at Rio de Los Angeles State Park to the museum/cultural center and research building. This site planning option enlarges the footprint of the Project site and creates a high potential for biodiversity with the creation of the ecological island in the River.

Figure 6-7 depicts the sectional profiles at the southern and northern areas of the Project which highlight the reshaping of the channel. The current channel profile is delineated by a pink dashed line. In Section A, the newly formed landscape is shown as a grey massing and depicts the reformed River channel and edge condition and introduces the island and bridge to Elysian Valley. Section B depicts the canal and its confluence with the River as well as the new large hill as a topographic feature.

Figure 6-8 through 6-10 provide three-dimensional (3D) massing models of the Island site planning option looking north, south, and east. Figure 6-11 depicts a realistic aerial view of the Island site planning option.

Figure 6-12 and Figure 6-13 show the physical models that were prepared for all three site planning options.

Figure 6-6. Site Planning Option – Island

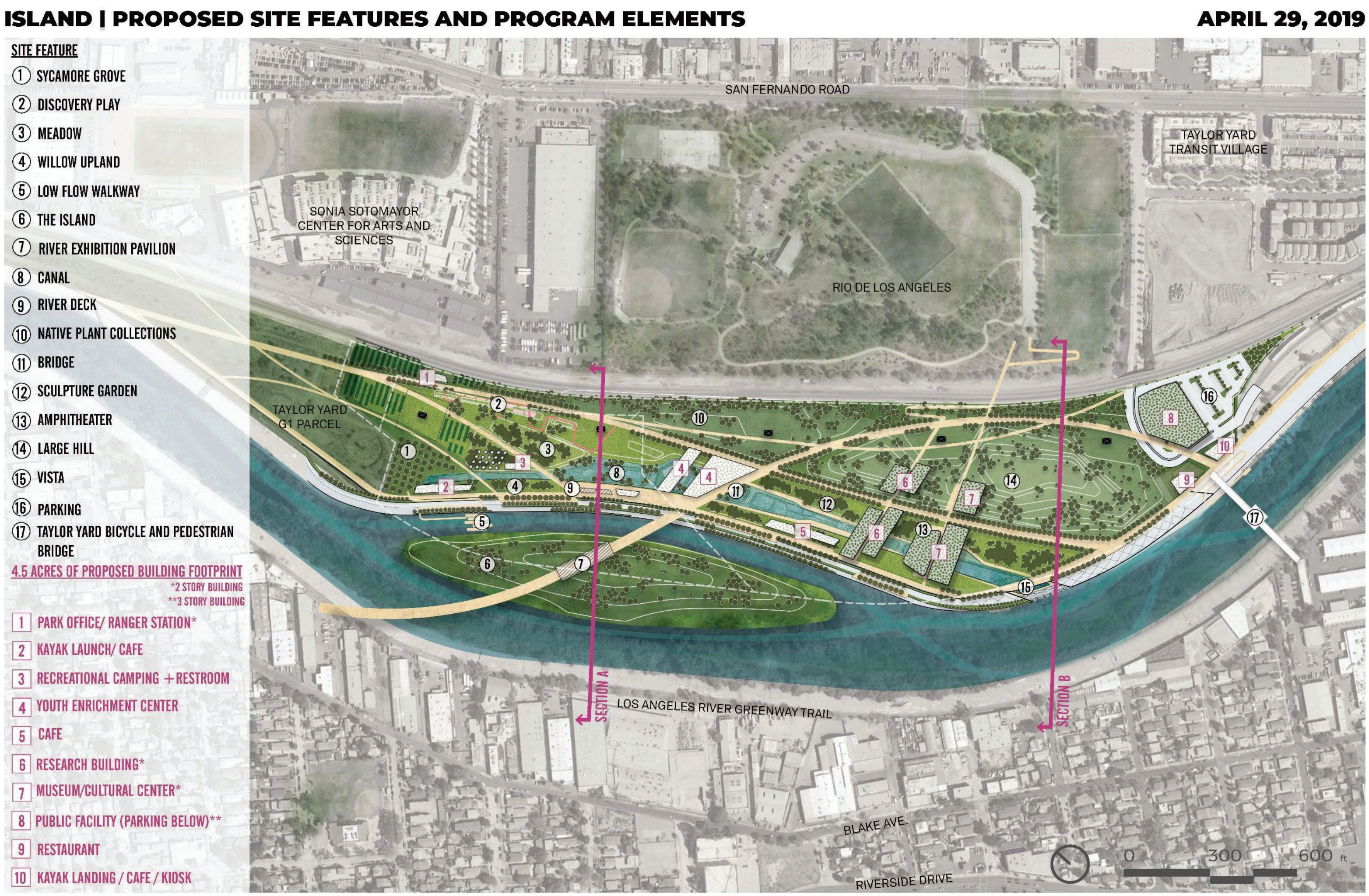


Figure 6-7. Site Planning Option Sections – Island

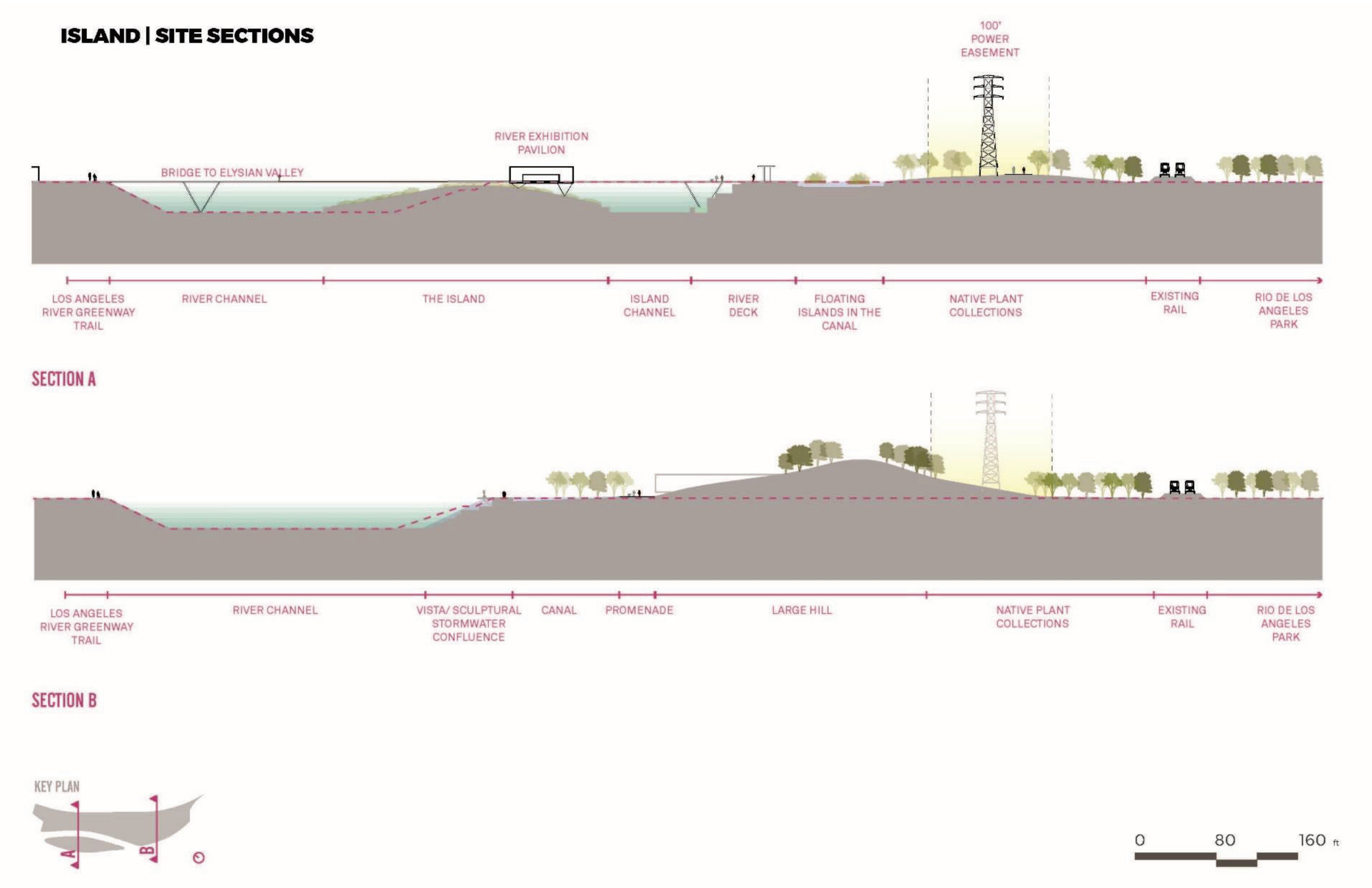


Figure 6-8. Island Site Planning Option– 3D View Looking North

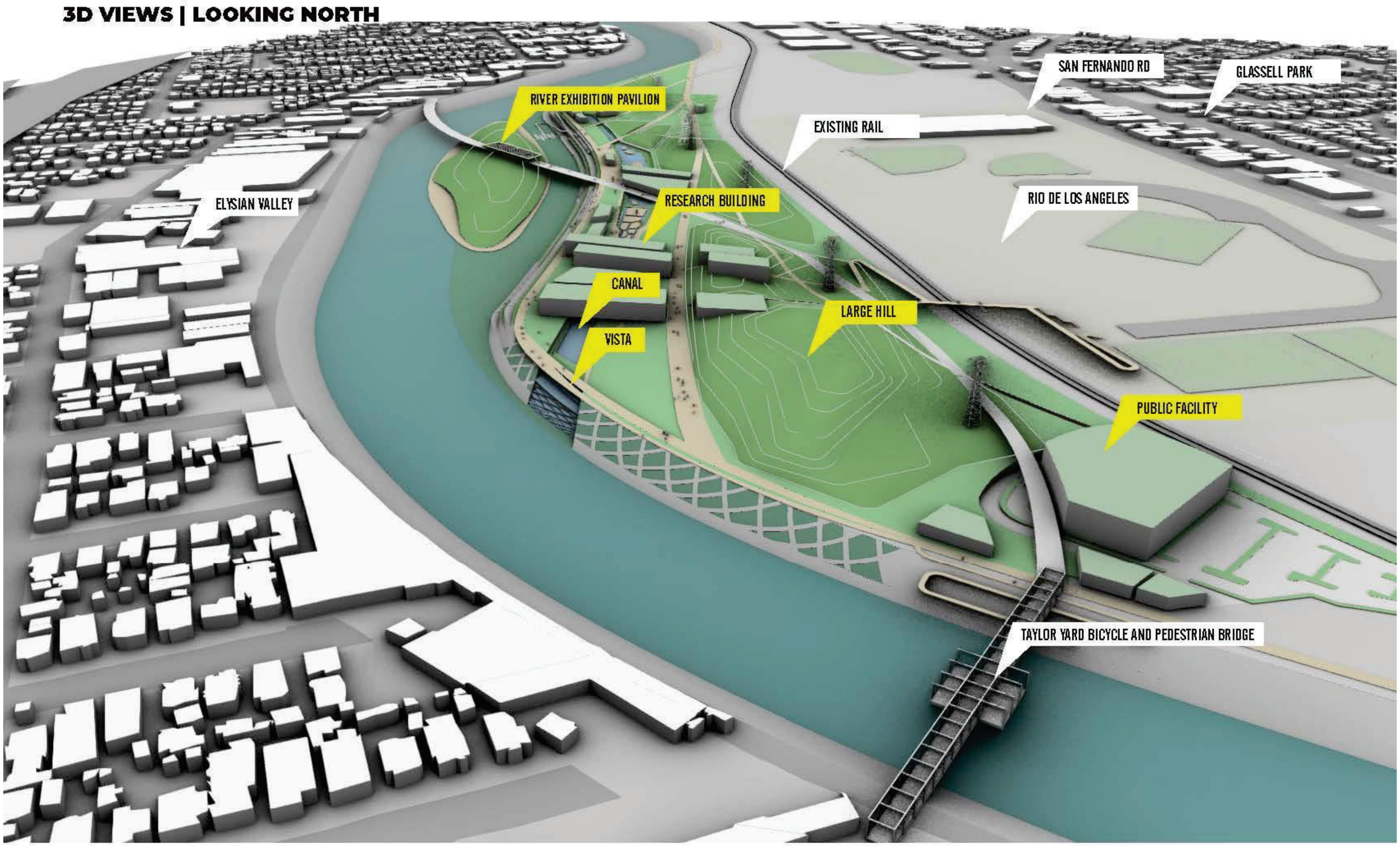


Figure 6-9. Island Site Planning Option – 3D View Looking South

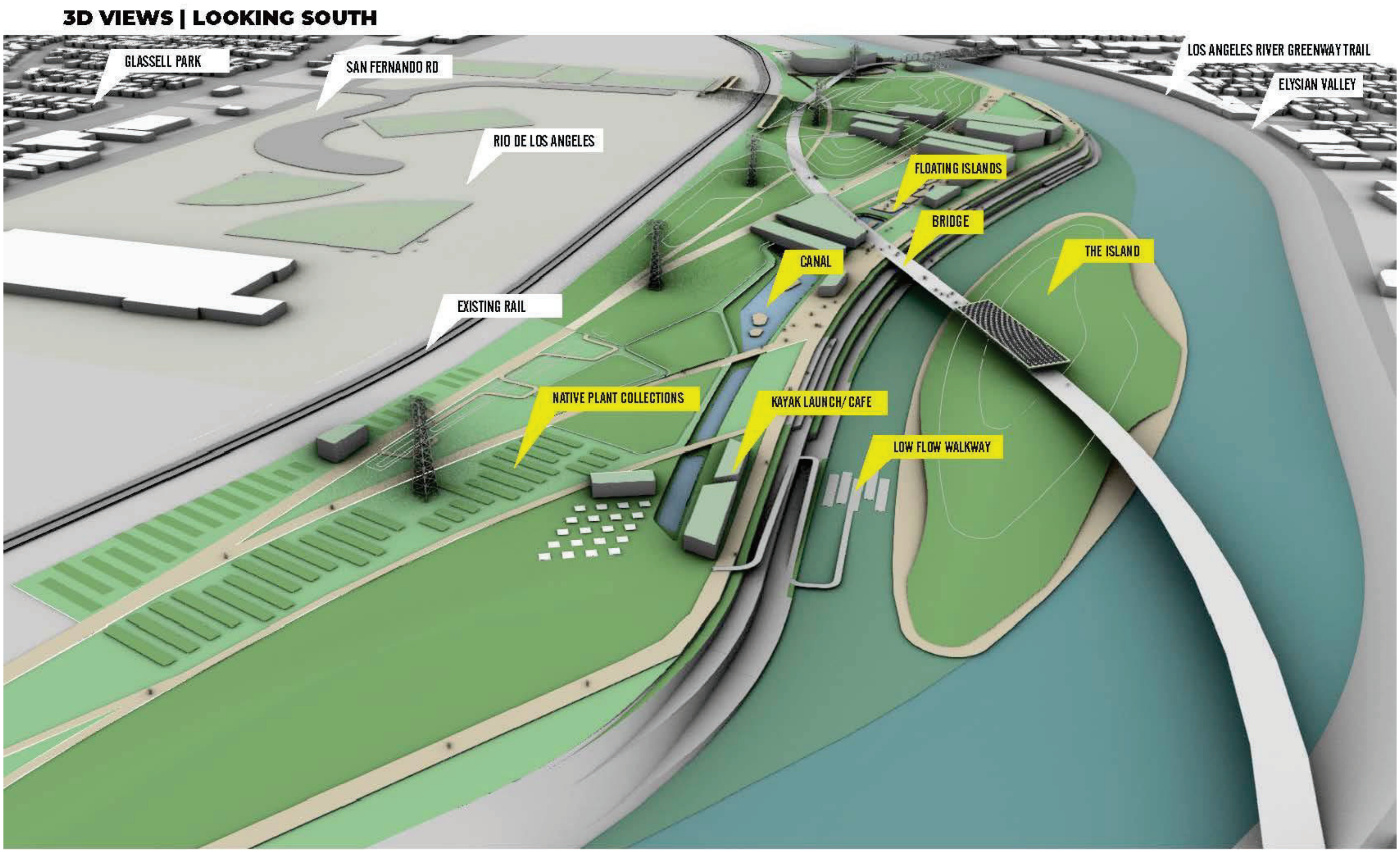


Figure 6-10. Island Site Planning Option – 3D View Looking East

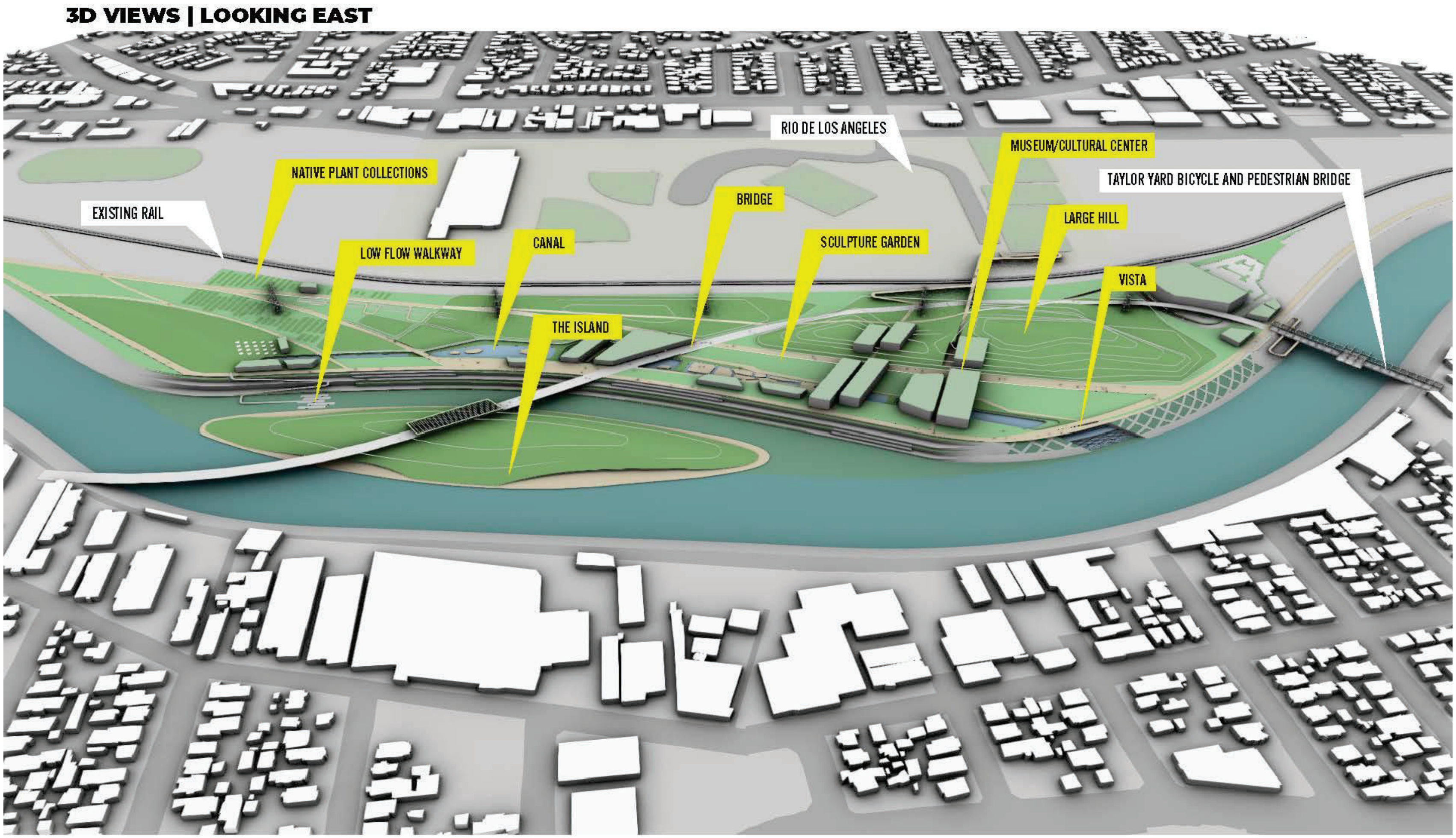


Figure 6-11. Site Planning Option - Island, Realistic

ISLAND **2020.11.24**

Figure 6-12. Physical Model of the Three Site Planning Options

Figure 6-13. Physical Model of the Three Site Planning Options

6.2.2 Soft Edge

The Soft Edge site planning option envisions a soft-edged River on the east bank with a significant amount of new riparian and upland habitat per Ecosystem Plan objectives. The existing concrete trapezoidal channel is modified to a create a series of terraces that manages both dry- and wet-weather storm runoff from the site and adjacent neighborhood through a series of wet meadows and ephemeral wetlands. By creating an undulated edge, the River's natural processes are exposed and provide visitors with an experience of the fluvial geomorphic process. The interior of the site consists of four main components: a plaza, fields, and a hill, which are all linked by an esplanade that give visitors a layered experience of the site's past, present, and future ecologies. The existing power lines and towers on the east Riverbank would be relocated to an alignment on the east side of the Project site and incorporated into the native nursery.

Soft Edge – Site Features and Program Elements

- Site features and program elements for the Soft Edge option (shown in Figure 6-14) include:
- Native Nursery – A resource for the rehabilitation of the River by propagating and growing native plants for the riparian environment

- Elysian Bridge – Bridge connection to the Elysian Valley neighborhood and the west side of the River
- Arboretum – Botanical collection of trees and native gardens
- Cliff – Cantilevered plaza providing visitors with dramatic views of the River and the bio-plateau
- Hill – Land feature that includes the arboretum, native nursery, and demonstration gardens
- Discovery Play - Nature play area for children and youth
- Fields – Native multi-purpose meadows
- Bio-plateau – A plain elevated from the River bottom and located along the Riverbank, serving as space for a bioretention BMP and demonstration gardens highlighting river ecology
- Terraces – Terraced gathering areas connecting the esplanade and the bio-plateau
- Pathways – Pedestrian and habitat corridors traversing the site
- Esplanade – A grand esplanade located adjacent to the River's edge that would provide access to the bio-plateau
- River Steps – Open air theater at the bio-plateau
- Amphitheater – Indoor/outdoor amphitheater associated with the museum/cultural center
- Land Bridge – Pedestrian bridge and wildlife crossing connecting Rio de Los Angeles State Park and the Project
- Plaza – Program facilities clustered at the entry to the Project site
- Parking – Parking lot that accommodates 400 parking spaces
- Taylor Yard Bicycle and Pedestrian Bridge – Bridge currently under construction from Elysian Valley to the Project site for bicycles and pedestrians

Site circulation in the Soft Edge refined site planning option takes an angular approach and creates nodes for small gatherings apart from major features and functions. Pathways are created to encourage wildlife passage through the site and to habitat corridors off-site. With the creation of terracing and a bio-plateau along the River's edge, the excavated soil is repurposed to create a hill, which draws visitors into the site as they enter from the parking lot. The bio-plateau and bioretention BMP would be designed to seasonally flood with River water during large storm events. The Soft Edge scheme explores the idea of buildings that are inset into the landscape to minimize hardscape and maximize the overall habitat value of the Project.

Figure 6-15 shows sections of the southern and northern portions of the Project and illustrates the reshaping of the River's edge and site interior. Section A illustrates the series of terraced plateaus and undulating topographies that create a dynamic relationship between the River and the site's highlands. Section B shows the plaza and the museum/cultural center as well as a land bridge that connects the Project with Rio de Los Angeles State Park.

Figure 6-16 through 6-18 provide 3D massing models of the Soft Edge site planning option looking north, south, and east. Figure 6-19 depicts a realistic aerial view of the Soft Edge site planning option.

Figure 6-12 and Figure 6-13 show the physical models that were prepared for all three site planning options.

Figure 6-14. Site Planning Option – Soft Edge

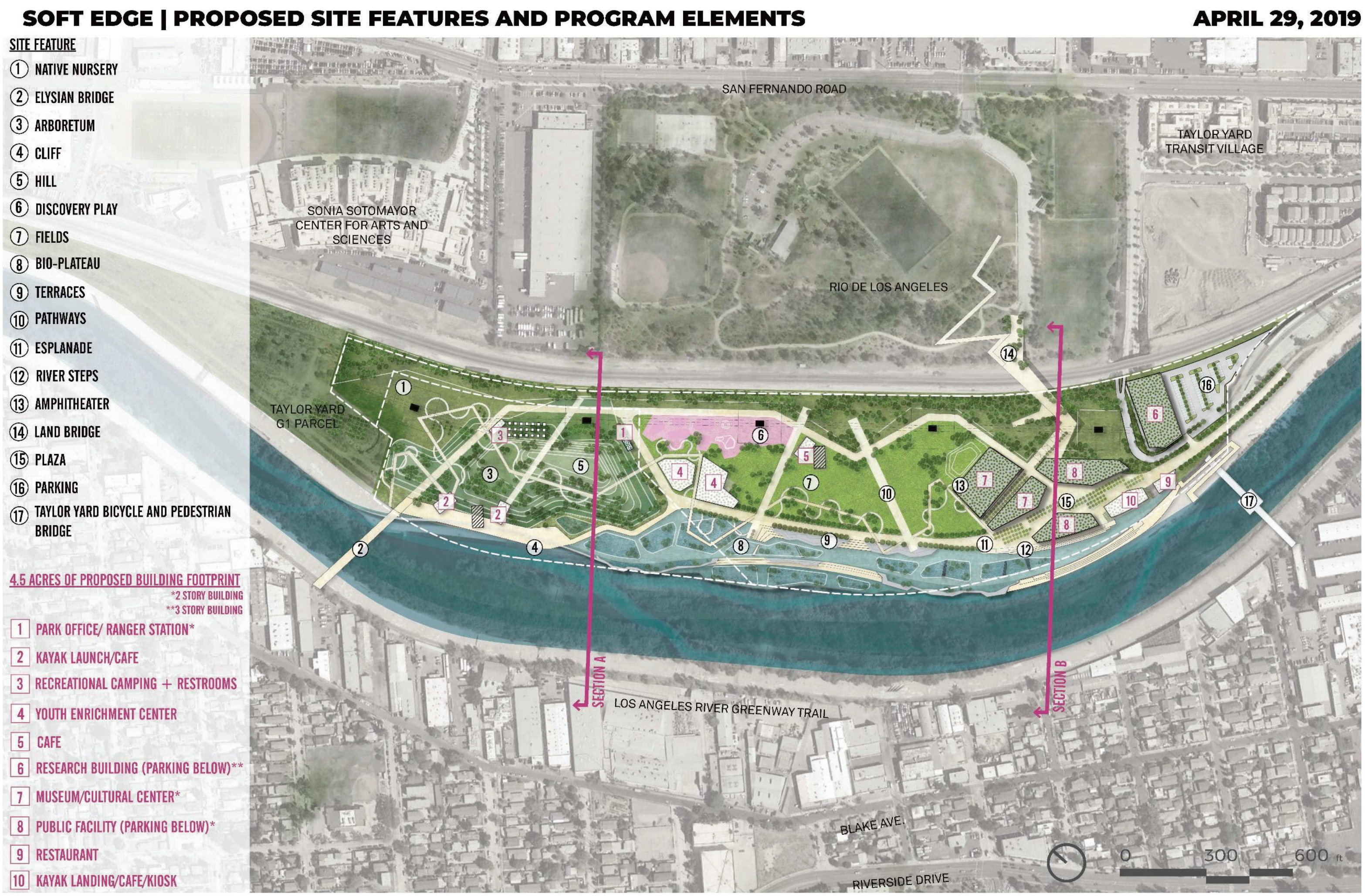


Figure 6-15. Site Planning Option Sections – Soft Edge

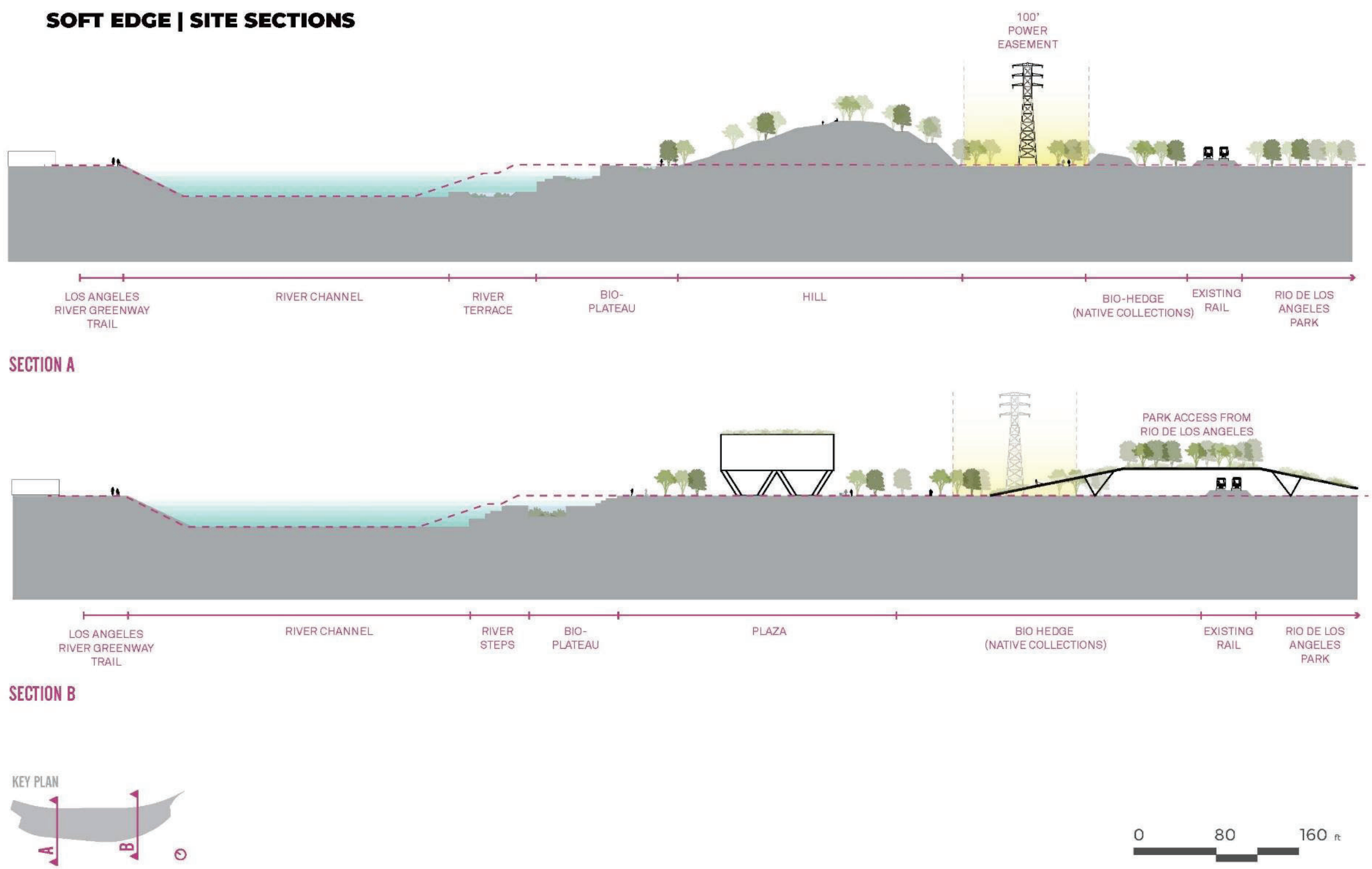


Figure 6-16. Soft Edge Site Planning Option – 3D View Looking North

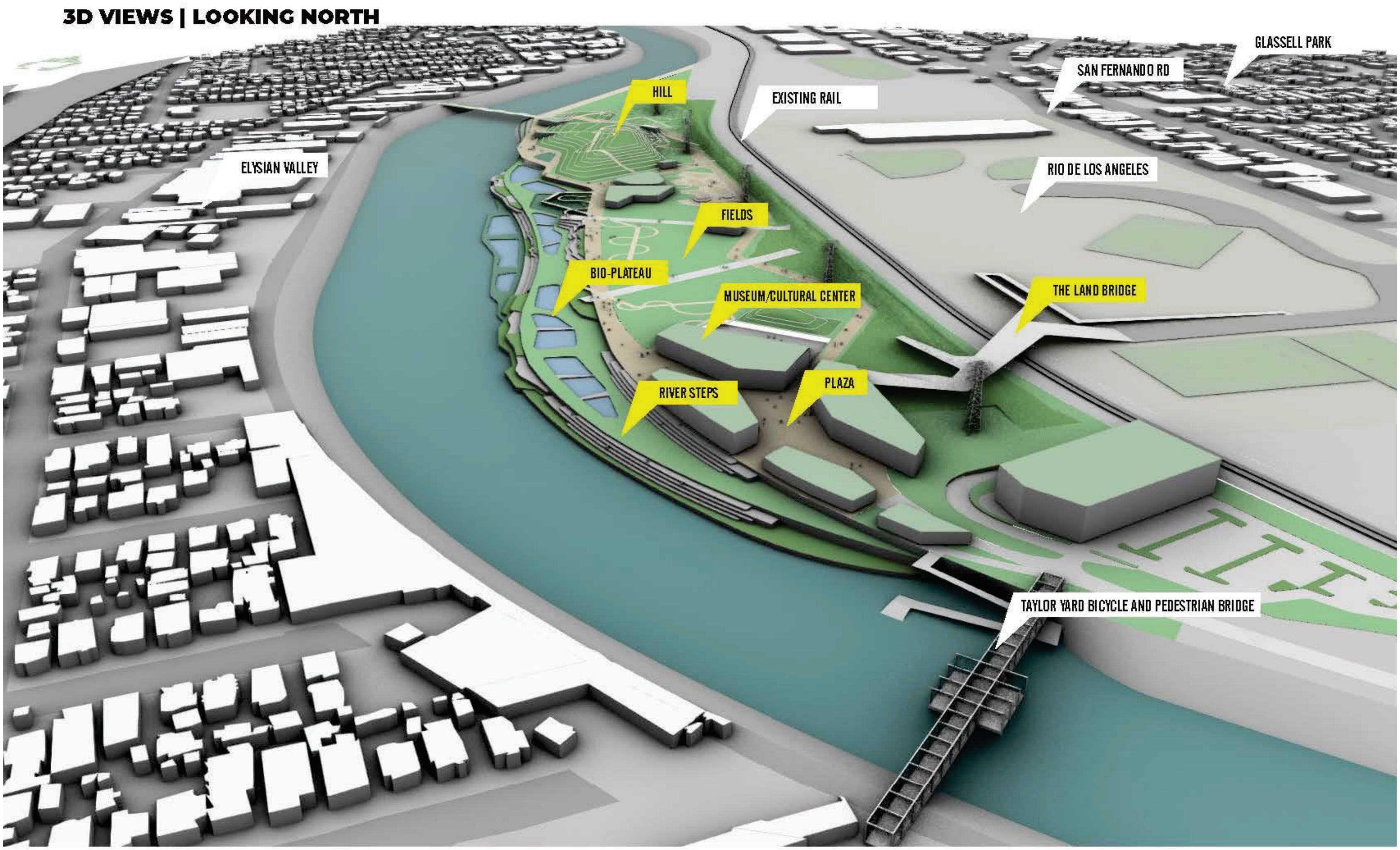


Figure 6-17. Soft Edge Site Planning Option – 3D View Looking South

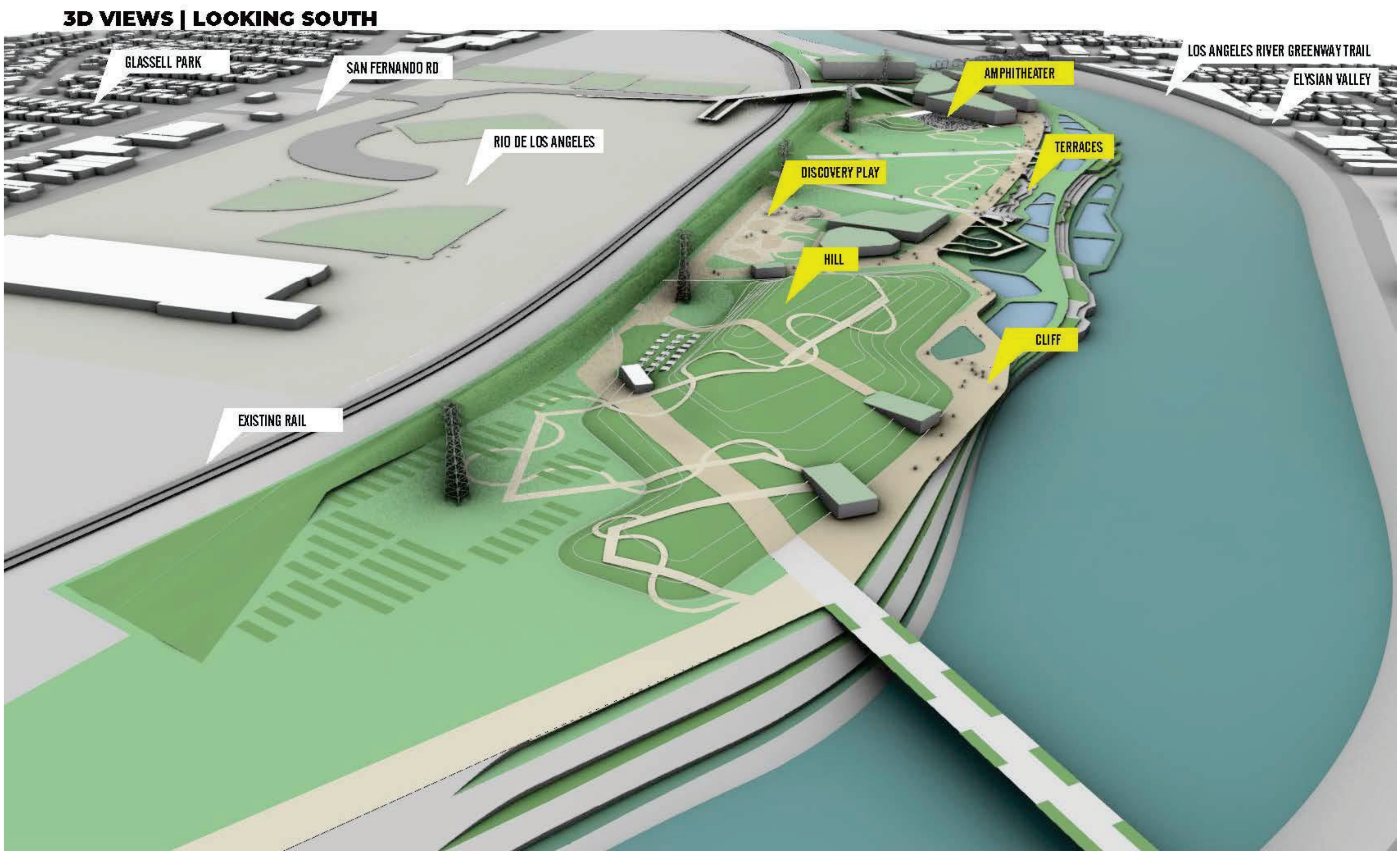


Figure 6-18. Soft Edge Site Planning Option – 3D View Looking East

3D VIEWS | LOOKING EAST

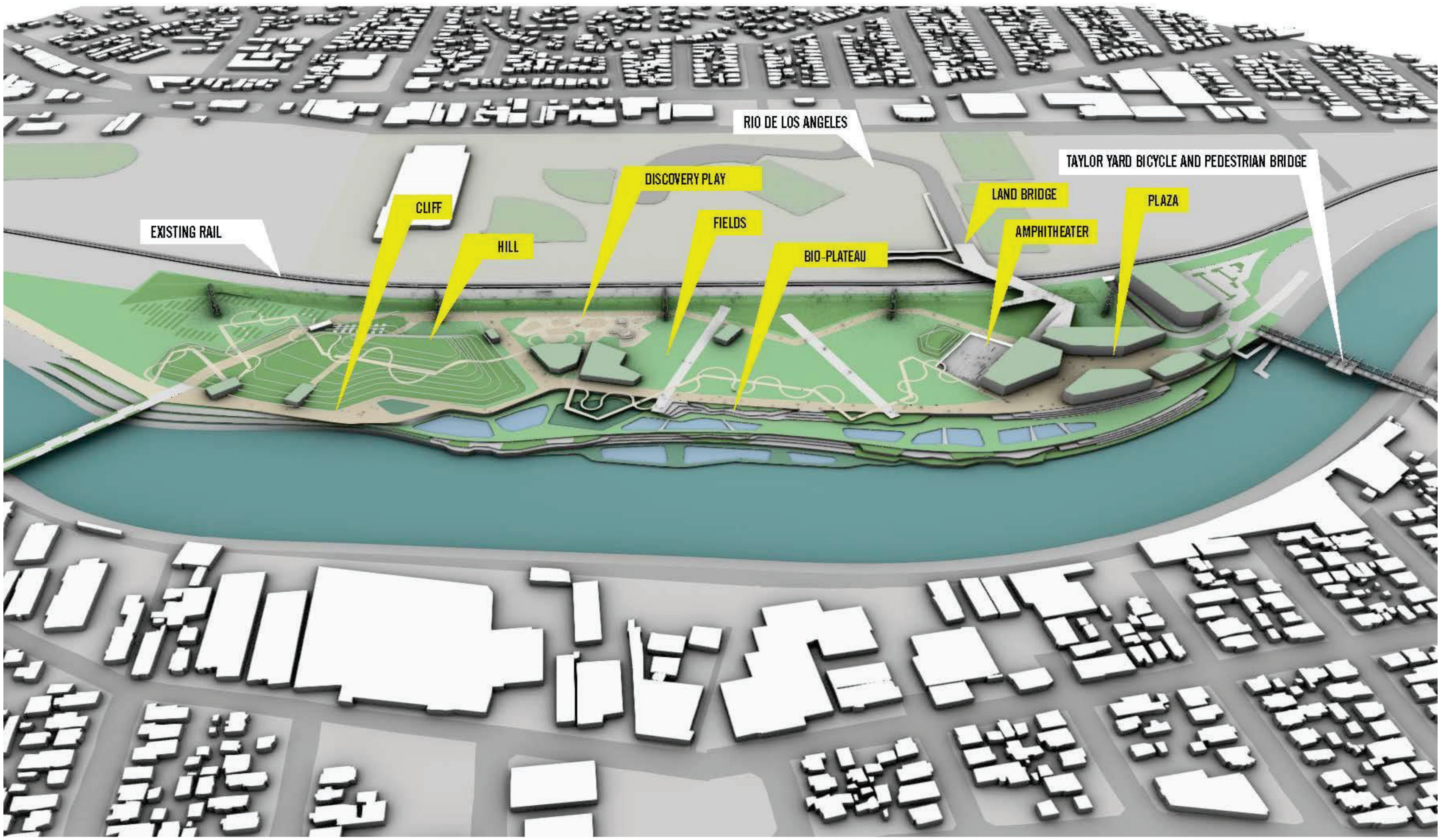


Figure 6-19. Site Planning Option – Soft Edge, Realistic

6.2.3 The Yards

The Yards, the new site planning option, maintains the existing concrete trapezoidal River channel and power lines and towers while creating an extensive path network, cantilevered moments that extend over the channel, and programmed area throughout the site. Stormwater and River water are diverted to a large bioretention BMP that cleans the water through a constructed wetland system before being directed back into the River. Cut-and-fill is managed on-site, with excavation from the bioretention BMP creating undulating hills and topography. An open meadow area allows for flexible uses and picnicking, while an esplanade along the River's edge allows visitors unique views of the River and surrounding valley. An interactive art piece and pavilion would occupy the former site of the turntable as the central node of the site.

The Yards – Site Features and Program Elements

- Site features and program elements for The Yards option (shown in Figure 6-20) include:
- Bio-Hedge Habitat Mounds – A series of topographic features to buffer train noise, filter air, and provide habitat along the eastern edge of the site
- Fields – Nursery, arboretums, demonstration gardens, and play areas
- Stormwater Demonstration Gardens – Collected water from off-site storm drains and pumped River water cleaned through a bioretention BMP including floating islands and wet gardens
- River Water Pump – A carved stream through the existing concrete channel where River water is pumped to the stormwater demonstration gardens
- Wetlands – A seasonal pond
- Amphitheater – Open air amphitheater and stage for music and theater along the River's edge
- Nature Play – A play area created with natural materials for children and youth
- Hills – Habitat edge with bird towers
- Land Bridge – Pedestrian bridge and wildlife crossing connecting Rio de Los Angeles State Park and the Project
- Turntable – Turntable land art installation
- River Outfall – The bioretention BMP outfall to the River
- Elysian Bridge – New pedestrian and bicycle bridge connecting the Project site with west side of the River
- Viewing Platforms – A series of lookouts cantilevered over the River channel
- Meadows – Large native meadow for flexible program use
- Balconies – River balconies and amphitheaters located along the River's edge
- Pathways – Paseos/paths throughout the park with canopies
- Plaza – Signature plaza at the entry to the site with parking that accommodates 400 parking spaces
- Planted Edge Armature – A living system along the channel edge
- Taylor Yard Bicycle and Pedestrian Bridge – Bridge currently under construction from Elysian Valley to the Project site for bicycles and pedestrians

Site circulation in The Yards site planning option radiates out from the historic location of the turntable. Remnants of the former service tracks are mimicked in the floating islands of the stormwater demonstration gardens. Topographical changes are subtle with the creation of small mounds for a buffered edge along the rail corridor. In this option, buildings are clustered at the southern edge of the site to concentrate programming in one location and allow more contiguous open space and recreation. Figure 6-21 depicts the sectional relationship between the topographic cuts and extrusions over the existing channel edge. Section A illustrates the cutting and filling of the stormwater demonstration gardens and the bio-hedge habitat mounds, while Section B depicts the unique experience of the viewing platforms and the planted edge armature.

Figure 6-22 through 6-24 provide 3D massing models of The Yards site planning option looking north, south, and east. Figure 6-25 depicts a realistic aerial view of the Soft Edge site planning option.

Figure 6-12 and Figure 6-13 show the physical models that were prepared for all three site planning options.

Figure 6-20. Site Planning Option – The Yards

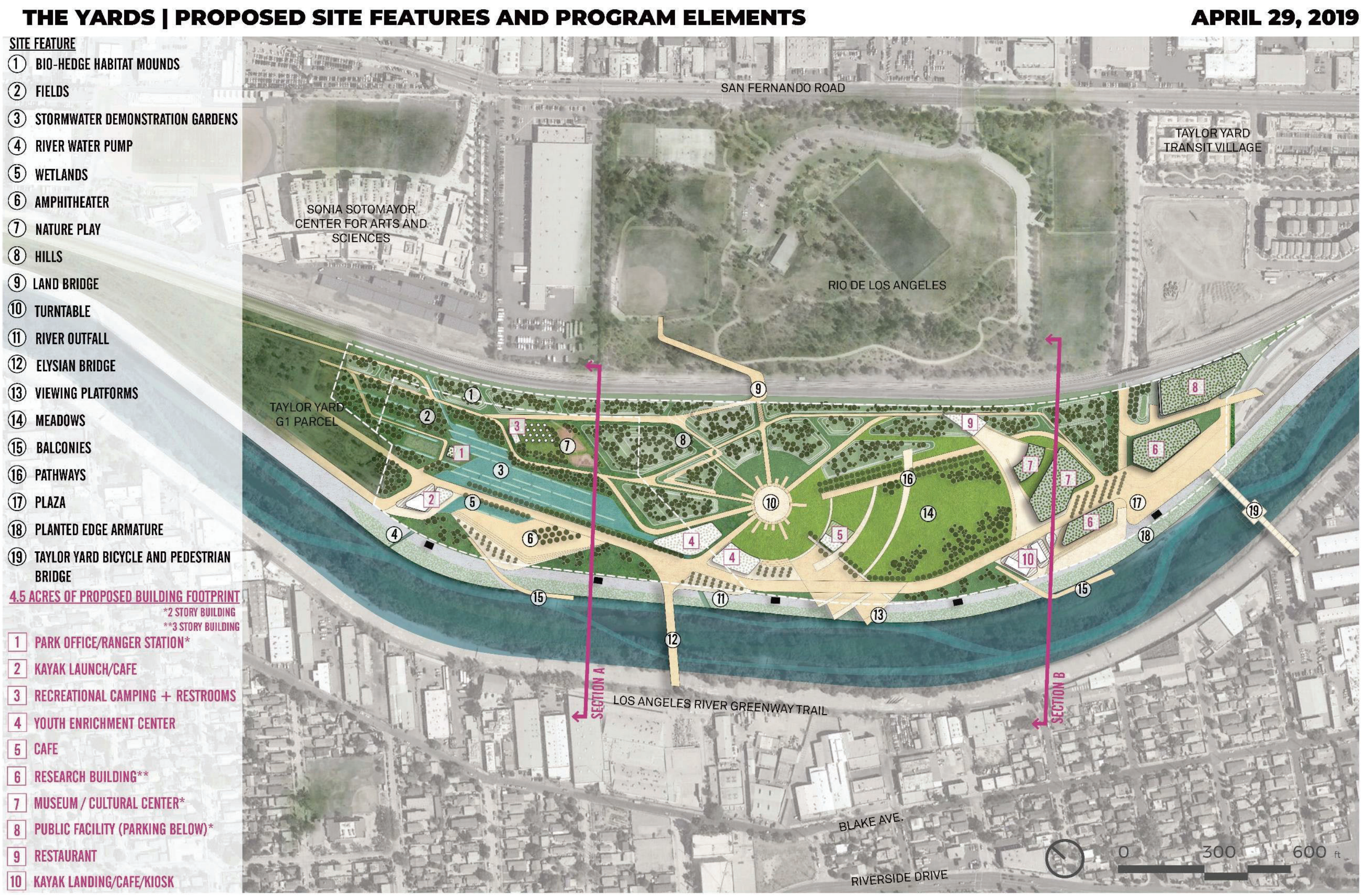


Figure 6-21. Site Planning Option Sections – The Yards

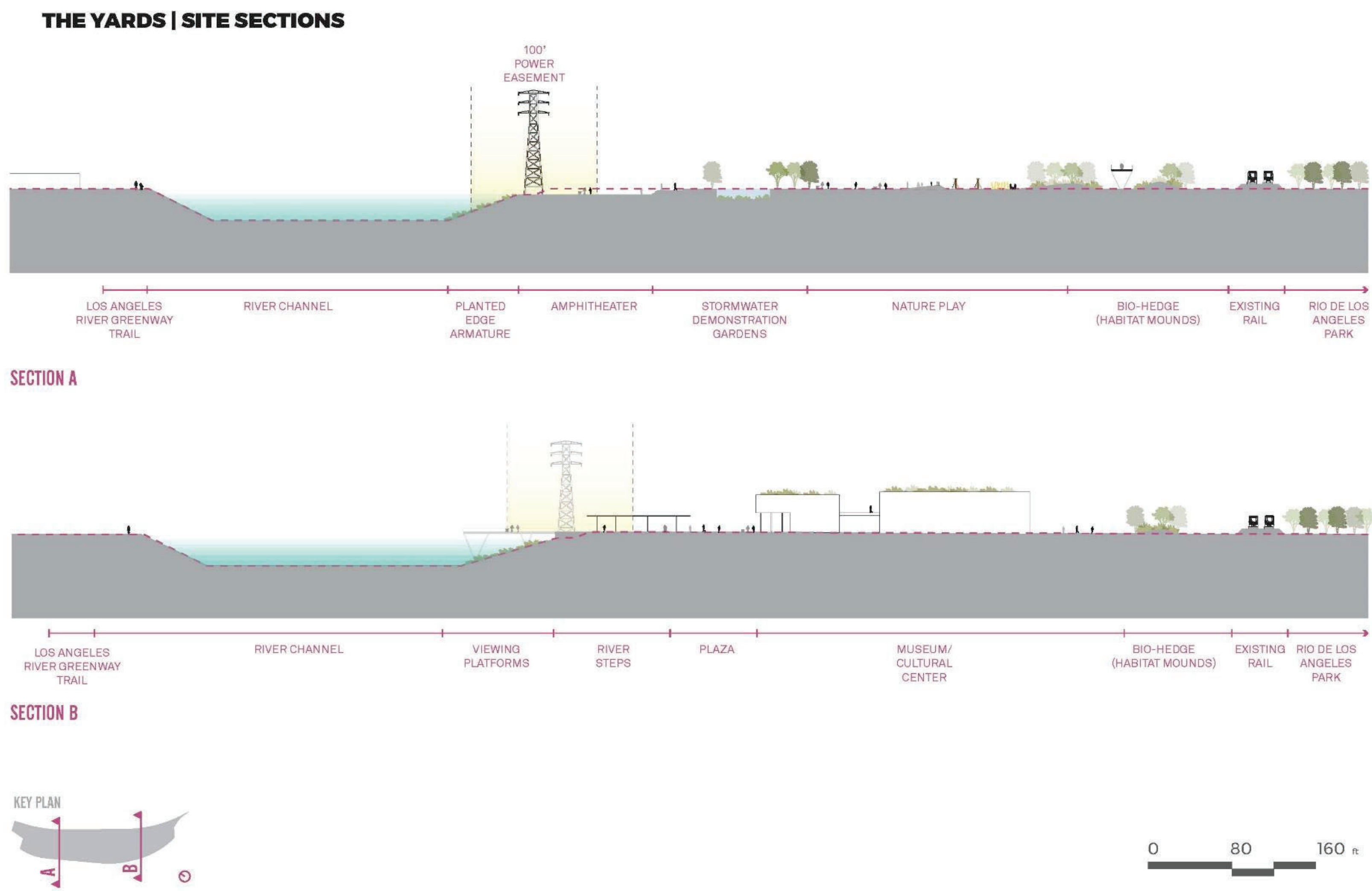


Figure 6-22. The Yards Site Planning Option– 3D View Looking North

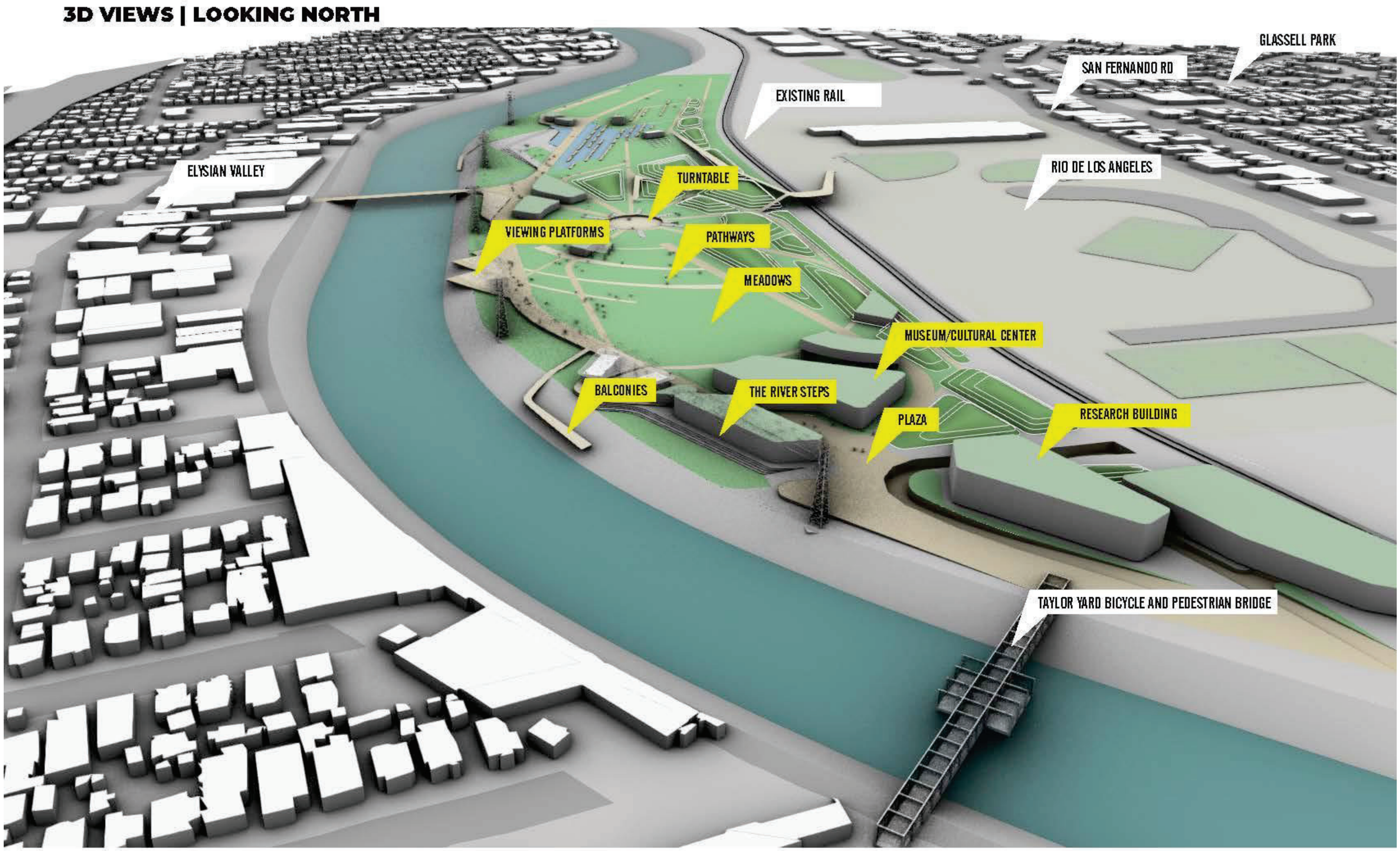


Figure 6-23. The Yards Site Planning Option – 3D View Looking South

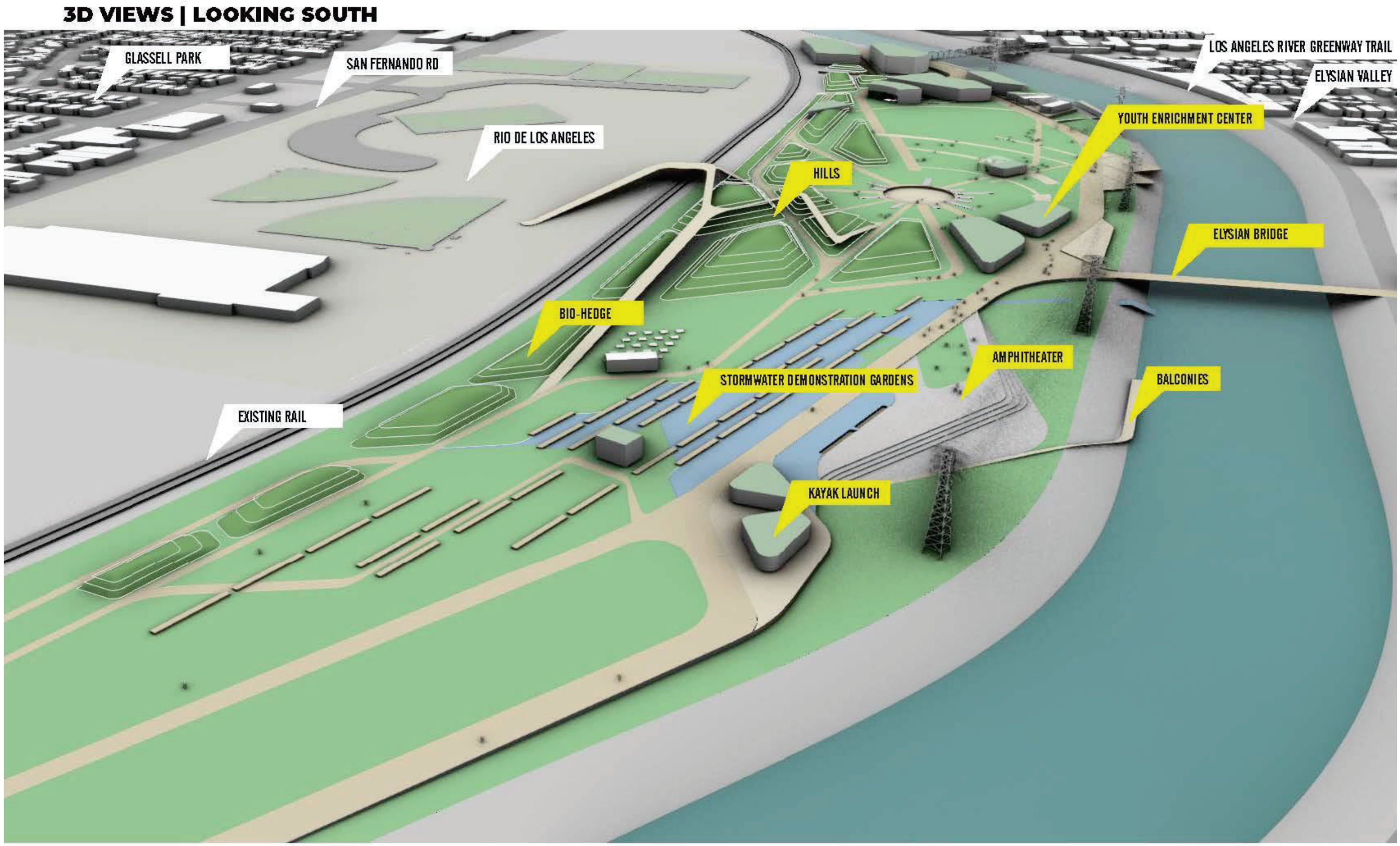


Figure 6-24. The Yards Site Planning Option – 3D View Looking East

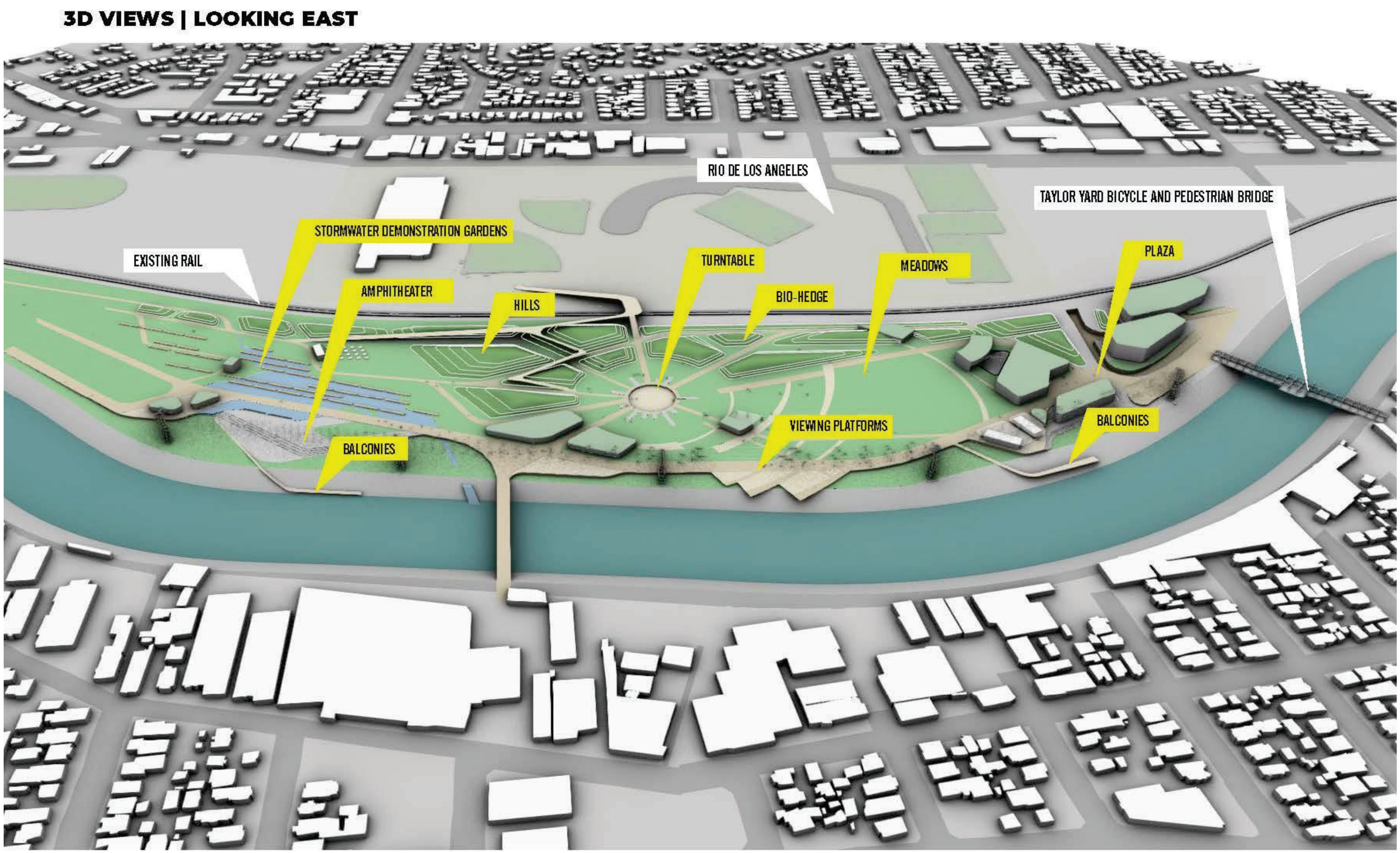


Figure 6-25. Site Planning Option - The Yards, Realistic

6.3 Possible Remediation Scenario

A remedial approach appropriate for future recreational use has not yet been identified or reviewed by DTSC. The final remediation plan would be developed based on the selected site planning option, along with DTSC and public input and presented in the form of a Response Plan. Multiple types of remedial and mitigation measures may be used to address different contaminants in environmental media and the associated exposure risk, as discussed in Chapter 3, *Site Contaminants*. The final remediation plan would be protective of human health and the environment both during construction and for the ultimate site use by achieving standards that lower the exposure risk to levels below DTSC-approved thresholds.

This section is a general presentation of a conceptual remedial approach for the site planning options, useful for demonstration purposes only. Remediation would be carried out to manage contaminants identified above a DTSC-established risk level. At this stage of the Project, the existing Remedial Action Plan, prepared by CDM in 2014 and approved by DTSC for cleanup to industrial use criteria, is the best available information with which to establish a conceptual remedial approach for the Project site, and forms the basis for the steps described below.

For each of the three site planning options, the first remedial step would be the preparation of a risk assessment to evaluate possible pathways of human and ecological exposure to site contaminants and establish the areas that require remediation to adequately address risk from those exposure pathways. Subsequently, remedial measures would be designed to address those areas of elevated risk. It is anticipated that the presence of hazardous levels of lead and other heavy metals in shallow soil, as well as petroleum hydrocarbons at all soil depths, would form the basis for soil remedial measures. Soil gas in the form of volatile chlorinated solvents and fuel-related vapors would also drive the remediation design. A long-term solution for remediation of exterior areas of the Project site could be an engineered cap, consisting of aggregate base, an impermeable liner, and several layers of clean fill and soil to allow for vegetation growth (see Figure 3-8). An engineered cap would prevent exposure to contaminated soil and migration of contaminants from soil to groundwater. Prior to installation of an engineered cap, specific areas identified with elevated levels of contaminants could be addressed by (i) excavation, transport, and disposal of soils at appropriate internment facilities, or (ii) on-site treatment through a series of in-situ or ex-situ treatment technologies. Surface preparations would be conducted prior to soil excavation/treatment and capping, including removal of asphalt, concrete, and voids created under previous site use (e.g., utility vaults). In addition, asbestos-containing materials would be abated and waste material hauled off-site. For interior spaces, soil gas mitigation systems underlying building slabs may be used to prevent indoor air intrusion. These mitigation systems could include vapor barriers (membranes to block migration of vapors upward into the building) or venting (active or passive extraction of vapors, directing them away from the building and breathing zone of occupants). Soil gas extraction systems could also be installed in those areas of the Project site where soil gas concentrations are highest.

6.3.1 Variations Between the Site Planning Options

The remediation approach described above applies to the Island, Soft Edge, and The Yards site planning options. For the Island and Soft Edge, some additional remediation would be required. Both the Island and Soft Edge site planning options would require soil excavation along the Riverfront. For the Island, excavation would be needed to create the island channel and generate a split flow path for the River through a portion of the existing site. For the

Soft Edge, the Riverfront would need to be pulled back to create a terraced access to the waterfront. Historical and recent soil sample results indicate a portion of the Riverfront excavation soils likely would be characterized as hazardous waste. As such, disposal and/or treatment of hazardous waste potentially would be required for both the Island and Soft Edge site planning options. Any excavated material characterized as hazardous waste would be segregated and handled through off-site disposal at an appropriate internment facility, or through treatment and on-site reuse. The remaining non-hazardous soils could be characterized and relocated, placed on-site to generate topography, and covered with an engineered cap as described above.

In addition, for both the Island and Soft Edge options, excavation along the Riverfront may require management of groundwater during construction, and installation of flow barriers such as a sheet pile wall to prevent the flow of the River into the excavation. A groundwater pump and treatment system would be installed and operated to dewater the excavation and treat and dispose of the water in accordance with appropriate regulatory requirements.

The Yards option does not include any Riverfront excavation; therefore, these remediation steps would not be implemented.

6.4 Landscape Elements

Site design for any of the site planning options was done to follow the goals and guidelines set by the LARRMP and align with the Ecosystem Plan objectives. The site design will include on-site stormwater management; habitat creation using native, drought-tolerant planting; appropriate hardscape finishes to minimize the urban heat island effect; and educational and interpretive signage among various other environmental and cultural elements.

6.4.1 Stormwater Quality Improvement and Management

Because of the City's Mediterranean climate and the periods of extended drought, the Project would use on-site stormwater management to capture, store, and reuse as much on-site stormwater as possible. A bioretention BMP would divert flow from two large storm drains that collect water from a nearly 2,400-acre tributary drainage area that currently drain into the River near the Project site. This landscaped shallow depression would capture and filter stormwater runoff and include a layer of plants and soil where pollutants can be filtered, absorbed, and biodegraded as stormwater percolates through the soil media. Once stormwater saturates the media materials and fills the bioretention BMP, an underdrain system would convey the treated stormwater to an outlet. An impermeable liner is proposed for the Project to prevent infiltration into the underlying soils. Further discussion on stormwater quality improvement objectives and the bioretention BMP is provided in Appendix D of this report, the Final Proposition O Project Concept Report. If approved for implementation and funding, the bioretention BMP and other initial park improvements may be constructed in an early phase and incorporated into the design and construction of the overall Project.

6.4.2 Irrigation

To create the most water-efficient irrigation system possible, the irrigation system would likely be a combination of subsurface drip, stream bubbler, or spray heads depending on the hydro-zone, slope, and use of the area. Irrigation design must also prevent mobilization of pollutants related to the contaminated soils into the groundwater and the

River from overwatering. Potable water and local stormwater runoff, including dry-weather flow, could be used for irrigation. Recycled water from the Los Angeles-Glendale Water Reclamation Plant, located just a few miles north of the Project site, may be also used to reduce or eliminate the amount of potable water used in the landscape, but potable water would likely need to be used as part of an underground drip system. A recycled water distribution line already exists in San Fernando Road. Water demand and potential supplies for the Project are discussed further in Chapter 12, *Evaluation of the Island Option*.

6.4.3 Plant Palette and Ecology

The planting palette would draw from the approved, and soon-to-be updated, plant list provided by the County Plan's *Landscaping Guidelines and Plant Palettes* as well as other resources such as the *Water Use Classification of Landscape Species*, Bob Perry's *Landscape Plants for California Gardens*, and the *Sunset Western Garden Book*. All plants would be chosen per their plant community, with a focus on native, drought-tolerant species. Specific native habitat species would also be included to promote biodiversity in the park and are discussed further in Chapter 8, *Habitat and Biodiversity*, of this report. Figure 6-26 shows potential habitat types, and Figure 6-27 provides a sample of completed projects with native landscaping.

6.4.4 Hardscape and Finishes

To reduce the urban heat island effect, all hardscape areas would use colors that minimize heat absorption and glare. Permeable unit pavers and stabilized decomposed granite would be used where appropriate to provide a softer and more naturalized aesthetic to the park. Some of the hardscape materials would also draw inspiration from the site's industrial history. All hardscape area would be made of resilient materials with binders or appropriate finishes for the frequent use and harsh conditions of a public space. See Figure 6-28 and Figure 6-29 for pictures of potential hardscape materials.

6.4.5 Educational and Interpretive Signage

An extensive network of wayfinding and interpretive signage would be developed to guide visitors through the site and to educate the public on the site's cultural and industrial history, the history of the River, and the importance of habitat creation for the local flora and fauna. See Figure 6-30 for examples of potential signage design. Final design will adhere to signage guidelines included in the County Plan update.

6.4.6 Lighting

Because the planned hours of operation for the park are dawn to dusk, lighting for much of the site would be limited to paths and security lighting as needed. Lighting would also be provided in plazas, event spaces, and parking lots for evening events. Solar lighting would be used, where feasible. Figure 6-31 provides some examples of potential lighting design.

Figure 6-26. Potential Habitat Types

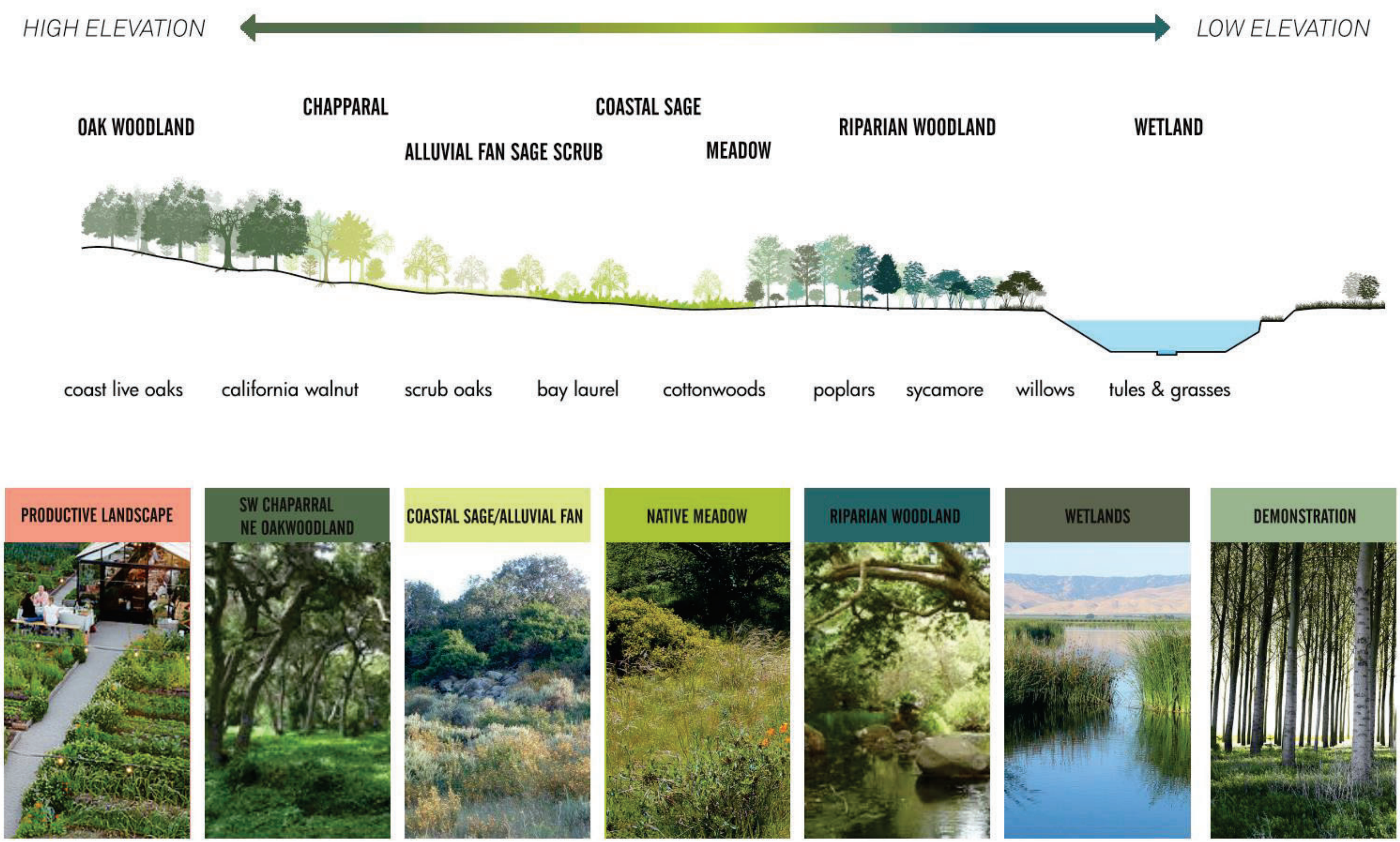
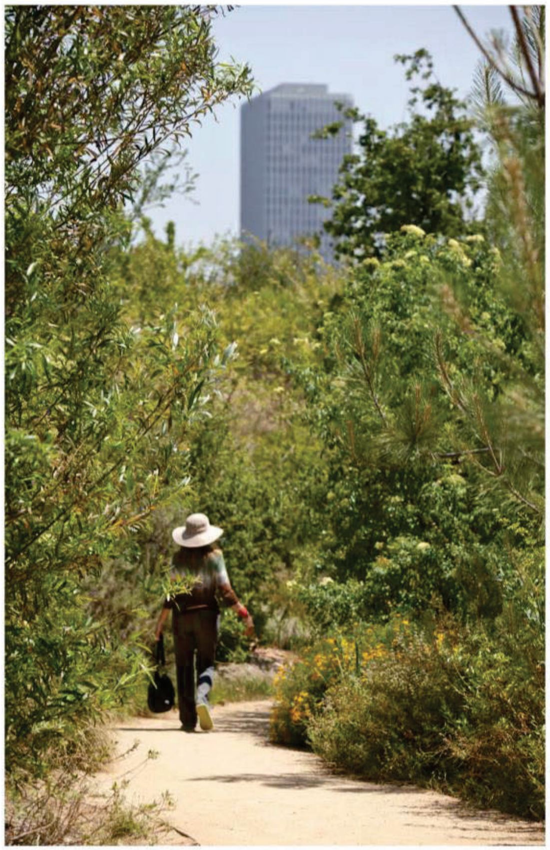
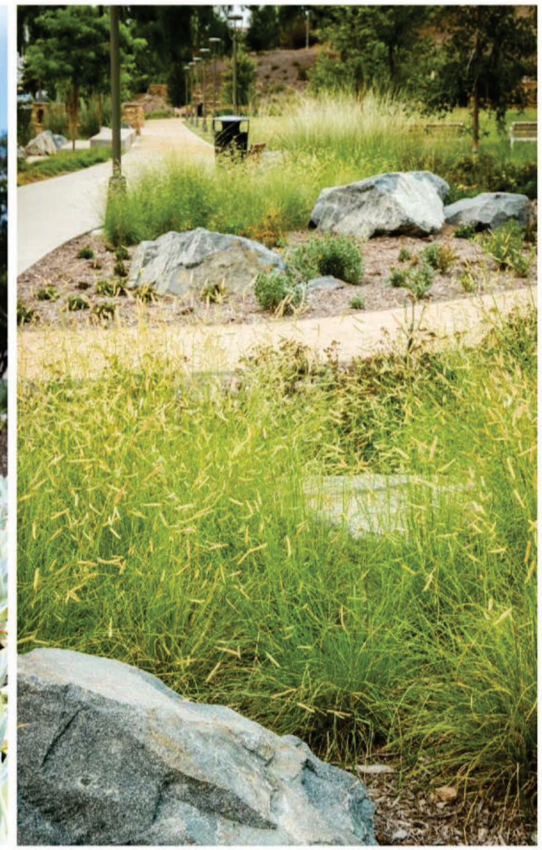


Figure 6-27. Examples of Completed Projects with Native Palette



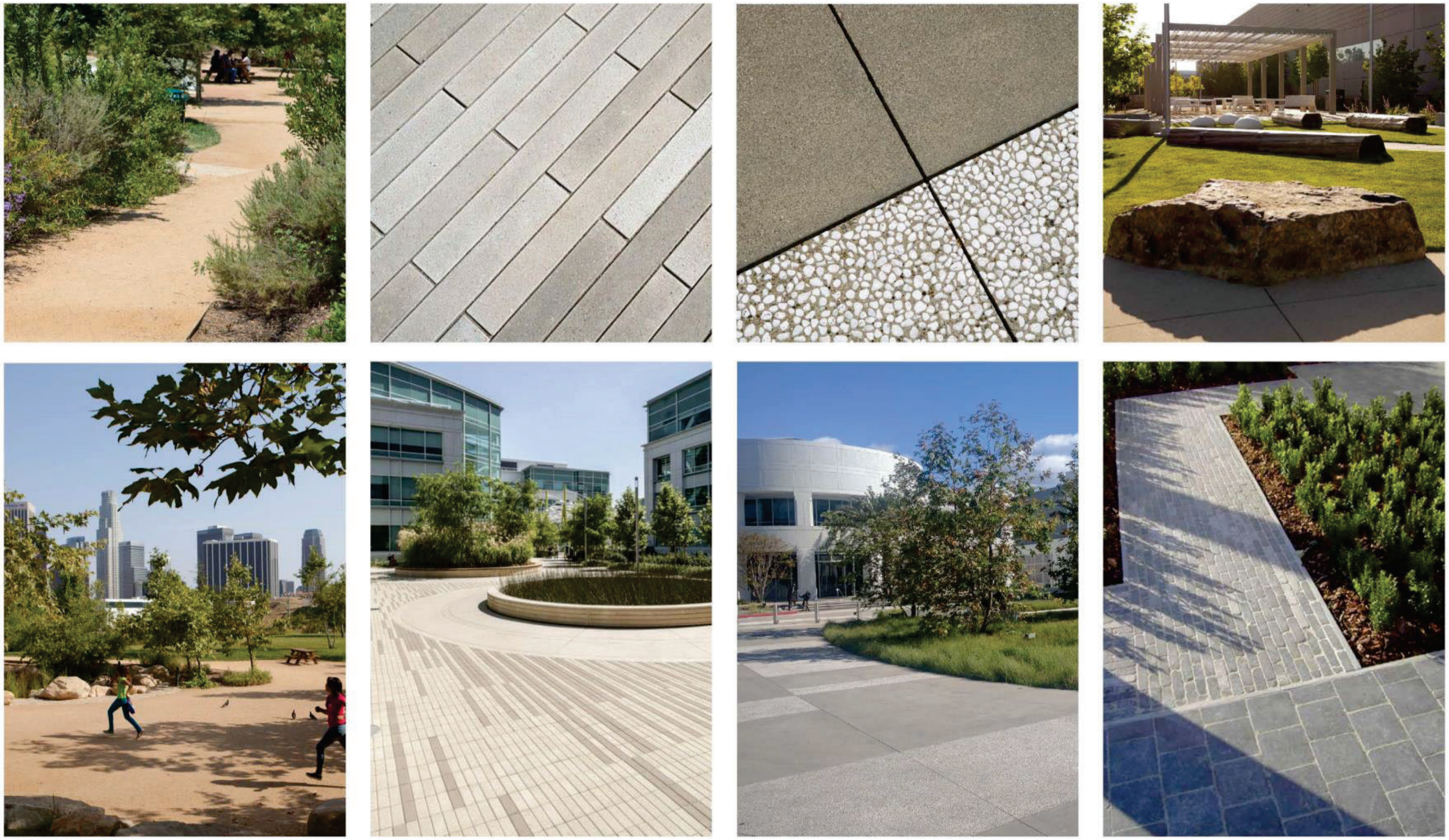
Vista Hermosa Park

Ishihara Park



Hillcrest Park

Figure 6-28. Examples of Potential Hardscape Materials



Decomposed Granite (D.G.) | Concrete Pavers | Decorative Concrete | Stone Tile / Boulder

Figure 6-29. Examples of Potential Hardscape Materials

Figure 6-30. Examples of Potential Signage Design

Figure 6-31. Examples of Potential Lighting Design

6.5 User Experience

The site planning options were developed to create a diverse range of experiences for a variety of users. The Project must provide a place for people from adjacent neighborhoods to gather, enjoy nature, and connect with the River in a way that fosters community and stewardship of the natural treasure in their backyards. At the same time, the Project would draw regional visitors as an example of how a blighted former rail yard can be returned to a thriving ecosystem that reflects the true character of the City around it.

Effective community and stakeholder engagement were essential to site planning option development. Important takeaways included a strong support for environmental, River, and cultural learning and providing access and connectivity via pedestrian and bicycle trails and paths. Ample areas for natural elements supporting native habitat and connections to nature, vistas, and lookout points taking advantage of the Project site's setting along the River with 360-degree views to the surrounding hills and mountains were important. Large outdoor gathering and performance spaces, food amenities ranging from food carts to cafés, and accessible outdoor activities such as kayaking, nature walks, and children's play also ranked high.

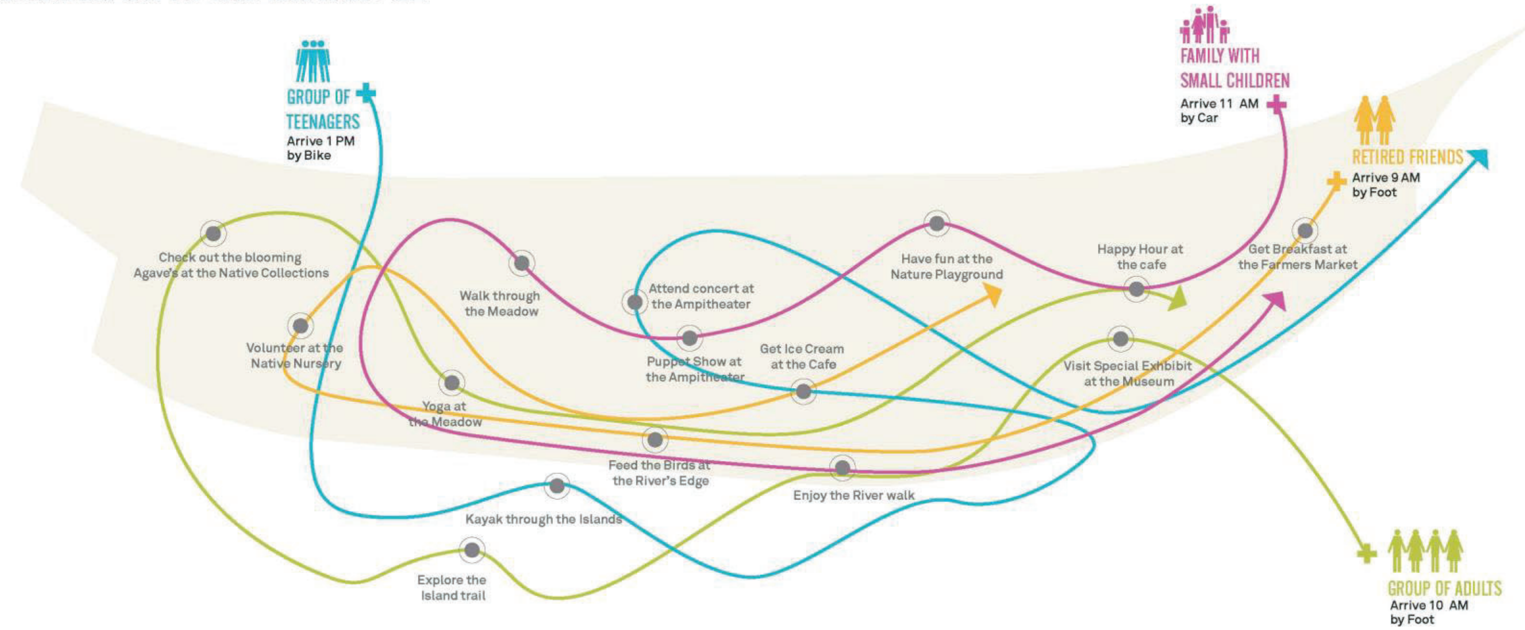
The site planning options restore and enhance the natural resources associated with the River by creating habitat areas, wetlands, native plant nurseries, and an arboretum. These ecological features over this vast Project site would provide opportunities to enjoy immersion into nature, education through organized nature walks, bird watching, self-guided learning through interpretive signage, classes in botany, and many other environmental learning programs. Programs like these could also provide skills-based training opportunities for local youth to become guides and stewards of the River.

The flexible meadow space in each of the site planning options provides a variety of recreation opportunities throughout the site. It would be planted with a native meadow grass mix and large trees to provide comfort and shade as well as ecological benefits. These unprogrammed areas could be used for picnicking, summer concerts or performances in the park, pick-up games, or family celebrations.

An expansive network of pathways and trails through the site creates the opportunity for a different experience at each visit. The larger promenades would be constructed for multi-modal use with separate bicycle and pedestrian lanes. Small trails would meander through habitat zones for quiet opportunities to observe nature. Multiple connections to and from Rio de Los Angeles State Park, the G1 parcel, and the Los Angeles River Greenway Trail create loops to easily traverse the Project site.

Programmed areas like the camp site, amphitheater for musical or theatrical performances, nature playground, café, and the museum or cultural center are a reason for visitors to return. Figure 6-32 diagrams the many ways the Island option might be experienced by different users – a group of teenagers, a family with small children, retired friends, and a group of adults – on a Saturday in the park. Similar user experiences are anticipated for each site planning option.

Figure 6-32. Diagram of Potential User Experiences on a Saturday



7 RIVER HYDRAULICS AND FLOOD MANAGEMENT

The Project site is located within the Glendale Narrows, an 11-mile stretch of River that extends from about Griffith Park to downtown Los Angeles. The River channel in the Glendale Narrows has an unlined bottom due to upward pressure from the shallow groundwater table. The unlined condition of the channel has allowed nature to continue to exist through this stretch and creates significant potential for further habitat restoration. With restoration would come changes to complex River hydraulics to an area known to fall within the floodplain, an area subject to a one-percent chance of flooding in any given year. Because of the potential alteration of the Riverbank and the goals to expand the River to enhance habitat, the Project is intrinsically linked with the characteristics of the River. Understanding the Project's hydraulic effects on the River, including water velocities and turbulence, as well as its effects on flood risk management, are crucial to Project success. This section summarizes the hydrologic and hydraulic analyses of the River conducted as part of the site planning option development process and flood management as it pertains to the Project.

7.1 Existing Conditions

The current configuration of the River channel cross-section at the Project site is trapezoidal with 3:1 (horizontal to vertical) side slopes and a base width of 220 feet (BOE 1961). Each levee (i.e., each side of the channel) is approximately 23 feet in height from the invert of the River channel. The western side slope is currently protected by concrete, and the eastern slope is protected partially with grouted riprap and partially by concrete. The channel bottom is unlined and contains sediment deposits that have formed sand bars/islands, which have become stabilized as the root systems of the many trees and other vegetation has trapped sediment (USACE 2015). Historically, the River flowed continuously through this reach fed by groundwater that forced up by relatively shallow, impermeable geologic strata within the Glendale Narrows. However, during the early part of the 1900s, LADWP implemented an extensive water extraction program throughout the San Fernando Valley that lowered the groundwater level upstream of the Narrows and eliminated the dry-weather flows (Gumprecht 1999). In the 1980s, dry-weather flows returned to the River fed by wastewater treatment effluent from the Donald C. Tillman and Los Angeles-Glendale Water Reclamation Plants and local urban runoff. These water sources continue to provide flows throughout the year and a base flow during the dry season.

USACE owns and maintains the stretch of the River that pertains to the Project. Figure 7-1 shows the existing typical cross-section of the River at the Project site (USACE 2015), and Figure 7-2 is a photo of the current River conditions.

Figure 7-1. Existing Typical Cross Section of the River Channel

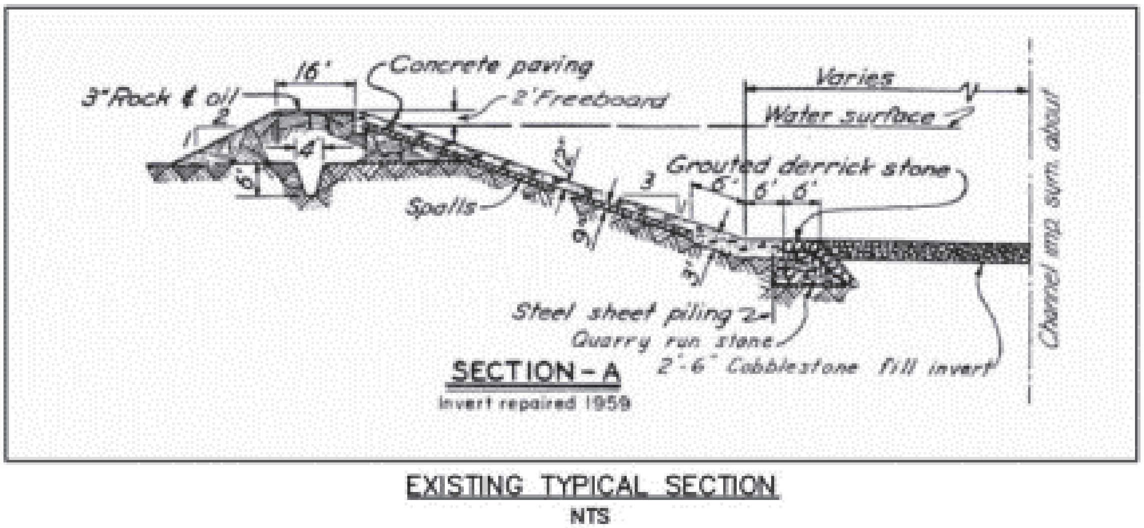
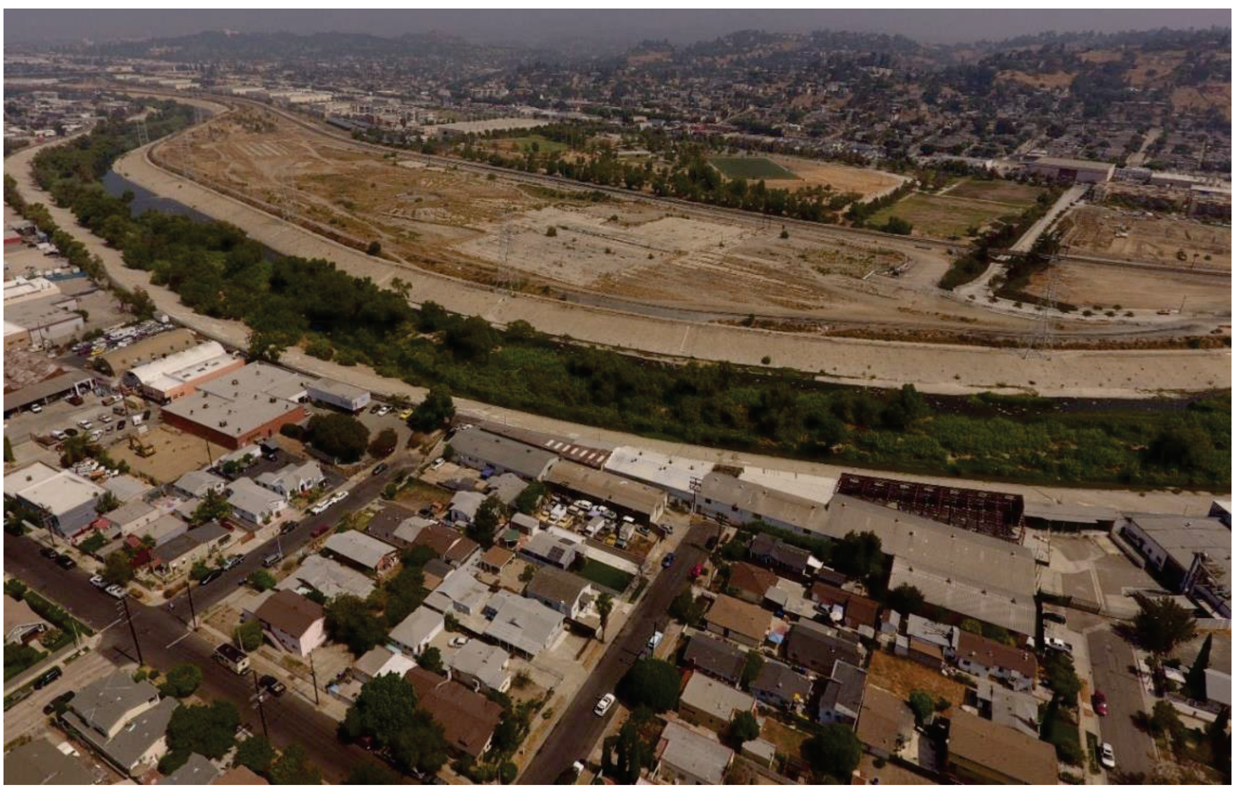


Figure 7-2. Photo of the River at the Project Site



Urbanization within the Los Angeles River Watershed has increased peak flow rates significantly over time. Growth of vegetation and deposition of sediments have also altered channel capacities in the Glendale Narrows (County of Los Angeles 2019). The regulatory standard under the National Flood Insurance Program for a flood having a one percent chance of occurrence in any given year is referred to as the "100-year flood" or "base flood." A study by USACE as part of the Ecosystem Plan in 2015 determined that many locations in the Glendale Narrows under existing conditions would experience flooding under much higher frequency events than 100-year flood levels. The design discharge for the River channel at the Project site is 83,700 cfs based on a discharge frequency analysis in the 1992 Los Angeles County Drainage Area (LACDA) Feasibility Study. This design flow is equivalent to a 57-year flood level and assumes a clean, trapezoidal channel. The existing channel capacity has been reduced over time to a flow rate of 50,500 cfs, however, or a risk of water exceeding the channel depth during an 11-year flood event (USACE 2015).

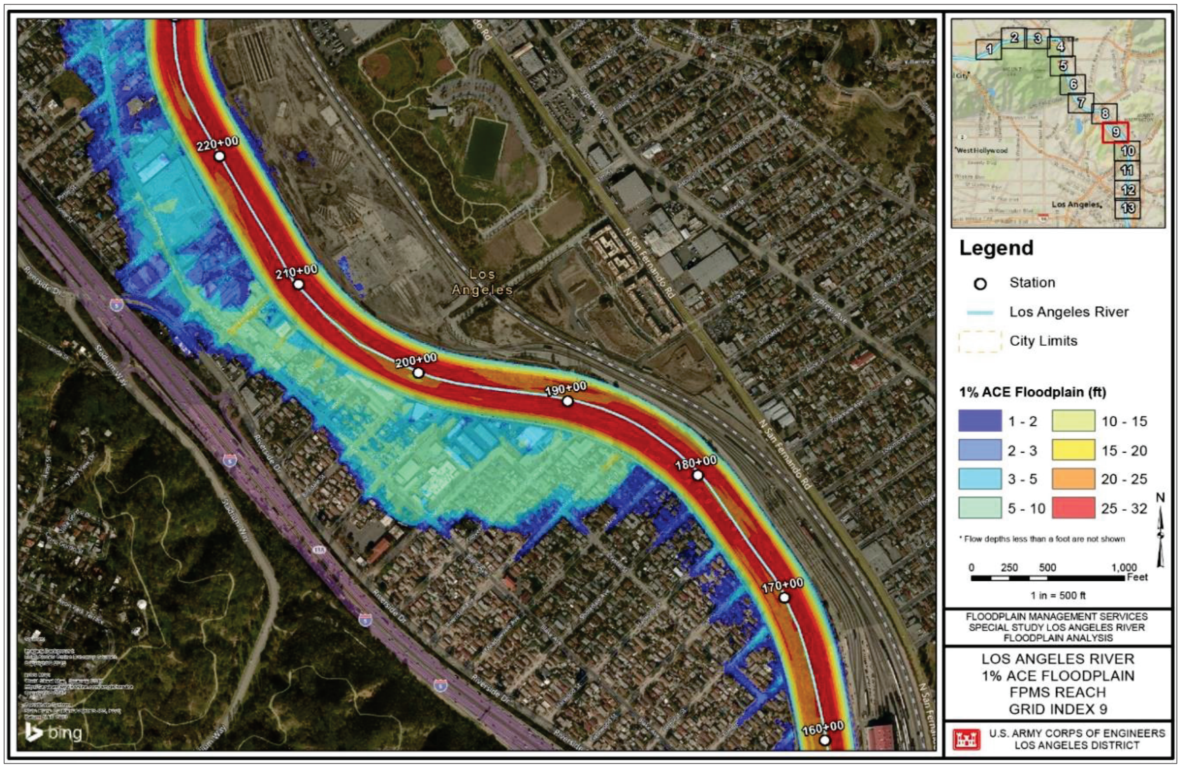
In 2016, USACE revisited the floodplain analysis and mapping and produced a Floodplain Management Services Special Study for the River from Barham Boulevard to First Street under current conditions accounting for vegetation and sedimentation (USACE 2016b). The hydrologic data for the reach where the Project site is located, Reach 9 in the 2016 USACE study, used flow rates from LACFCD Runoff Station F57, which is located 800 feet upstream of the Arroyo Seco confluence and just downstream of the Project site. Table 7-1 shows the calculated flows for Station F57 at 2-, 5-, 10-, 50-, and 100-year events, the original design flow, and the updated design flow used in the study.

Table 7-1. Recurrence Interval for Flows at Station F57

Recurrence Interval	Flow Rate (cfs)
2-year	16,317
5-year	29,081
10-year	37,518
50-year	54,576
100-year	61,031
LACDA Design Flow (1992)	83,700
USACE Floodplain Management Services Special Study (2016)	93,800

The data in the table show that the calculated flows for Reach 9 appear lower than the design flow rates. The Floodplain Management Services Special Study, however, used the updated flow rate of 93,800 cfs based on an analysis of unsteady flow hydrographs as required by the Federal Emergency Management Agency (FEMA). The updated flow rate is greater than previously published 100-year flood events and reflects an updated analysis of the greater Los Angeles River Watershed. The analysis showed that the flows at this rate overtop the western levee and cause flooding within the City along the west bank of the River (in the Elysian Valley neighborhood). The study used a combination one-dimensional (1D)/two-dimensional (2D) model developed by USACE called Hydrologic Engineering Center – River Analysis System (HEC-RAS) to evaluate the impacts of higher flow rates in this reach. Figure 7-3 shows the results of the analysis for existing conditions.

Figure 7-3. Floodplain Analysis by USACE using 1D/2D HEC-RAS Model



Recent analyses for the update to the County Plan have shown that reducing flood risks in the Glendale Narrows will require a multi-pronged approach. Flood risk reduction will require reduction of inflows, increased storage capacity at dams within the system, increased infiltration via the removal of hardscape along the River, and restoration or an increase of hydraulic capacity within the channel to achieve flood protection requirements.

7.2 Analysis of Site Planning Options

Any modification to the River configuration and vegetation would either decrease or increase water surface elevation and corresponding flood risk. Specifically, any increase in the cross-sectional area that allows reduced flow velocities and increased channel roughness created by expected riparian habitat could increase water surface elevation. The options developed for the Project site are being designed with the objective to have no impact on existing flood risk along the River.

7.2.1 Initial Site Planning Options

Hydraulic analysis of the Project started with the three initial site planning options, One Island, Soft Edge, and Three Islands, and the concept developed in the Ecosystem Plan. Preliminary hydraulics for each of those four options were evaluated using Manning's "n" calculations and a USACE 1-D HEC-RAS model. Manning's "n" values are used to estimate the friction between a channel surface and the water it conveys – a higher value indicates more surface roughness. Cross-sections for the options were substituted into the model at the Project site with adjustments to the invert elevation to match existing conditions. The analyses were run using both the 1992 LACDA design flow of 83,700 cfs and the 2016 USACE design flow of 93,800 cfs.

River depth is a function of energy. Water can have two water levels depending on the regime (subcritical or supercritical). Subcritical flows are characterized by deeper slower water, and supercritical flows are characterized by shallow faster water. The River flows at the Project site are subcritical but nearing supercritical. In this condition, as water flows lose energy, the depth increases.

Manning's equation is an empirical formula estimating the average velocity of liquid flowing in an open channel. The HEC-RAS hydraulic model uses horizontally varying Manning's "n" values, a coefficient for roughness based on many parameters, such as vegetation type and density, and soil surface conditions. Manning's "n" values are used to estimate the friction between the water and the channel surface, and a higher value indicates more surface roughness. The following values are used in the model:

- 0.014 – concrete-lined, smooth
- 0.020 – trapezoidal concrete channel banks
- 0.035 – clean straight, full, no rifts or deep pools, more stones and weeds
- 0.060 – light brush and trees
- 0.110 – heavy stands of timber, few down trees, little undergrowth, and flow into branches
- 0.120 – urban overbank areas

The actual roughness values for each option depend on topography, riparian habitat plant types, and distribution. Roughness values of 0.05 were assumed outside the main channel area and 0.04 within the main channel for this analysis.

The expansion of the cross-sectional width and increase in channel roughness from adding riparian vegetation in the initial site planning options causes increased energy losses. The energy losses slow the river flows causing the depth to increase so that the same volume of water passes the cross-section in the same amount of time. Table 7-2 provides a summary of the change in water surface elevation (WSE) based on the changes to the cross-section width and roughness.

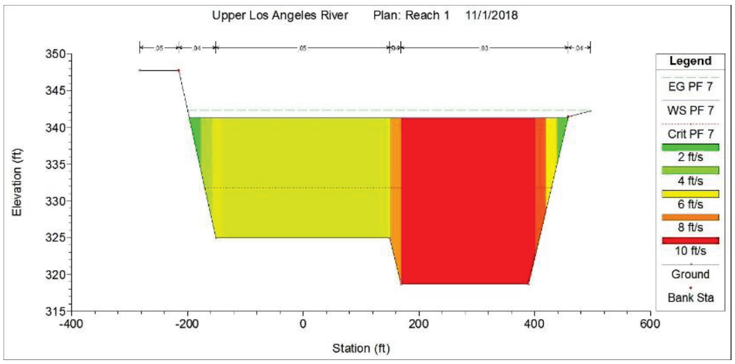
Table 7-2. Summary of Water Surface Elevation Changes by Option

Option	Proposed WSE (feet)	Existing WSE (feet)	Change (feet)	Proposed WSE (feet)	Existing WSE (feet)	Change (feet)
	1992 LACDA Design Flow			2016 USACE Design Flow		
Ecosystem Plan	339.80	336.49	+3.31	341.26	337.67	+3.59
One Island	339.55	336.49	+3.06	341.10	337.67	+3.43
Soft Edge	338.11	336.49	+1.62	339.46	337.67	+1.79
Three Islands	339.53	336.49	+3.04	341.03	337.67	+3.36

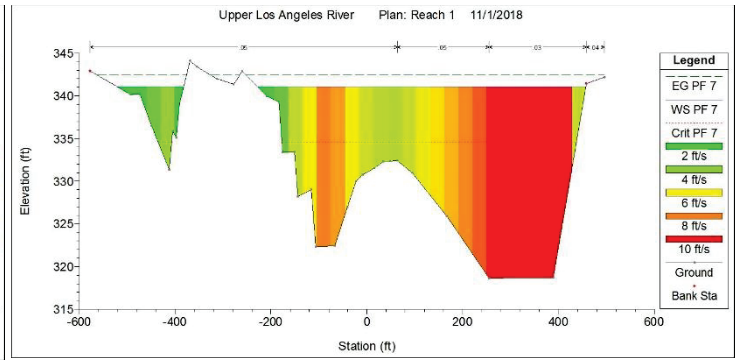
The Soft Edge site planning option, with no flow diversions around islands, appears to cause the least impact to the system. However, additional modeling is required to analyze the complex nature of split flows around islands to confirm this conclusion.

Figure 7-4 graphs the estimated velocities in each cross-section. Each cross-section is looking downstream, with the Project site to the left and the western Riverbank to the right. The red shows velocities higher than 10 feet per second (ft/s), and green indicates flow velocities of 2 ft/s or lower. The flow velocities determine what type of plants can be in certain areas and will dictate the type of channel stabilization methods that are most appropriate for the section.

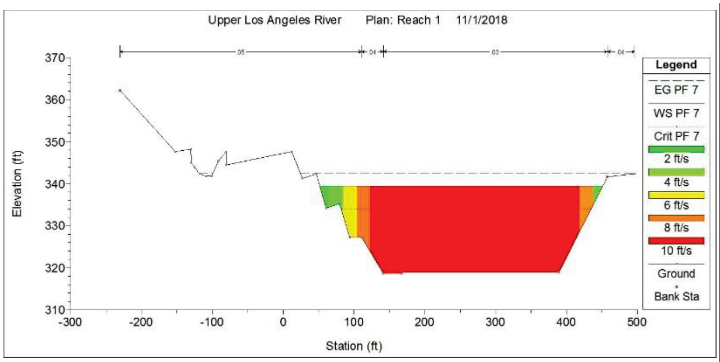
Figure 7-4. Flow Velocities with 2016 USACE Design Flow



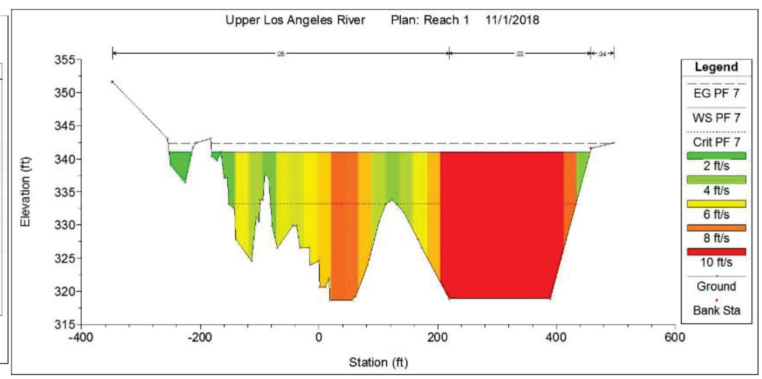
Ecosystem Plan



One Island Option



Soft Edge Option



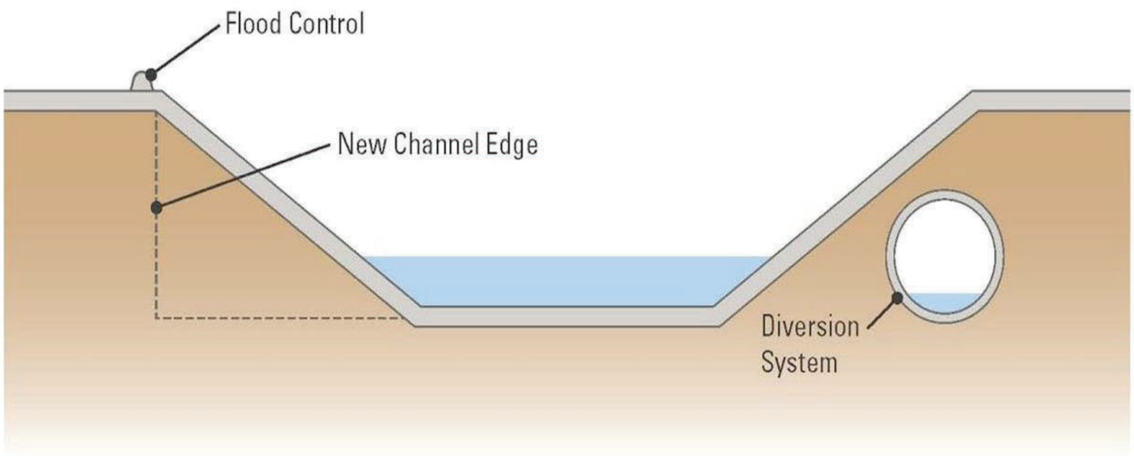
Three Islands Option

The results of this preliminary analysis show that the WSE at these cross-sections rises between 1 and 3.5 feet depending on the option. The changes relate to increased cross-sectional area that allows reduced flow velocities, and increased channel roughness created by expected riparian habitat. This is the reason hydraulic models of the options are important in the decision-making process. Each site planning option may be feasible, but further refinement and analysis are necessary to ensure WSEs in the River are not negatively impacted.

The Project team, therefore, began exploring ways to avoid increasing the WSE through design. One result was the development of The Yards site planning option. This new option maintains the current geometry of the River channel and current WSEs. Another idea was to modify the Island site planning option so that the western edge of the island is located at the existing channel boundary and elevation to maintain the channel dimensions. Section 7.2.2 considers these modifications in detail.

Additional flood risk abatement strategies could also be employed to modify the channel, if deemed necessary to implement the Project. Such strategies could include construction of a diversion system under the Project site, altering the configuration of the channel edge, or installing a flood control curb on the western Riverbank as shown in Figure 7-5.

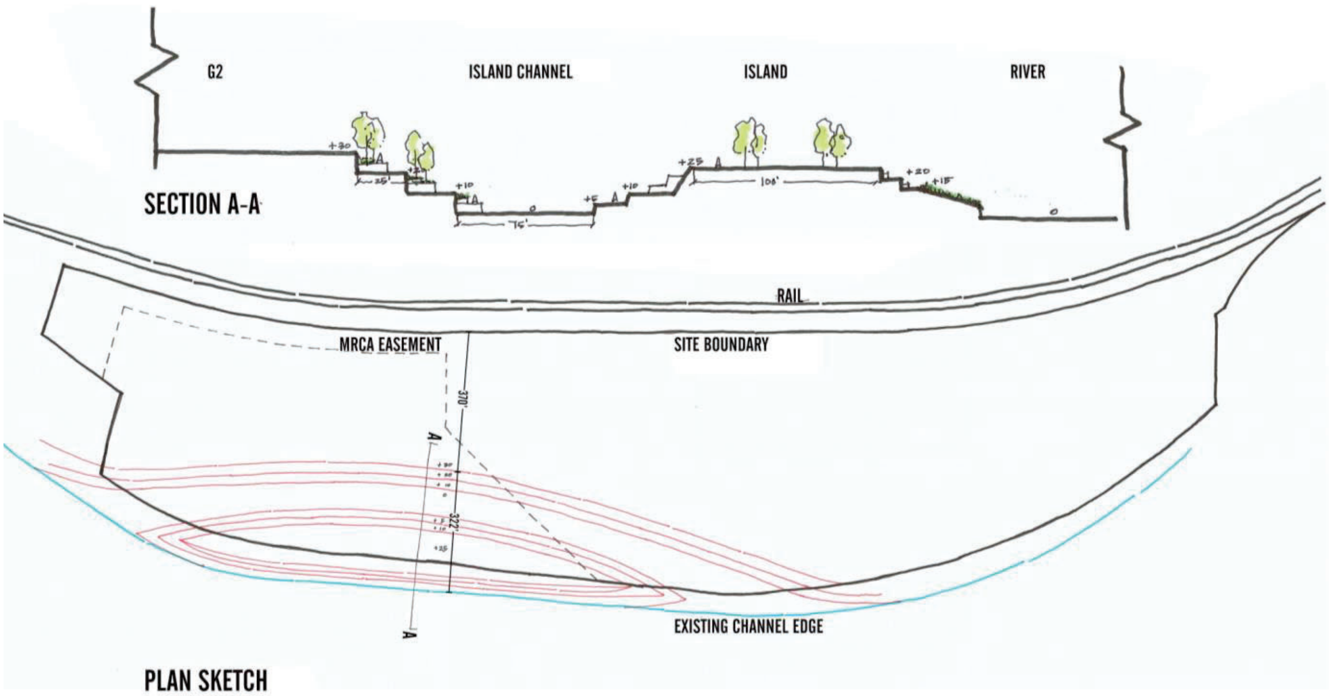
Figure 7-5. Potential Flood Risk Abatement Strategies



7.2.2 Modified Island Site Planning Option

Additional 1D modeling was conducted to determine the potential changes in River hydraulics resulting from modifying the configuration of the island and associated channel in the Island site planning option. For this modeling, current channel conditions were assumed to be the baseline, using the USACE HEC-RAS model prepared in 2016 and calibrated to current channel conditions. Modeling also aimed to analyze the modified island configuration with the flow rate of 50,500 cfs, or an 11-year flood event, which is the current channel capacity at this location. At this lower flow rate, it is anticipated that variation in channel roughness would have more of an impact on velocities than at higher flow rates, so the modeling adjusted the channel roughness to simulate the existence of different types of vegetation within the channel. Figure 7-6 illustrates the conceptual island location as tested under the additional hydraulic modeling.

Figure 7-6. Modified Island Site Planning Option for Additional 1D Modeling



The flow rates for the 11-year event for the main River channel and the new island channel were determined iteratively following the procedure outlined in the HEC-RAS reference manual. The flow rate split varied based of the Manning's "n" values, with more capacity in the new island channel for minimal roughness values than for the moderate and extreme roughness values. Table 7-3 contains the flow rates for the 11-year event for the main River channel and the new island channel for each model roughness scenario.

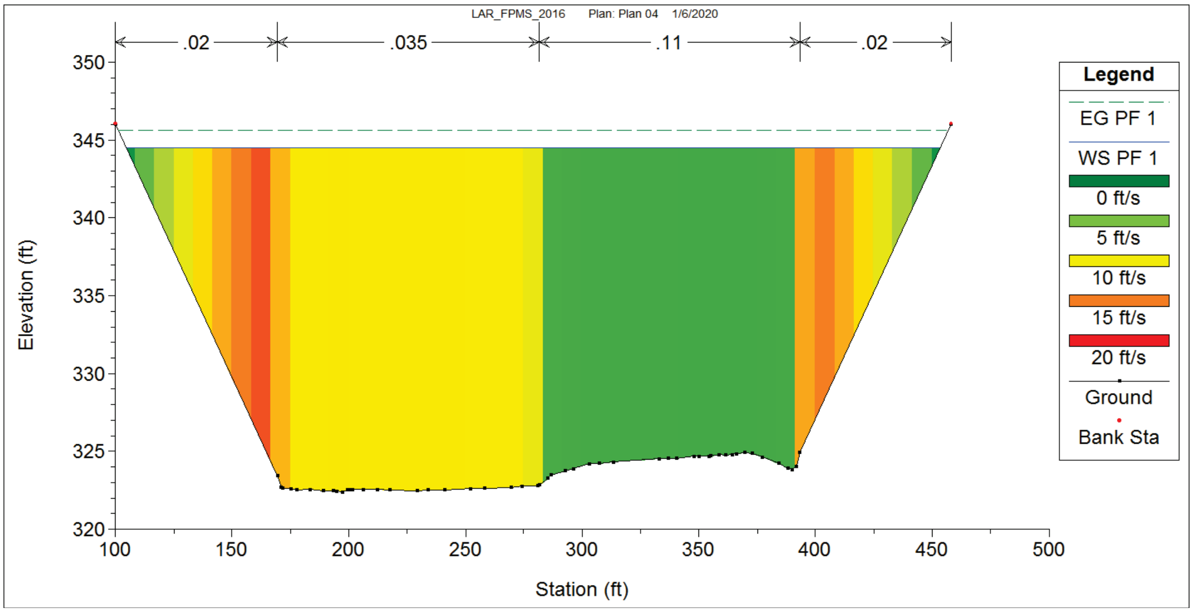
Table 7-3. Split Flow Rates for Each Roughness Scenario for the 11-Year Event

Scenario	Main River Channel Flow Rate (cfs)	New Island Channel Flow Rate (cfs)
Existing Conditions	50,500	Not Applicable
Minimal Roughness	29,250	21,250
Moderate Roughness	34,000	16,500
Extreme Roughness	38,400	12,100

The moderate and extreme roughness scenarios at the design flow rates discussed in the previous section show potential increased flooding risk. The minimum roughness scenario improves flooding risk by reducing WSEs. The WSE changes are discussed later in this section. The Project seeks to add riparian habitat to modify the River system to meet the Ecosystem Plan goals so the varying roughness scenarios – minimal, moderate, and extreme – were modeled to evaluate the impacts of vegetation on WSE and channel velocities.

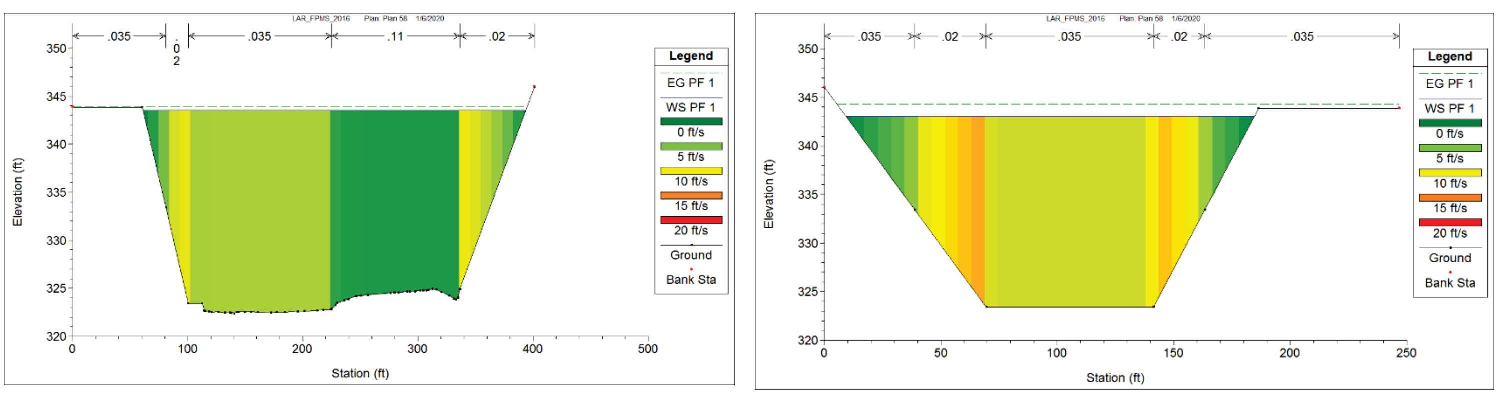
Existing conditions were modeled first to use as a baseline for which to compare the roughness scenarios for the modified Island site planning option. Figure 7-7 shows the existing conditions estimated velocities for 50,500 cfs at a cross-section located approximately at the mid-point of the proposed island location, looking downstream. This is the same cross-section location shown for the roughness scenarios. The western side of the channel bottom is modeled with heavy vegetation to represent the sediment depositions and vegetation growth currently within the channel. Varying slightly from the images in the previous section, the red in the following figures shows velocities higher than 20 ft/s, and green indicates flow velocities of 5 ft/s or lower.

Figure 7-7. Existing Conditions Velocities



The minimal roughness scenario used Manning's "n" values of 0.020 for the lower 10 feet of the island and eastern channel banks and 0.035 for the clean, straight, unlined channel bottom and the upper surface of the proposed island. Figure 7-8 shows the estimated velocities for the 11-year event for the main River channel (left) and the new island channel (right).

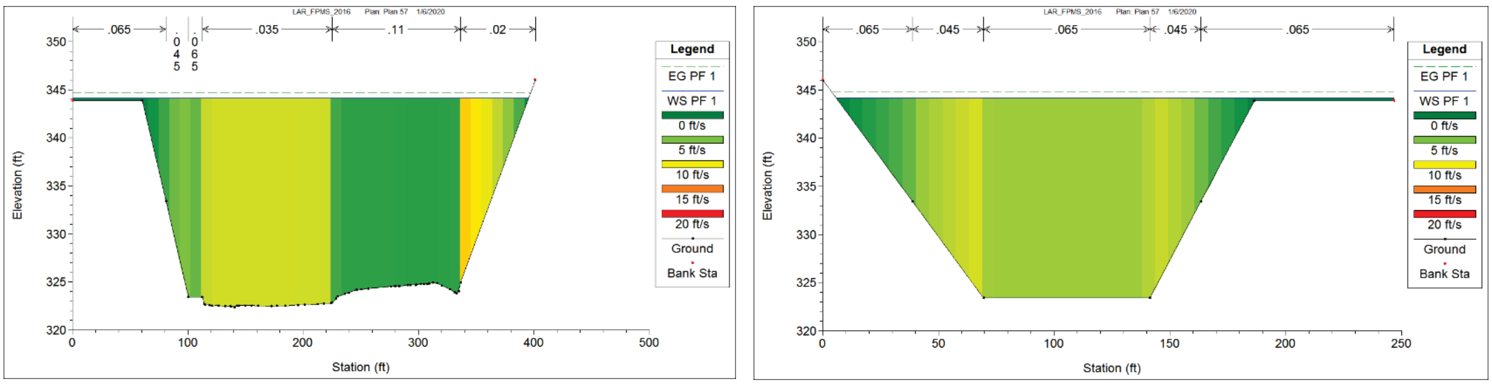
Figure 7-8. Minimal Roughness Velocities



Main River Channel **New Island Channel**

The moderate roughness scenario used Manning's "n" values of 0.045 for the lower 10 feet of the island and eastern channel banks and 0.065 for the channel bottom and the upper surface of the proposed island. Figure 7-9 shows the estimated velocities for the 11-year event for the main River channel (left) and the new island channel (right).

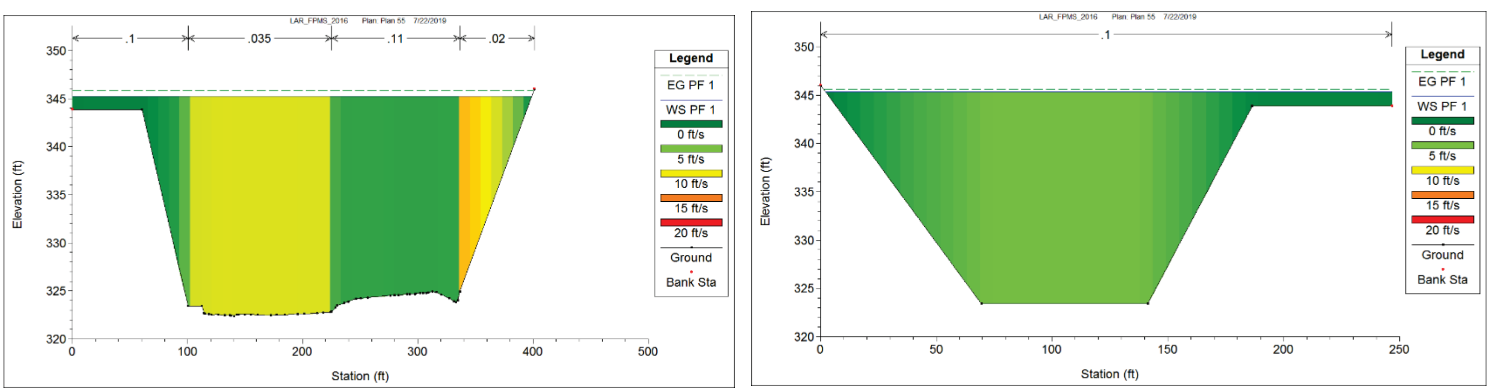
Figure 7-9. Moderate Roughness Velocities



Main River Channel **New Island Channel**

The extreme roughness scenario used Manning's "n" values of 0.10 for the proposed island and eastern channel banks and surface, which represents dense vegetation. Figure 7-10 shows the estimated velocities for the 11-year event for the main River channel (left) and the new island channel (right).

Figure 7-10. Extreme Roughness Velocities



Main River Channel **New Island Channel**

The WSE increased as the channel velocity decreased upstream of the proposed island for the extreme roughness scenario. The opposite was observed for the minimal roughness scenario, for which the channel velocities increased slightly upstream of the proposed island, and the WSE decreased slightly upstream of the island location and significantly along the channel at the proposed island location.

The additional 1D modeling confirms that the location of the island itself impacts the floodplain, and that moving the island closer to the existing channel edge could potentially yield positive benefits in flood risk protection. Based on the modeling conducted, the WSE would increase to a maximum of 3.2 feet (1.75 feet above the channel banks) for the extreme roughness scenario above existing conditions; increase to a maximum of 1.5 feet (0.1 foot above the channel banks) for the moderate roughness scenario; and decrease to a minimum of 2.0 feet below existing conditions for the minimum roughness scenario. With modifications to the island location, moving it within the Project site and aligning it with the existing channel boundaries, and the addition of a new straightened island channel, river water velocities at minimal roughness would increase over existing conditions, thereby reducing potential flood risk in an 11-year flood event. Taking this information into account, a site plan and cross sections were prepared for the Island site planning option showing the modified island location and elevations (Figure 7-11, Figure 7-12, and Figure 7-13).

Figure 7-11. Site Planning Option – Modified Island

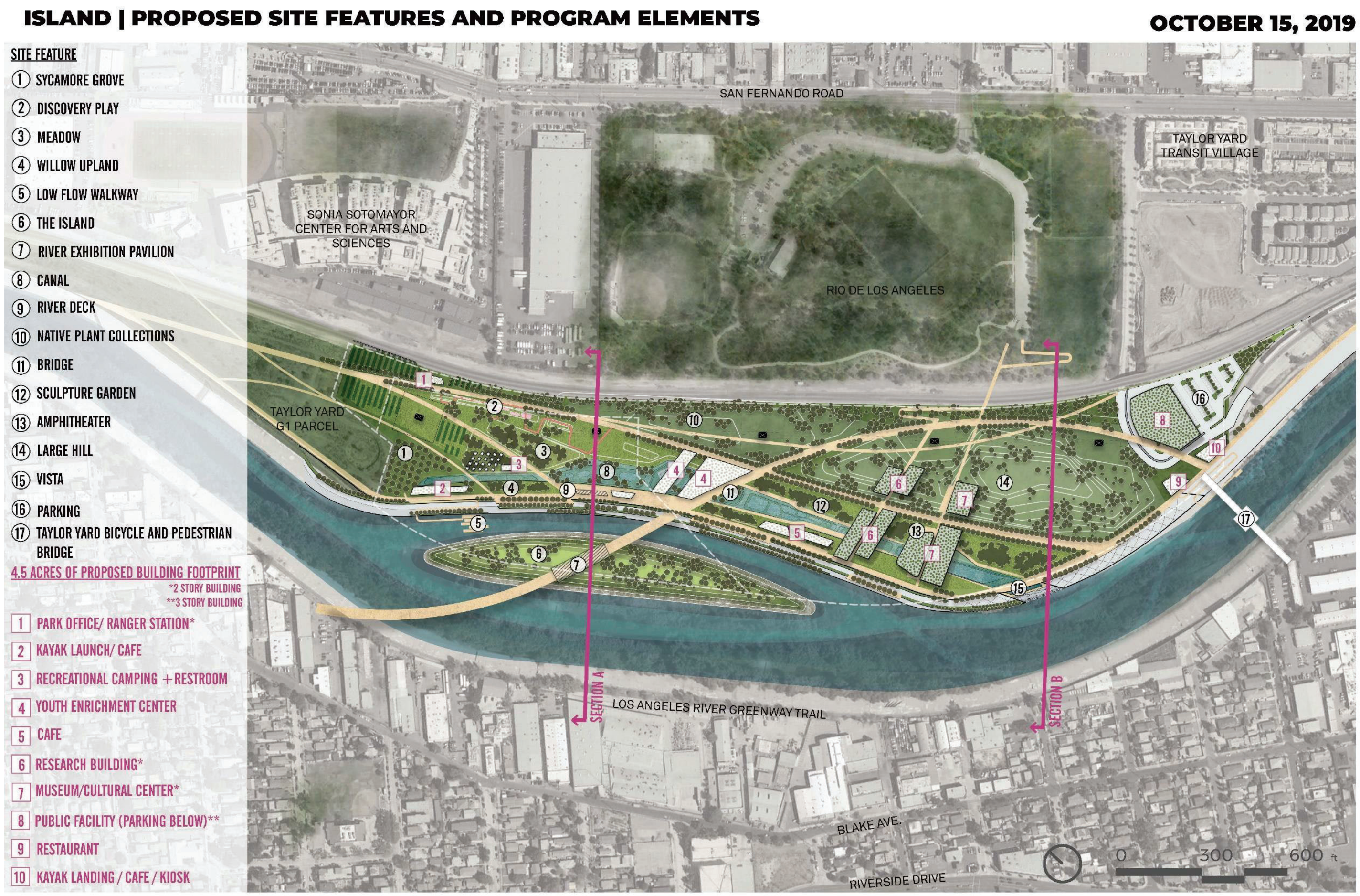


Figure 7-12. Site Planning Option Sections – Modified Island

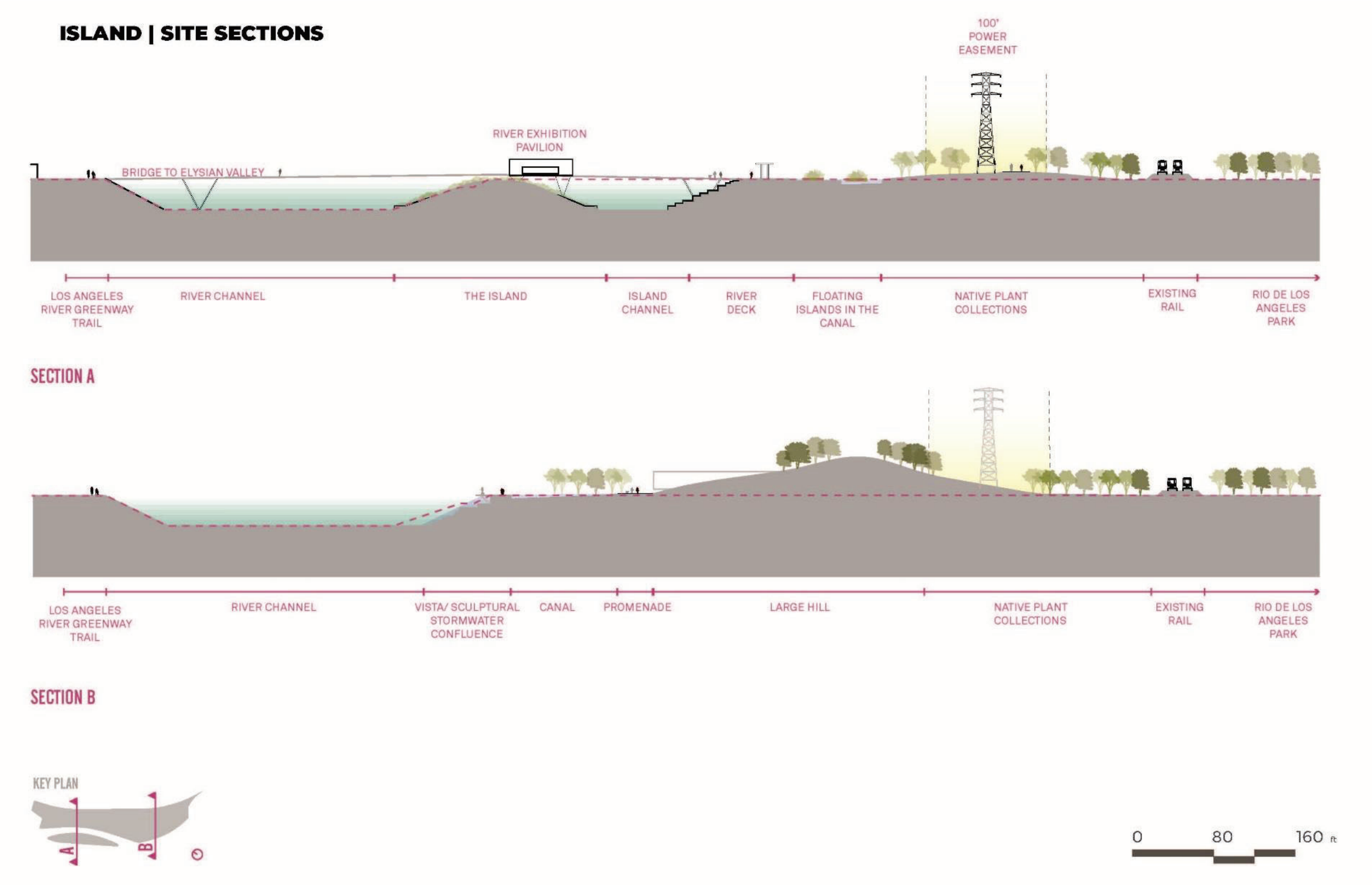


Figure 7-13. Site Planning Option – Modified Island, Realistic

This modeling concludes that the selection of the channel-lining materials and vegetation, which changes the roughness coefficient, has a critical effect on the floodplain and must be carefully selected as design progresses. The modeling also indicates that further benefits to water velocities may be derived by moving the location of the island farther upstream, into the G1 parcel, which could allow more flexibility in vegetation and channel lining selection. The analysis highlights the importance of continued River maintenance and coordination among multiple agencies to remove sediment and non-native vegetation within the channel, consistent with the recommendations of the Ecosystem Plan. Further detailed modeling will be required to fully evaluate the effects of channel modifications in coordination with USACE.

7.3 Bioengineering

Bioengineering is the practice of using natural features such as riparian habitat, large woody debris, rock vanes and weirs, and other engineering features such as retaining walls, gabions, and geogrids to develop a natural ecosystem that is resilient to flood forces and erosional shear stresses. Any changes to the riverbed configuration would influence the water velocity, which in turn affects the type of vegetation that can survive. Higher water velocities limit the types of species that can survive. The flows near the Project site are subcritical with expected velocities currently ranging between 10 and 17 ft/s. Widening the bank would result in a slower velocity of the water in the channel as would planting vegetation along the banks. Table 7-4 presents bioengineering strategies and their associated critical water velocities with red indicating resilience to higher velocities and yellow indicating lower velocities. Habitat values from low to high are also shown.

Table 7-4. Bioengineering Strategies, Critical Velocity, and Habitat Value

Material	Critical Velocity (ft/s)	Habitat Value (low - high)
Live poles	3-10	high
Live poles in woven coir turf reinforced mat	3-10	high
Live brush wattle fence	3-10	high
Lawn (short-time loaded)	6	low
Lawn (long-time loaded)	5	low
Fascine sausage	8-10	medium
Fascine roll	9-11	medium
Live staking in rip-rap	6-21	medium
Live cribwall	10-12	medium
Vegetated reinforced soil slopes	10+	medium
Live brush sills with rock (depends on rip-rap stability)	12+	medium
Vertical bundles	6-10+	high
Weighted fascine	8-10	high
Brush mattress	8-10+	high
Riparian habitat	8-10	high
Live fascine	8-10+	high
Brush layer/branch packing (depends on soil condition)	10+	high
Gabions	6-21	medium
Rip-rap	10-25	medium
Articulated concrete	20-30	medium
Planted retaining wall	30+	medium
Grouted rip-rap	30+	low
Concrete lining	30+	low

The harder the bioengineering strategy, the lower the habitat benefit derived from the solution. For example, planted retaining walls, structural concrete or block walls containing openings for plants to grow, are hard enough to withstand the flows of the River but they offer a low to medium value for habitat, depending on the design of the walls, the setbacks, and riparian overbank widths. Brush mattresses, a stabilizing cover made from a combination of live stakes, live fascines, and branch cuttings, on the other hand, can handle flows of around 10 ft/s once they are established and offer high habitat value and the mattresses become vegetated riparian areas. As shown, high habitat values are achieved with critical velocities in the range of 3 to 10 ft/s. Chapter 8, Habitat and Biodiversity, contains further discussion on habitat.

7.4 Flood Capture and Storage

As part of the County Plan update effort, the County identified needs that exist at numerous project sites along the 51-mile River system. At the Project site, flood risk reduction and water supply, among others, have been identified as needs (County of Los Angeles 2019). The potential of the Project site to be used to capture and store flood water has been preliminarily evaluated.

7.4.1 Flood Risk

As discussed earlier in this chapter, flood risk is known to exist in this stretch of the River. According to the 2002 California Coastal Conservancy study, if both the G1 parcel and the Project site were excavated to the same elevation as the River channel, by cutting approximately 25 feet in depth, the result would be a maximum flood storage capacity of approximately 1,500 acre-feet. If the area were filled with sand or gravel, the flood storage capacity would be reduced to approximately 280 acre-feet. For context, the upstream Sepulveda and Hansen Basins hold 18,127 acre-feet and 33,348 acre-feet, respectively. It would take a new basin at the same order of magnitude as the Sepulveda and Hansen Basins for the Glendale Narrows to meet the capacity of a 100-year flood event (County of Los Angeles 2019). Therefore, any project implemented at the Project site would not remove the adjacent neighborhoods from the floodplain.

That said, the Project site may offer limited flood storage capacity that could improve flood risk downstream on an incremental basis. The feasibility of incorporating flood capture and storage capability through retention during storm events into the Project will be further evaluated as part of site planning option development, and will depend on factors such as site design, an analysis of flood risk benefits, discussions and agreement from agencies with flood management responsibilities for the River, and other flood management projects within the region.

7.4.2 Water Supply

Infiltrating stormwater to the groundwater system is an effective way of increasing local water supply in the region. Through decades of development within the watershed, impervious ground surface has increased greatly limiting natural groundwater recharge through infiltration. There are many local initiatives to increase infiltration to groundwater through engineered solutions. At the Project site, the high groundwater table limits the amount of aquifer storage below the site as opposed to locations such as the San Fernando Groundwater Basin with much greater groundwater recharge capability. Additionally, the groundwater at the Project site is known to interface with the River downstream, meaning the stormwater infiltrated at the Project site could end up in the River rather than the groundwater system. Previous groundwater modeling indicates that local groundwater in the shallow aquifer generally flows toward the River. However, with deeper levels of the model, the groundwater flow is not upward but parallel to the River (The River Project 2002). This indicates that deep infiltration may result in some recharge benefit.

As discussed in Chapter 3, Site Contaminants, contaminated soil conditions at the Project site raise concerns that infiltration may result in migration of contaminants to the groundwater system. Complete removal of the contaminated soil and import of clean fill material presents cost and feasibility restrictions; however, other infiltration solutions that avoid contact between the stormwater runoff and the contaminated soil may be feasible, such as lined infiltration wells or a system that conveys surficial stormwater to an uncontaminated location on-site.

Further analysis on the feasibility of incorporating infiltration into the Project will be conducted to determine its compatibility with the remediation and site design.

Another way to potentially assist with local water supply is to retain water from a storm event within the island channel during a rain event with sluice gates, and/or in a reservoir or tank at the Project site, for beneficial use during dry periods. These possibilities can be further explored as design continues.

River hydrology and hydraulics and flood management in the Glendale Narrows and at the Project site are complex and critical to the success of this Project. Facilities and improvements constructed as part of the Project will either be designed to flood or built outside the floodplain. Identifying channel lining materials and topographical changes, and developing a vegetation management and maintenance plan, will be key to understanding the impacts of the Project on River hydraulics and flood risk within the reach.

8 HABITAT AND BIODIVERSITY

Los Angeles sits within a Mediterranean climate region, which covers only two percent of the Earth's surface but is home to nearly 20 percent of its plant species. The Project would restore native habitat and ecosystem functions within a region also identified as one of Conservation International's 35 global biodiversity loss hotspots (the California Floristic Province) and within the globally significant Pacific Flyway. This chapter discusses existing habitat conditions, identifies restoration opportunities incorporated into development of the site planning options, and analyzes biodiversity performance against a site-specific measurement system.

The term restoration is often interpreted with a variety of connotations by professionals and laypeople. Use of the term for this Project aligns with its use in the Ecosystem Plan (see Section 8.1.2). The Ecosystem Plan proposes restoration in terms of multiple restoration measures estimated to be feasible considering the current urban context of the study area, not to be confused with full restoration of historic natural conditions. Rather, the Ecosystem Plan speaks of "a more natural hydrologic and hydraulic regime," restoration of riparian habitat types, and "naturalizing the river's edge where feasible," among other measures. Yet, the Ecosystem Plan identifies Taylor Yard as having some of the greatest potential for higher levels of restoration in the broader Ecosystem Plan study area.

The following section describes further evaluation of potential ecosystem restoration measures at the Project site to support biodiversity (e.g., species of concern, connectivity, native vegetation). Ecosystems, including urban ecosystems like the Project site, comprise both biota (animals and plants) and the underlying abiotic (physical rather than biological) characteristics that make an ecosystem suitable for biodiversity, such as hydrology, microclimate, geology, and soils. Social and built factors are also key parameters for urban biodiversity, including presence of extensive fill material on the site, the legacy of industrial development, stakeholder community values and perceptions, and feasibility of long-term ecosystem stewardship. The alternatives for urban ecology shared in this report reflect many higher level ecosystem restoration measures likely feasible for the Project site, balanced with other demands for recreational, educational, and civic uses expected of most urban open spaces and parks.

8.1 Existing Habitat Conditions

Ecology at the Project site is currently highly altered due to compacted soils; flood control measures that have eliminated hydrologic connectivity with the River; and sparse, mostly non-native vegetation creating poor-quality habitat for wildlife. The site is mostly flat and consists of concrete foundations from previous structures covering 35 to 40 percent of the property. Along the western edge of the Project site and at the top of the Riverbank, existing vegetation comprises a mixture of ruderal species (non-native weeds typical of disturbed areas), a few native coastal sage scrub species (believed to be volunteer seedlings from adjacent planted areas west of the Project fence-line), and a mix of non-native and early successional native small trees. Some small depressions that appear to hold water during rainy periods are also present in this area; however, these features are associated with past human activities rather than natural ephemeral wetlands. Overall, existing habitats for native plants and animals are of low quality. Based on the disturbed and isolated nature of the Project site, it currently lacks the minimum characteristics and conditions necessary to support any sensitive natural communities or special-status plant or animal species (City of Los Angeles 2014). The site is not likely to have federal or state-listed species, or species of special concern (special-status species) because it has been developed for many decades (USACE 2015).

The River adjacent to the Project site contains some existing riparian habitat. Within the riverbed portion of the channel, there is a mixture of open water and disturbed riparian and wetland vegetation that is dominated by non-native plant, tree, and vine species. The riverbed is braided in some areas but in most locations, there are primary and secondary terraces that have various types of riparian and wetland vegetation communities. Existing native vegetation includes willows, cottonwoods, box elders, Arizona ash, cattails, bulrush, and aquatic plants. In addition to these native species, non-native species, such as giant reed (*Arundo donax*), are found in the River.

Prior to construction of Rio de Los Angeles State Park in 2004, disturbed riparian woodland (habitat with decreased function and value due to human effects) was observed growing in low-lying areas of the Rio de Los Angeles State Park site and was determined to be a result of past activities and remediation work on the property (State Parks 2004). Riparian woodland species observed at the Rio de Los Angeles State Park site include arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), Fremont cottonwood (*Populus fremontii*), and blue elderberry (*Sambucus nigra ssp. caerulea*). Although in a disturbed state, this natural community is considered sensitive because it contains many of the same species that a mature riparian woodland is known for, and that can be used by special-status bird species such as yellow warbler (*Setophaga petechia*) and yellow-breasted chat (*Icteria virens*), both of which are CDFW Species of Special Concern. Disturbed coastal sage scrub was also observed at the Rio de Los Angeles State Park site in a small patch along a west-facing slope in the southwestern corner of the property (State Parks 2004). Species observed include California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), mulefat (*Baccharis salicifolia*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*).

Historically, there have been numerous special-status plants and wildlife observed in the Project vicinity, including the federally and state-listed endangered least Bell's vireo (*Vireo bellii pusillus*; LBVI). Protocol-level surveys for the federally and State-listed endangered southwestern willow flycatcher (*Empidonax trailii extimus*), LBVI, and the federally listed threatened and CDFW Species of Special Concern coastal California gnatcatcher (*Polioptila californica californica*) were conducted in 2005 and 2007 in USACE-managed areas (USACE 2015). The survey area included the Project site. Surveys for southwestern willow flycatcher and coastal California gnatcatcher were negative. LBVI were detected in 2007, in 2009 during another survey, and again in 2013 in the Project vicinity, but breeding or nesting behavior has not been observed (USACE 2015).

According to a review of the Rio de Los Angeles State Park Project's Initial Study/Mitigated Negative Declaration, California Natural Diversity Database, and other literature, six sensitive wildlife species including several bats and the American peregrine falcon (*Falco peregrinus*), eight sensitive plant species such as Nevin's Barberry (*Mahonia nevinii*) and mariposa lilies (Calochortus**)**, and sensitive plant communities were identified as having the potential to occur in the vicinity of the Project site; however, no special-status species are currently within the Project site.

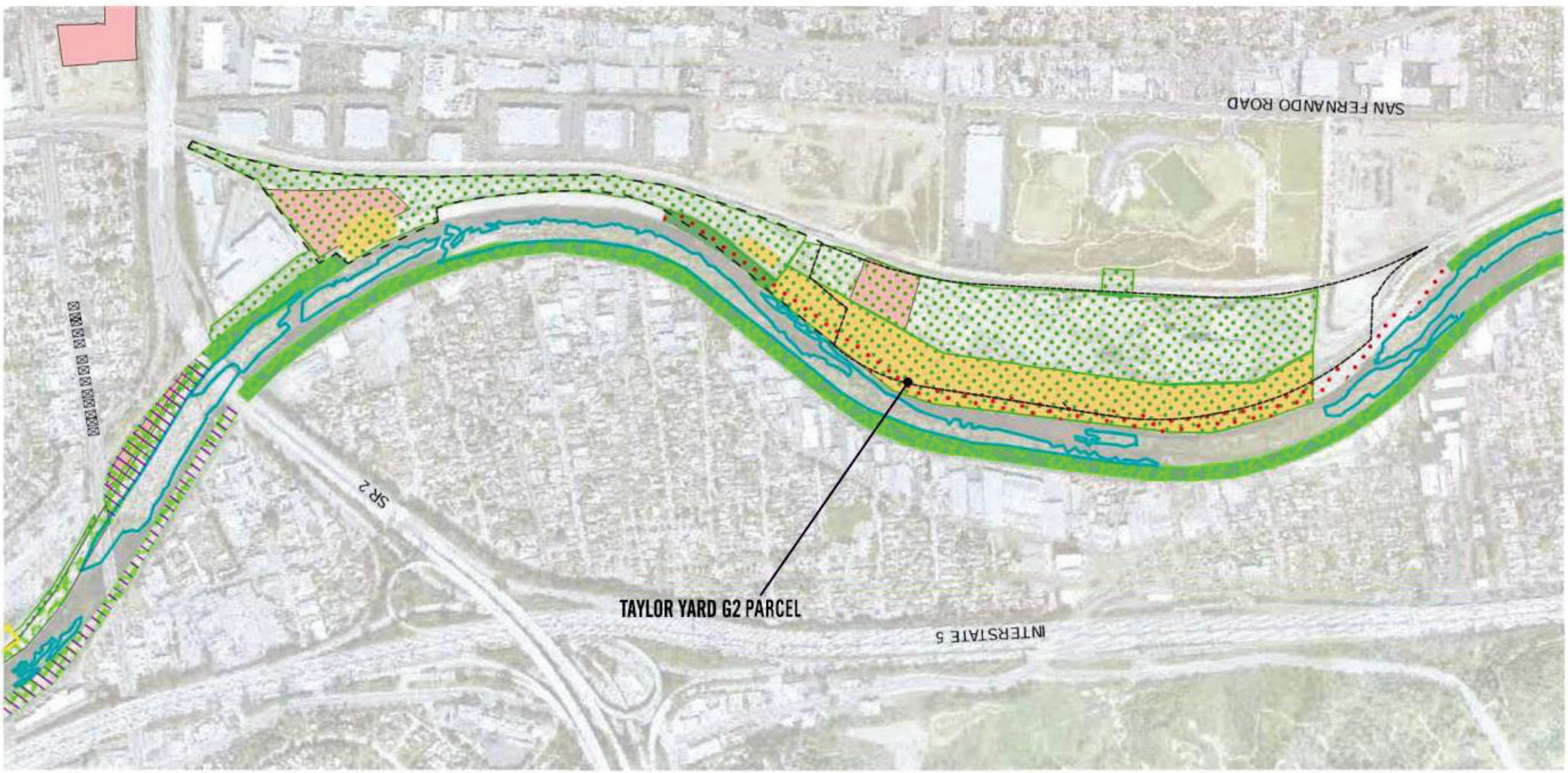
8.2 Relevant Past Studies

8.2.1 Ecosystem Plan

The Project is critical to fulfillment of the Ecosystem Plan objectives to restore ecosystem functions in the Glendale Narrows. Restoration efforts would reestablish riparian strand, freshwater marsh, and aquatic habitat communities, reconnecting the River to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo Mountains while maintaining existing levels of flood risk management. The Ecosystem Plan also includes opportunities for passive recreation that are compatible with the restored environment (USACE 2015).

The Project site falls within Reach 6 of the Ecosystem Plan, which extends from the Glendale Freeway (SR-2) bridge over the River to the downstream crossing of Interstate 5 (I-5). Figure 8-1 illustrates the relationship of the Project site to habitat restoration in Reach 6 of the Ecosystem Plan. The Ecosystem Plan identifies creating geomorphic features and areas of freshwater marsh plants (shown in orange) at the Project site and creating habitat corridors and riparian habitat on the Riverbanks (green dots). The concrete would be removed on the eastern bank to widen the channel (red dots) and the western channel walls would be bioengineered to increase habitat value (green). At the southern end of the Project site, the channel would be terraced (shown in white) and, within the channel, the invasive vegetation would be managed (blue). The pink represents a potential location for temporary construction staging.

Figure 8-1. Habitat Restoration in Reach 6 of the USACE Ecosystem Plan



LEGEND

Sub-Measures
- Expose stormdrain outlets; convert to natural stream confluence
- Create geomorphology and plant for freshwater marsh
- Bioengineer channel walls
- Habitat corridors/riparian planting on banks
- Planting built into channel walls
- Channel banks mainstem/widen channel with concrete removal
- Terrace banks
- Modify trap channel to vertical sides
- Invasive management
- Potential Temporary Construction Staging Areas

The three planning objectives of the Ecosystem Plan are:

1. Restore Valley Foothill Riparian Strand and Freshwater Marsh Habitat
    a. Restore Valley Foothill Riparian wildlife habitat types
    b. Restore aquatic freshwater marsh communities
    c. Restore native fish habitat
    d. Restore supporting ecological processes and biodiversity
    e. Restore a more natural hydrologic and hydraulic regime to reconnect River to historic floodplains and tributaries
    f. Reduce velocities
    g. Increase infiltration
    h. Improve natural sediment processes
2. Increase Habitat Connectivity
    a. Increase connectivity between the River and historic floodplain
    b. Increase nodal connectivity for wildlife between restored habitat patches and nearby significant ecological zones such as the Santa Monica Mountains, Verdugo Hills, Elysian Hills, and San Gabriel Mountains
3. Increase Passive Recreation
    a. Include recreation that is compatible with the restored environment

The Ecosystem Plan assumes the following restoration features at the Project site:

- Restoration of approximately 39 acres, providing 649.6 Habitat Units (HUs) as calculated by Combined Habitat Assessment Protocols (CHAP). This is approximately a threefold increase from baseline conditions at 219.3 HUs, which is further discussed in Section 8.4.
- Widening the soft-bottomed riverbed by approximately 300 feet to create geomorphic features and areas of freshwater marsh. As an example, Figure 8-2 provides images of the River before widening (existing conditions) and what the River could look like after widening. Figure 8-3 illustrates the setback called for in the Ecosystem Plan.
- Gradual riparian slope to the overbank elevation for approximately 1,000 feet along the River.
- Aquatic riverine habitat (i.e., freshwater marsh, open flowing water) dominating the new riverbed.
- Riparian planting on the Riverbank consisting of 50 percent riparian trees and 50 percent riparian shrubs, resulting in two to three structural layers.

Figure 8-2. Before and After River Widening

Source: ClimbingLA 028 0222

Before River Widening

Source: Cheviot Trees Website

After River Widening (conceptual)

Figure 8-3. Ecosystem Plan's Area for Geomorphological Restoration to Support Freshwater Marsh

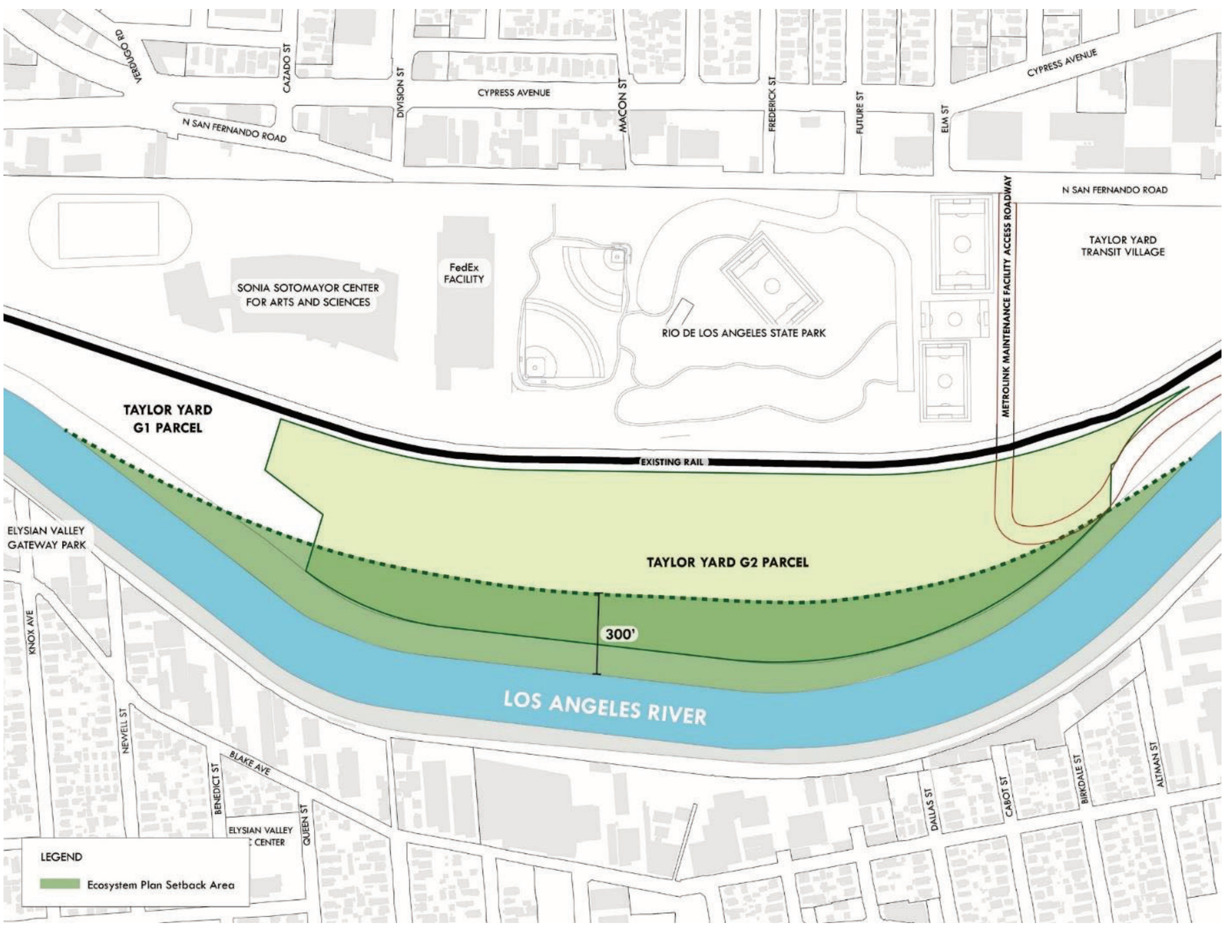
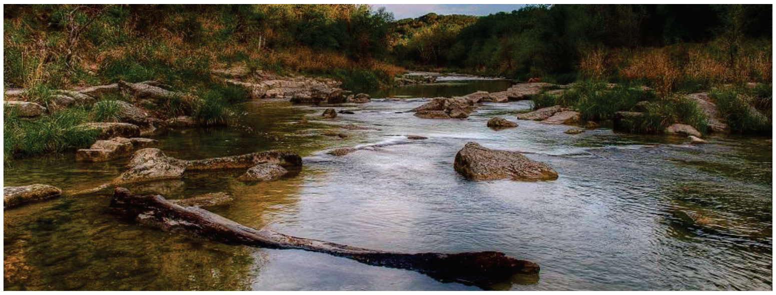


Figure 8-4 shows examples of established habitat types envisioned for the Project. Habitat types include aquatic riverine, ephemeral marsh, riparian strand, and riparian woodland. Examples of projects that transition between habitat types are also shown.

Figure 8-4. Examples of Established Habitat Concepts



Source: myubuntu.info Website

Aquatic Riverine

Source :discovertorrance.com

Ephemeral Marsh

Source: https://www.arroyoseco.org

Riparian Strand

Source: https://www.arroyoseco.org

Riparian Woodland

Because a primary goal of the Project is to achieve the objectives of the Ecosystem Plan, the Project team analyzed each planning objective and how it could be incorporated into the Project (Table 8-1). The first column in Table 8-1 describes potential approaches to meet each objective that could be incorporated into any of the site planning options. The second column describes specific methods and considerations for meeting the objective, and the third column discusses the potential challenges and limitations of the Project site.

Table 8-1. Potential Approaches to Meet the Objectives of the Ecosystem Plan

Potential Approach to Meet Objective	Specific Methods & Considerations	Potential Challenges & Limitations
Objective: 1. Restore Valley Foothill Riparian Strand and Freshwater Marsh Habitat		
Measure: 1a. Restore Valley Foothill Riparian wildlife habitat types		
▪ Design Project to support adjacent aquatic riverine habitat and variety of riparian strand habitat components, including large and small mammals, birds, reptiles, fish, invertebrates, trees, shrubs, herbs, vines, and grasses ▪ Integrate a variety of topographic features and choose appropriate native plant species for planting and seeding ▪ Include an irrigation system that can deliver water to planted areas during periods of drought as needed (recycled water) ▪ Design Project so that there is at least one contiguous patch of uninterrupted habitat that can be used as a wildlife corridor that is parallel to the River ▪ Include features that act naturally to assist with cleaning dry-weather runoff	▪ Soil suitability testing ▪ Soil amendments, as necessary ▪ Pre-construction general biological surveys ▪ Focused special status species surveys ▪ Sensitive species avoidance and minimization measures ▪ Planting and seeding with species collected locally ▪ Vegetated terraces/slopes (e.g., live stakes, fascines, gabions, articulated concrete blocks) ▪ Include wetland treatment ponds and swales for dry-weather runoff ▪ Strategically locate hard structures ▪ Rigorous non-native species removal program ▪ Routine monitoring and reporting ▪ Adaptive management	▪ Soil import may be necessary ▪ Important to use topsoil with native soil organisms (e.g., mycorrhizae) ▪ Soil testing and amendments will be necessary if no import occurs ▪ Plantings may be susceptible to scour during flood events until roots become well-established ▪ Plant with pathogen and pest avoidance and management in mind (phytophthora from nurseries, shot-hole borer, gold-spotted oak borer) ▪ Extensive soil removal will be necessary to bring site down to more natural floodplain elevation ▪ Establishment of more natural groundwater functions to support habitat, and potentially interactions with contaminated groundwater, may face regulatory, safety, and engineering constraints ▪ Surface water quality will need to be improved to support native habitat types (temperature, pollutants, flood/storm flow velocity)

Potential Approach to Meet Objective	Specific Methods & Considerations	Potential Challenges & Limitations
Measure: 1a. Restore Valley Foothill Riparian wildlife habitat types (continued)		
▪ Reengineer/restoring the "Arroyo de San Rafael"[1] tributary, that currently enters the River on the G1 parcel, to flow through the site or Rio de Los Angeles State Park to provide more natural hydrologic conditions to support native Valley Foothill Riparian habitat. Approximate historic watercourse location of "Arroyo de San Rafael" is indicated in Figure 8-5 as "Alluvial Tributary."		
Measure: 1b. Restore aquatic freshwater marsh communities		
▪ Design Project to support freshwater marsh habitat components, including small mammals, birds, reptiles, fish, invertebrates and aquatic plants ▪ Widen River channel and slope to the east to provide more opportunity for freshwater marsh habitat ▪ Choose appropriate native plant species for planting and seeding ▪ Include a temporary irrigation system for select areas of marsh to augment rate of establishment (recycled water)	▪ Soil suitability testing ▪ Soil amendments, as necessary ▪ Sensitive species avoidance and minimization measures ▪ Planting and seeding with species collected locally ▪ Rigorous non-native species removal program ▪ Routine monitoring and reporting ▪ Adaptive management	▪ Soil import may be necessary ▪ Important to use topsoil with native soil organisms (e.g., mycorrhizae) ▪ Soil testing and amendments will be necessary if no import occurs ▪ Plantings may be susceptible to scour during flood events until roots become well established ▪ Will need to establish vegetation in marsh areas outside of wet season to avoid damage from storm flows (irrigation system)

[1] Name not confirmed.

Potential Approach to Meet Objective	Specific Methods & Considerations	Potential Challenges & Limitations
Measure: 1b. Restore aquatic freshwater marsh communities (continued)		
▪ Design Project so that marsh has multiple connections with the riparian strand wildlife corridor ▪ Create geomorphology to support more natural marsh hydrology by lower elevation of the site to near groundwater-level ▪ Engineer hydrology to support marsh vegetation in areas where groundwater cannot be accessed, such as stormwater treatment features or water from the Eagle Rock Drain/"Arroyo de San Raphael" ▪ Incorporate naturally ephemeral character of marsh features where appropriate as described by TNC (2016) (see Section 8.2.2)		▪ Establishment of more natural groundwater functions to support habitat, and potentially interactions with contaminated groundwater, may face regulatory, safety, and engineering constraints ▪ Surface water quality will need to be improved to support native habitat types (temperature, pollutants, flood/storm flow velocity)
Measure: 1c. Restore native fish habitat		
▪ Integrate landscape features into the design of the River that could someday support sensitive fish species when greater habitat connectivity is established along River — Species of interest: ▪ Santa Ana sucker ▪ Speckled dace ▪ Arroyo chub ▪ Steelhead trout	▪ Restore select areas of site to develop into suitable habitat for sensitive fish species ▪ Areas with gravel, rubble, and boulders as substrate ▪ Areas with sandy to muddy substrate ▪ Establish plants/trees that would provide shady areas ▪ Sculpt topography to maximize shade to potential restored "Arroyo de San Rafael" tributary	▪ Currently very few locations with existing suitable habitat in the River ▪ Any habitat created by the Project would be fragmented until other projects are completed to establish connectivity ▪ In the future, translocated or naturally established native fish species could be negatively affected by poor quality dry-weather runoff or recreational uses

Potential Approach to Meet Objective	Specific Methods & Considerations	Potential Challenges & Limitations
Measure: 1c. Restore native fish habitat (continued)		
▪ In future refinements, the concept of a canal in the Island option, and stormwater wetlands in the other options will be explored as a restoration of the "Arroyo de San Rafael" tributary. Restoration of more natural tributary characteristics has the potential to provide significant habitat benefits, including for native fish species and sensitive riparian birds. However, some reduction in stormwater treatment capacity will be necessary to accommodate higher quality habitat	▪ Treatment of water quality (temperature, pollutants, storm flow profile, etc.) entering the site from potential "Arroyo de San Rafael" prior to exposure to freshwater fish habitat	▪ Other habitat affinities needed by these species could be affected by flood events, which could negatively affect long-term survival ▪ Achieving levels of water quality to support native fish habitat types (temperature, pollutants, flood/storm flow characteristics) is possible, but challenging. Numerous efforts are underway across the watershed to achieve this objective.
Measure: 1d. Restore supporting ecological processes and biodiversity		
▪ Design Project with careful consideration of soil, water, vegetation, and wildlife ▪ Plan for establishment of habitat that has various strata (trees, shrubs, grasses/herbs) that can be self-sustaining ▪ Include a buffer for portions of the site that may not have suitable hydrology for riparian strand or freshwater marsh habitat ▪ Buffer the highest value habitat areas from edge effects from adjacent more active uses ▪ Use species of plants that will attract various wildlife, including pollinators	▪ Design monitoring program to measure various aspects of the restoration such as transects, quadrats, or California Rapid Assessment Method (CRAM) ▪ Horticultural monitoring ▪ Botanical monitoring ▪ Soil monitoring (chemical/physical properties) ▪ Permanent photo-stations ▪ Routine general biological surveys to catalogue as many species as possible	▪ Illegal encampments ▪ Vandalism ▪ Intense storms resulting in major amounts of precipitation over a short period ▪ Drought ▪ Plant pests and disease ▪ Projected climate change

Potential Approach to Meet Objective	Specific Methods & Considerations	Potential Challenges & Limitations
Measure: 1d. Restore supporting ecological processes and biodiversity (continued)		
▪ Use custom seed mixes and plant palettes that are diverse and appropriate, including both woody and herbaceous native species		
Measure: 1e. Restore a more natural hydrologic and hydraulic regime to reconnect the River to historic floodplains and tributaries		
▪ Design Project so that a much greater area is subjected to benefits from the River than the existing condition, which consists of a concrete sloped channel with a natural bottom ▪ Expanding the River channel is the primary means for restoring a more natural hydrologic and hydraulic regime ▪ Restoration of "Arroyo de San Rafael" tributary and its confluence with the River	▪ Remove the concrete slope on east side of River ▪ Create terraces that gradually increase in elevation to the east ▪ Create island(s) as part of the site ▪ Create inlets, tributaries, and/or pools at key locations within the site	▪ There is not enough sediment left in the system to create braided sand and gravel bed systems due to upstream dams and debris basins ▪ The velocities in the system to maintain flood protection will influence the potential solutions that will work for the restoration of this reach. ▪ Extensive soil removal will be necessary to bring site down to more natural floodplain elevation ▪ Potential exposure of contaminated groundwater may face regulatory, safety, and engineering constraints
Measure: 1f. Reduce velocities		
▪ Design Project in a way that River flows will be slowed more than they are currently	▪ Widen the River channel ▪ Introduce terracing and/or islands into the design ▪ Potentially include placement of large boulders into the River channel	▪ Hydrologic studies of the channel indicate that reducing velocities may increase flood risk, which is not an acceptable outcome. Additional studies are needed to determine viability of any channel modifications.

Potential Approach to Meet Objective	Specific Methods & Considerations	Potential Challenges & Limitations
Measure: 1g. Increase infiltration		
Infiltration may not be appropriate due to high groundwater levels and the potential to mobilize contamination from the site into the groundwater table.		
Measure: 1h. Improve natural sediment processes		
▪ Consider importing sediment to maintain wildlife habitat	▪ Introduce terracing and/or islands into the design ▪ Potentially include placement of large boulders into the River channel	▪ Limited sediment supply consisting mainly of silts and clays ▪ Current sediment transport should not be expected to maintain channel stability in a natural channel section ▪ Additional study of the sediment in the River system, flow velocities, and shear forces in the proposed channel cross-sections is needed
Objective: 2. Increase Habitat Connectivity		
Measure: 2a. Increase connectivity between the River and historic floodplain		
▪ Design Project in a way that seeks to increase the floodplain area adjacent to the River ▪ Enhance connectivity up- and down-stream through the site ▪ Include restoration of adjacent uplands that were historically present on the eastern portions of the site, including oak woodlands (see stream terrace type in Figure 8-5)	▪ Widen the River channel and incorporate more gradual slope to the east ▪ Bioengineer/vegetate channel walls, terraces, or banks ▪ Incorporate native upland plant species and restored upland vegetation types in upland areas of the site ▪ Create second channel in Island site planning option that is more natural in character ▪ Terraced channel walls in Soft Edge option	▪ Due to urban development, increasing connectivity between the River and the broader historic floodplain is limited ▪ Balancing flood control with connectivity is challenging ▪ Extensive soil removal would be necessary to bring site down to historic natural floodplain elevation

Potential Approach to Meet Objective	Specific Methods & Considerations	Potential Challenges & Limitations
Measure: 2a. Increase connectivity between the River and historic floodplain (continued)		
	▪ Minimize edge effects in areas of high connectivity between the River channel, adjacent floodplain, and uplands	
Measure: 2b. Increase nodal connectivity for wildlife between restored habitat patches and nearby significant ecological zones		
▪ Nodal connectivity would include establishment of a physical connection of the G1 parcel and the Project site. The G1 parcel is closest to Griffith Park, which is also part of the Santa Monica Mountains range. ▪ The Project site is within relative proximity to Santa Monica Mountains, Verdugo Hills, Elysian Hills, Mount Washington, and San Gabriel Mountains. ▪ Reduce edge effects to encourage habitat connectivity.	▪ Include establishment of wildlife corridor in the riparian strand and multiple direct connections with the flowing portion of the River (marsh habitat) ▪ Support habitat connectivity to Rio de Los Angeles State Park ▪ Design upland areas of the site, including more active uses, to minimize edge effects and support wildlife movement for many types of species through them ▪ Reduce light, noise, and active uses within and directly adjacent to high value habitat areas ▪ Cluster active uses to minimize edge effects (clustering=less total length of edge)	▪ Currently the Project site is fragmented from other natural areas ▪ Over time it is expected that other projects along the River will augment the nodal connectivity for all reaches

Potential Approach to Meet Objective	Specific Methods & Considerations	Potential Challenges & Limitations
Objective: 3. Increase Passive Recreation		
Measure: 3a. Include recreation that is compatible with restored environment		
▪ Design Project to include a variety of structures and areas that blend with the natural environment, resulting in a nature-focused park setting	▪ Habitat and wildlife viewing towers ▪ Native meadow for flexible uses ▪ Native plant interpretative garden ▪ Bat houses/owl houses ▪ Educational signage ▪ Pedestrian/bicycle paths ▪ Arboretum ▪ Amphitheater ▪ Kayak landing ▪ Nature play areas for children ▪ Exercise stations ▪ Bridge(s) for visitor and wildlife access ▪ Picnic area(s) ▪ Trash and recycling receptacles ▪ Restrooms ▪ Community science activities ▪ Community stewardship activities	▪ Proximity to sensitive wildlife ▪ Proximity of human use to dangerous flood conditions during peak flows

8.2.2 The Nature Conservancy Study

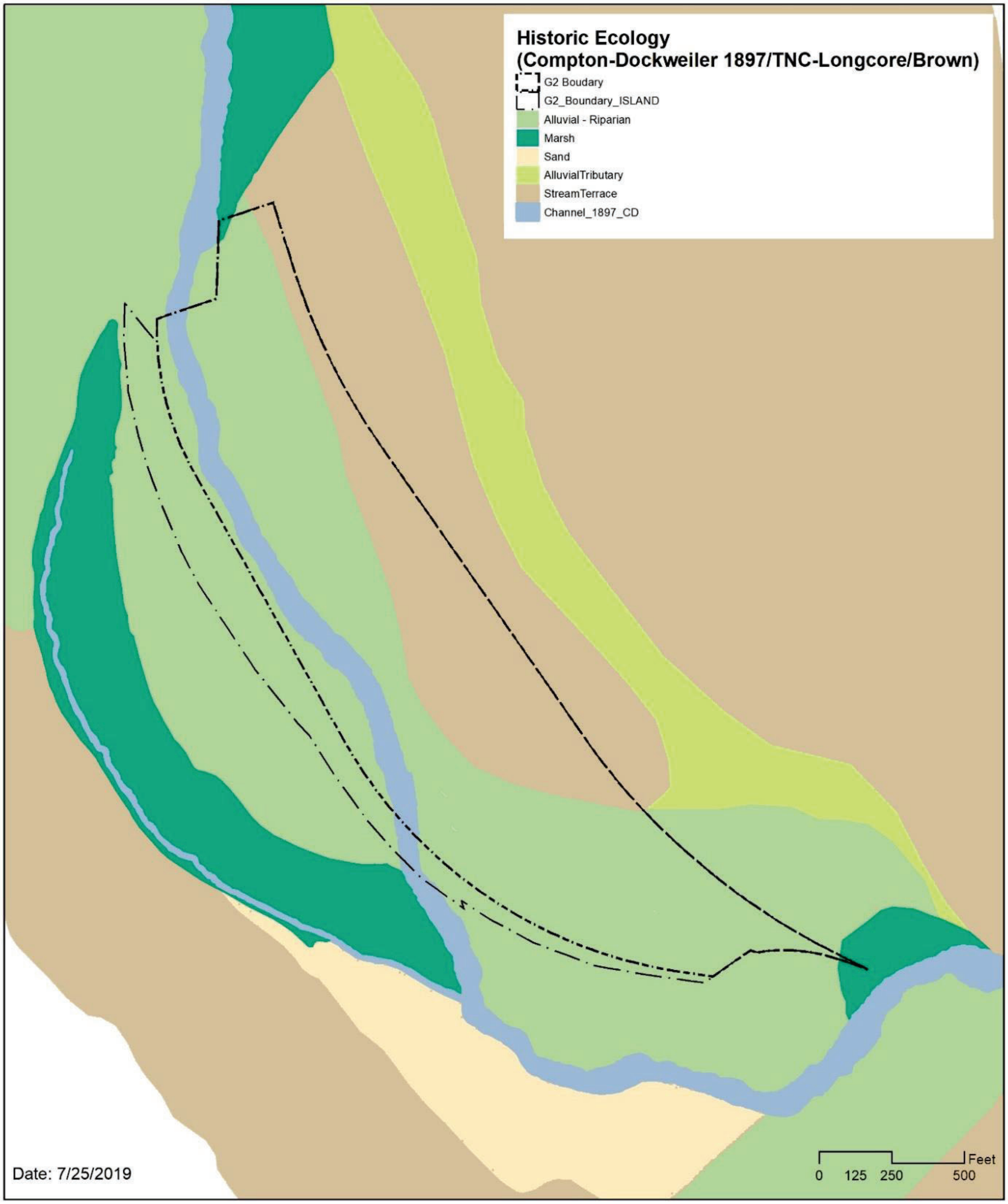
In 2016, the Nature Conservancy (TNC) published the Los Angeles River Habitat Enhancement Study and Opportunities Assessment, which focuses on water supply and habitat resiliency for the River. In the study, TNC identifies habitat enhancement requirements, opportunities, and constraints for the Elysian Valley by investigating its historic and existing conditions. TNC's major findings are:

- Multiple agencies and stakeholders have governance over the River, which creates an uncertainty of flow rates.
- Flow rates are higher than they were historically, which is supporting non-native species and reducing biodiversity, particularly in the soft-bottomed channel in the study area.
- Complementary habitats—and not just those in-stream—increase biological value and present opportunities to return the area closer to its natural hydrological regime. These opportunities consider adjacent upland habitats, land use, and the landscaping.

The study identifies the creation of a river-adjacent floodplain habitat at the Project site as one of six Project opportunities with ecological benefits that could contribute to returning the study area toward its historic hydrological and hydraulic conditions, thereby increasing biodiversity and providing a more natural habitat.

Figure 8-5 is a graphic from the TNC study with the Project site drawn in by the Project team. The graphic is partially based on the projected historic types present prior to intensive European settlement according to the 1897 Compton-Dockweiler maps. It is thought that the alluvial tributary shown in light green is the historic path of the "Arroyo de San Rafael," which is now piped under the G1 parcel in the Eagle Rock Drain.

Figure 8-5. Estimated Historic Pre-European Settlement Conditions



8.3 Habitat Restoration Opportunities

The Project presents significant opportunity to transform land that was once developed and disturbed into a more natural state that supports native flora and fauna. Habitat restoration at the Project site would greatly increase biodiversity by creating additional space for plants and animals to establish and persist, and provide a stopover point for transient or migratory wildlife. Many relatively common species in the region are rare in urban Los Angeles. The Project could provide habitat for many such species and opportunities for more robust nature experiences by the public. TNC (2016) identified many relatively common species that could be targeted for the site including the side-blotched lizard, Pacific chorus frog, blue grosbeak, and long-tailed weasel, among others.

A thorough review of existing reports was completed to identify potential target taxa and vegetation communities on-site. Species and vegetation communities that appeared in two or more reports were identified as possible targets. These lists were cross-referenced with various community science platforms like eBird and iNaturalist to understand current urban movement and locations. Understanding the Project's scope and intended programmatic uses, 12 target taxa were selected to further research:

- Bobcat (*Lynx rufus*)
- Coyote (*Canis latrans*)
- Yellow Breasted Chat
- Osprey (*Pandion haliaetus*)
- Side-Blotched Lizard (*Uta stansburiana*)
- Pacific Chorus Frog (*Pseudacris regilla*)
- Big Brown Bat (*Eptescus fuscus*)
- Arroyo Chub (*Gila orcuttii*)
- Santa Ana Sucker (*Catostomus santaanae*)
- Great Blue Heron (*Ardea herodias*)
- Two-striped Garter Snake
- Monarch Butterfly

The team looked at various aspects for each: rationale for selection as target species, range size, habitat, ecology, and behavior.

Figure 8-6. Target Species for the Project Site

Side blotched lizard (left) Source: Joshua Tree National Park. Pacific chorus frog (right). Source: LA County Trails

Another opportunity of the Project is to increase suitable habitat that is usable for special-status species, some of which are shown in Figure 8-7. For example, recent studies reveal that least Bell's vireo have used the native habitat in the River as a stopover point. If suitable least Bell's vireo habitat is established within the Project site, this species may use the area as future foraging and breeding grounds.

Additionally, habitat could be created for other special-status plants, fish, birds, and invertebrates. Greata's aster (*Symphyotrichum greatae*), for example, is a rare plant that is known to grow in damp places in canyons (Baldwin et al. 2012) including areas adjacent to waterways. It is primarily found in Los Angeles County (Calflora 2017). The closest record discovered during literature review is from 1932, located in Elysian Park, about 1 mile southwest of the Project site. Records indicate that this species is in the Arroyo Seco, about 5 miles to the east of the Project site. This plant could grow well in the restoration area, which would increase its range within Los Angeles County.

Figure 8-7. Special-Status Species with Potential to Occur at the Project Site


Western Yellow Bat (left) Source: LCR Multi-Species Conservation Program Website *Santa Ana Sucker (right) Source: Los Angeles Times*


Southern Steelhead Trout (left) Source: Topanga Malibu Property Website *Arroyo Chub (right) Source: NANFA Website*

Least Bell's Vireo (left) Source: Bob Steel Photography *Peregrine Falcone (right) Source: Dorian Anderson, Macaulay Library*


Plummer's Mariposa Lily (left) Source: Aaron Schusteff, Copyright 2010 *Greata's Aster (right) Source: Michael Charters, Copyright 2006*

Several potential grading and planting scenarios for the Project could support the establishment of natural habitat areas and increased biodiversity. One approach would be the creation of terraces adjacent to the River, which would allow for a greater number of habitat types while protecting those habitats from the force of floods that can be detrimental during inclement weather. Lowland areas could be designed for wetland habitat with a multi-terraced structure that transitions into other habitat types such as open water, riparian scrub, and riparian forest. In higher elevations among the terraces, other habitat types including riparian-upland transitional areas and upland habitat could be created, such as California Sycamore – Coast Live Oak woodland type described by TNC (2016). Upland habitat could be very diverse and designed for creation of native grassland and wildflower fields, scrub and chaparral, or walnut woodland. Terracing is a successful restoration technique for this type of Project and is expected to be effective as the foundation for habitat restoration and appropriate for protection of riverbanks and habitat during large storm events that generate torrential flows.

To fully realize these habitat restoration opportunities, the site planning options were developed with the following principles in mind:

- Maximize habitat structural quality of landscapes as appropriate
- Reflect historic habitat variety of habitats once present on the site
- Incorporate larger landscape patches, which are more valuable
- Provide wider landscape corridors, which are more valuable
- Position corridors for key, off-site connection points
- Minimize edge effects

Following the iterative process of development, the site planning options were then tested using the measurement system discussed in Section 8.4 to determine if they meet the habitat goals established in the Ecosystem Plan.

8.4 Biodiversity Assessment of Site Planning Options

8.4.1 Background

The Ecosystem Plan used the CHAP evaluation to quantify habitat value, which is a measurement system used by CDFW. The evaluation first determined a habitat suitability index (HSI), which is a quantification method resulting in a score between 0 (poor habitat quality) and 1.0 (optimum habitat quality). The HSI is then multiplied by a site's acreage to determine the HUs for a project, the ultimate quantification metric. The HUs identified via the HSI methodology were then combined with HUs resulting from an ecosystem-based habitat evaluation framework known as HAB (or the Habitat Accounting and Appraisal Methodology). The HAB approach identifies over 350 key environmental correlates, representing physical and biological habitat elements that influence a species, and over 100 key ecological functions, which refer to the principal set of ecological roles performed by each species in its ecosystem. It uses a geographic information system (GIS) to identify habitat polygons and map habitat types within a study area. The habitat type classifications are based on the California Wildlife Habitat Relationships System, with each polygon linking the habitat types to identified key environmental correlates and key ecological functions. The integration of both the HSI and HAB approaches results in the CHAP model.

The CHAP model is most effective for evaluating ecological restoration projects in more natural contexts that target high-quality natural vegetation communities. Considering the urban context and diverse park design elements that provide gradients of habitat quality and ecosystem services, and the proprietary status of CHAP model details, stakeholders, including USACE, support exploring a new approach to measuring the site planning options. The City therefore developed a customized biodiversity measurement system – the Site Biodiversity Index (SBI) – to serve as the measurement system. The SBI builds upon the draft City of Los Angeles Biodiversity Index which measures City-wide biodiversity under the guidance of an expert council of local scholars and practitioners.

The CHAP model was not used to measure the site planning options, but CHAP measurements of the Ecosystem Plan's Alternative 20 still provide valuable performance benchmarks. Alternative 20 included the exposure of storm drain outlets and conversion to a natural stream and confluence with diversion water quality ponds provided as-needed in an adjacent channel, the creation of geomorphology and plantings for a freshwater marsh, the grading of adjacent areas to a lower elevation for offline retention, the creation of habitat corridors and riparian planting on the banks, and planting built into the channel walls in the form of native vines or small shrubs. Using the CHAP methodology, this alternative identified a baseline score for the existing Project site as 219.3 HUs and a gross score of 649.6 HUs with the implementation of the alternative, for a net gain of 430.0 HUs over the existing site or a 2.96-fold improvement. It should be noted that although the CHAP model combines the G1 parcel and the Project site results, these results are scaled to reflect the HUs on the Project site only.

8.4.2 Methodology

A detailed analysis of biodiversity was conducted for the site planning options utilizing a unique SBI that begins with a framework that describes the structure, pattern, and function of biodiversity. Structure relates to the ecosystem form and landscape habitat value; the pattern relates to the habitat size, connectivity, and buffers; and the function relates to the natural processes within the habitat and the edge effects. By using this framework, an SBI score can be developed for a geographic area.

Using a similar GIS-based habitat assessment, the SBI for the Project uses a five-point scoring system for four different metrics measured for each 100 square-foot pixel across the Project site. This approach effectively integrates habitat considerations into the design process by identifying physical locations and features for improvement. The four initial metrics that were used to measure the site planning options, Island, Soft Edge, and The Yards, and the 2018/2019 existing conditions are in Table 8-2.

Table 8-2. Preliminary SBI Metrics

Metric	Weight	Purpose
Habitat Quality	4	Assesses the ability of landscapes to provide habitat
Habitat Variety	3	Suitability of habitat for target species or ecosystem
Edge Effects	2	Influence of noise, light, human activity, etc.
Off-site Connectivity	1	Locations for species movement between adjacent parcels

Metrics also can incorporate weighting of relative importance. The current weighting is informed by the weighting approach for the City of Los Angeles Biodiversity Index, which had input from University of California, Los Angeles Sustainable LA Grand Challenge Biodiversity group. Additional metrics to measure ecosystem services, such as the benefits of habitat toward education, human access to nature, air and water quality, and flood control, may also be considered in the future leading to a more complete measurement of site-ecosystem performance.

8.4.3 Evaluation and Results

Each site planning option and the existing condition were evaluated across all metrics. The results are provided as a normalized measure of improvement relative to the existing conditions, meaning the existing condition serves as the baseline from which performance is measured. Two measurements of the existing condition were required for this analysis. The Soft Edge and The Yards existing conditions reflect the existing boundary of the Project site (approximately 18,078 total pixels; Existing Project Site Boundary), while the existing condition of the Island uses an expanded boundary based on the footprint of the site planning option which extends into the River (approximately 21,334 total pixels; Existing Island Boundary). The following summarizes the evaluation methods and results based on the SBI.

Habitat Quality

Habitat quality considers the value of landscapes and vegetation as habitat, regardless of the type of habitat or its spatial context. The five-point scoring system used for habitat quality is shown in Table 8-3.

Table 8-3. Habitat Quality Metric Score Thresholds

Score	Condition Threshold
5	"Restoration" of native habitat types or existing intact high-quality natural areas
4	Biodiversity-oriented landscapes that do not meet the criteria to be considered "restoration," or existing, degraded natural areas where natural landforms are intact, but vegetation has been degraded
3	Diverse native or non-native landscapes, but with functional priorities other than habitat (e.g., stormwater gardens for water quality or arboretums for education), or existing transformed landscapes with some native vegetation
2	Other landscapes or native tree canopies over lawn or hardscapes, intensive landscape use areas such as camping, play areas, or existing non-native vegetation with marginal habitat value
1	Monocultures such as lawns, non-native tree canopies over lawn or hardscape, non-native vegetation with low habitat value
0	Hardscape including roads, trails, plazas, or buildings without green roofs

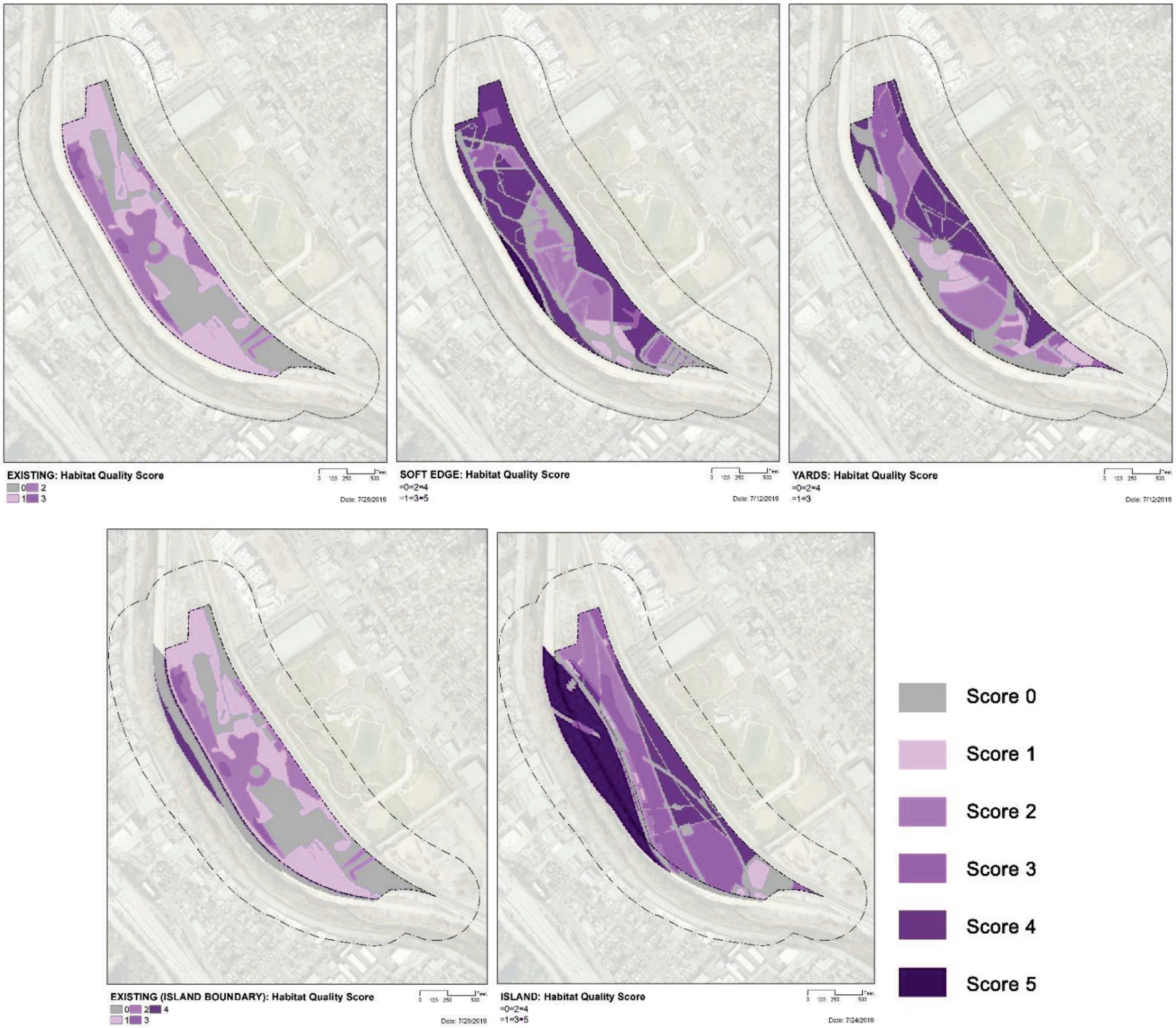
All planning options show a substantial improvement in habitat quality compared to existing conditions. Table 8-4 shows the total scores for the site planning options for habitat quality.

Table 8-4. Preliminary Scores for Habitat Quality

Site Planning Option	Total Points	Points Compared to Existing (Baseline)
Existing Island Boundary	20,031	1.00
Island Option	61,581	3.07
Existing Project Site Boundary	16,027	1.00
Soft Edge Option	42,174	2.63
The Yards Option	36,570	2.28

Figure 8-8 provides graphical representations of the habitat quality scores for each option. Darker purples indicate higher scores, and gray represents a zero score.

Figure 8-8. Preliminary Scores for Habitat Quality



Habitat Variety

Habitat variety considers the type of habitat that landscape features provide, regardless of the quality of the habitat. For example, a riparian or marsh landscape type may be either a restored river floodplain or stormwater gardens treating runoff through more engineered features. Scoring for this metric is complex and requires establishing targets for the types of habitat desired for the Project site. Site planning options that provide the various types at or below the targeted amount of area for each type receive a score of 5 for each pixel of the type. Where types exceed the area target, additional pixels for that type receive a score of 1 point. Proposed targets are based on suggested types in the TNC (2016) Study.

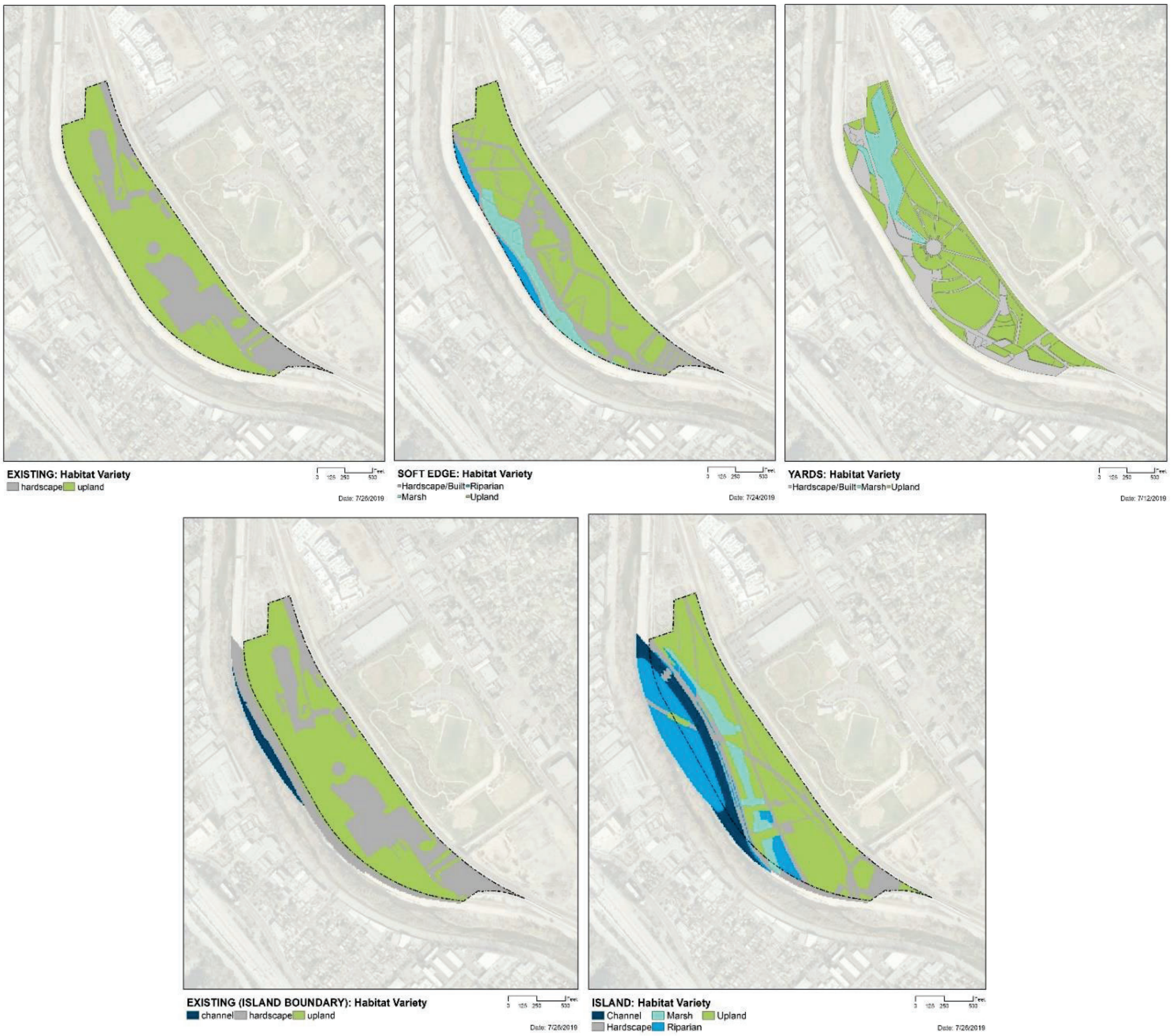
Each scenario provides a moderate improvement over the existing conditions. Table 8-5 shows the total scores for the site planning options for habitat variety.

Table 8-5. Preliminary Scores for Habitat Variety

Site Planning Option	Total Points	Points Compared to Existing (Baseline)
Existing Island Boundary	34,442	1.00
Island Option	63,963	1.86
Existing Project Site Boundary	30,002	1.00
Soft Edge Option	40,342	1.34
The Yards Option	38,746	1.29

Figure 8-9 provides graphical representations of the habitat variety scores for each option. Hardscape is shown in gray. Green indicates upland habitat, light blue indicates built marsh habitat within the stormwater bioretention BMP, blue indicates riparian habitat, and dark blue indicates river channel.

Figure 8-9. Preliminary Scores for Habitat Variety



Edge Effects

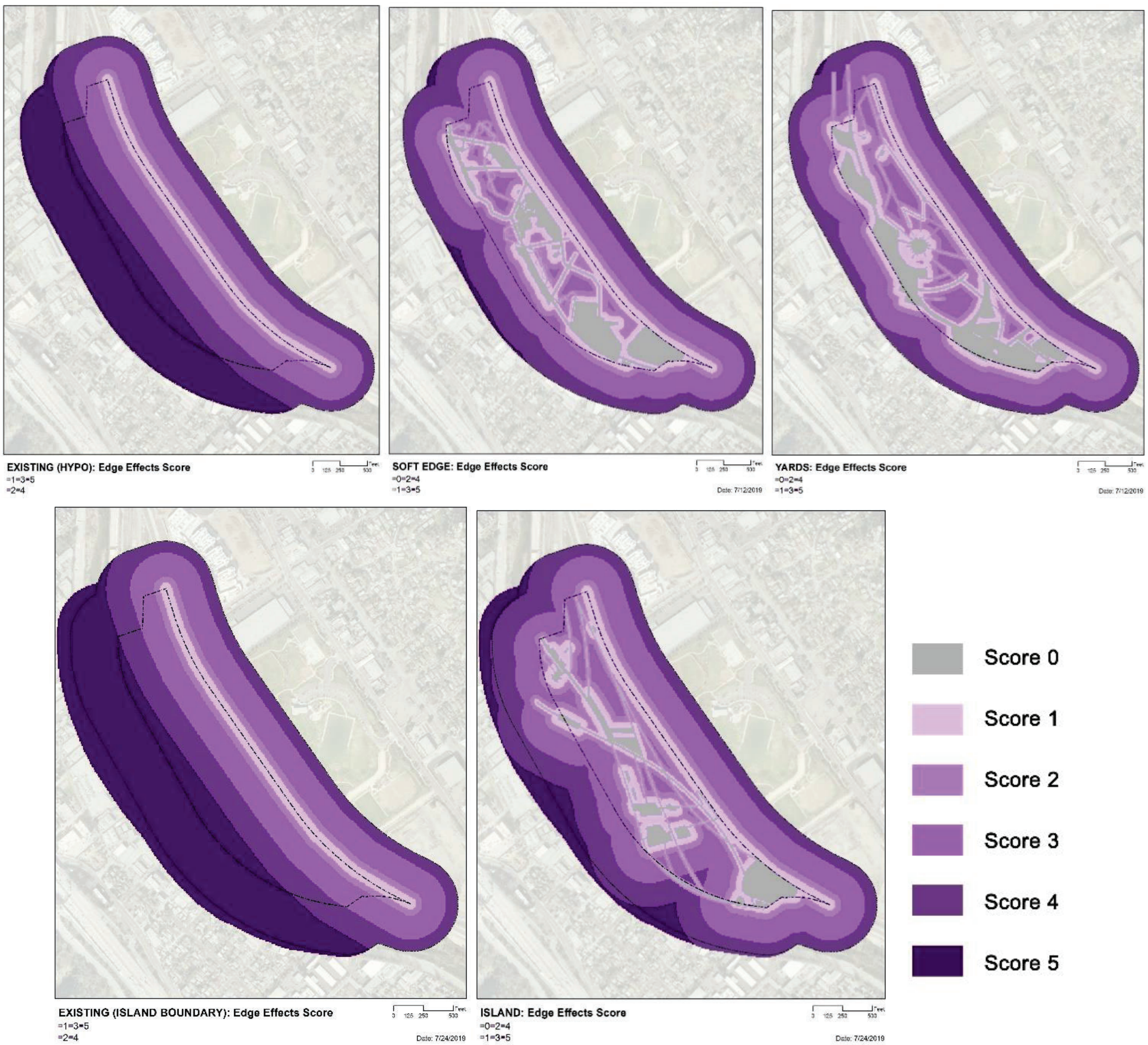
Human activities influence the quality of habitat, especially for sensitive species and urban “avoiders.” Activities can disrupt species movement, reproduction, or vegetation establishment, among other behaviors and processes. Table 8-6 shows the scores for edge effects, which are based on proximity to various types of land uses. Buffer distances used by Pacific Gas & Electric for nesting birds were used as the basis for buffer distance thresholds. Because edge effects can occur beyond the Project site boundary, the measurement is provided for areas within 400 feet of the Project site. The measurement considers only activities originating from on-site and an estimate of the adjacent railroad, not the effects of other nearby activities that may also be impacting the Project site. Each option shows a substantial increase (negative) of edge effects because of increased human activity across most of the site in all options compared to the existing condition, which has relatively little human activity.

Table 8-6. Preliminary Scores for Edge Effects

Site Planning Option	Total Points	Points Compared to Existing (Baseline)
Existing Island Boundary	223,771	1.00
Island Option	163,719	0.73
Existing Project Site Boundary	201,396	1.00
Soft Edge Option	135,889	0.67
The Yards Option	126,964	0.63

Figure 8-10 provides graphical representations of the edge effects scores for each option. Darker purples indicate higher scores, and gray represents a zero score.

Figure 8-10. Preliminary Scores for Edge Effects



Off-site Connectivity

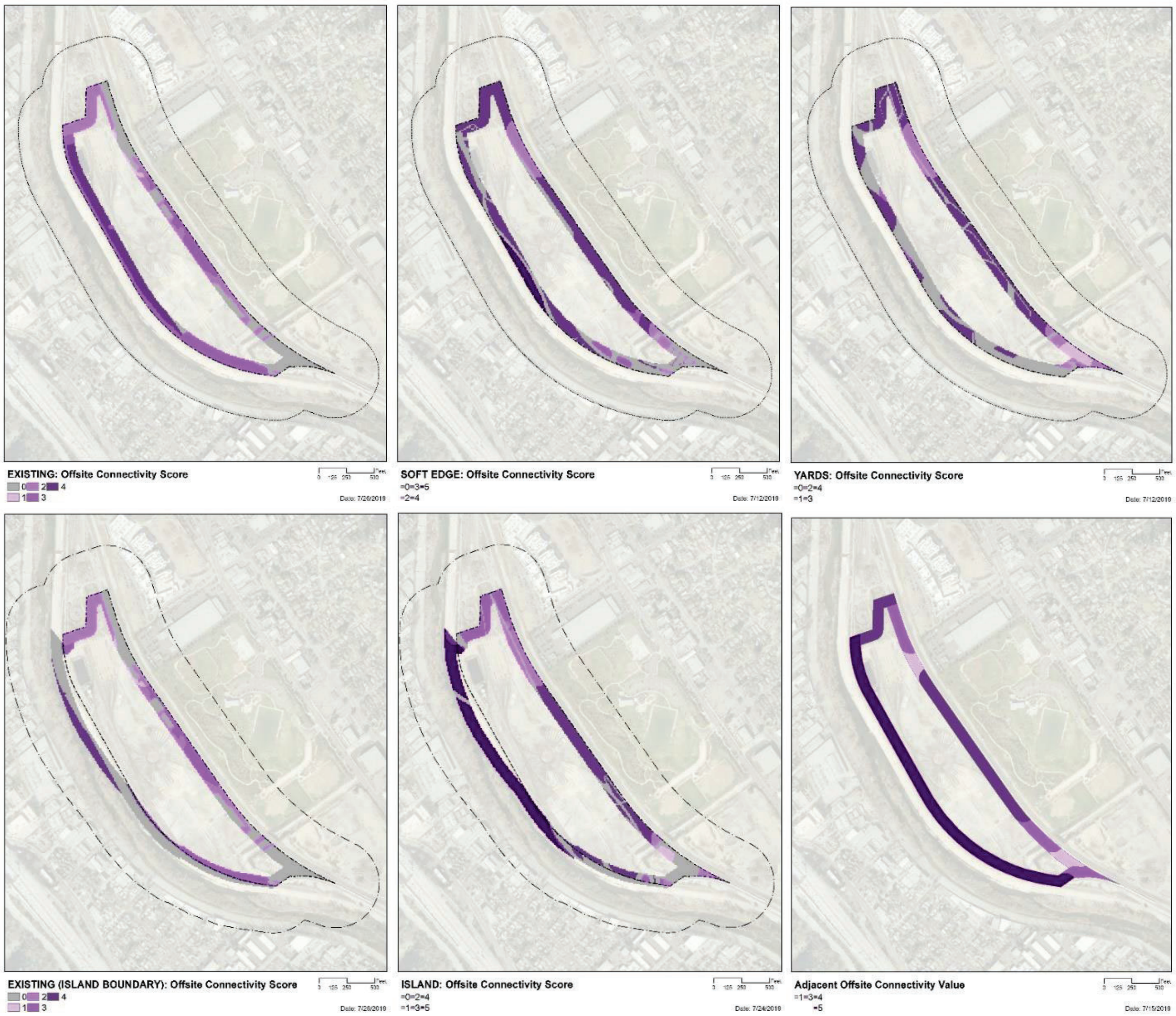
Maintaining and enhancing habitat connectivity between adjacent habitats and the Project site is an important strategy for enhancing the overall habitat value of the River and surrounding ecosystems. First, key locations on adjacent parcels with higher quality habitat were identified as target areas for connectivity. Areas adjacent to the River or other high-value habitats, such as Rio de Los Angeles State Park, received high scores. Areas near other land uses such as schools or residences received lower scores. Second, habitat quality (using the habitat quality metric score) for 100 feet inside of the Project site boundary was measured. Finally, the scores from the two steps were averaged for each pixel. Based on the current measurement approach, The Yards produces no change in off-site connectivity. Soft Edge produces somewhat of an improvement, and Island produces a substantial improvement, as shown in Table 8-7.

Table 8-7. Preliminary Scores for Off-site Connectivity

Site Planning Option	Total Points	Points Compared to Existing (Baseline)
Existing Island Boundary	9,699	1.00
Island Option	21,643	2.23
Existing Project Site Boundary	14,750	1.00
Soft Edge Option	18,265	1.25
The Yards Option	14,797	1.00

Figure 8-11 provides graphical representations of the off-site connectivity scores for each option. Darker purples indicate higher scores, and gray represents a zero score.

Figure 8-11. Preliminary Scores for Off-site Connectivity

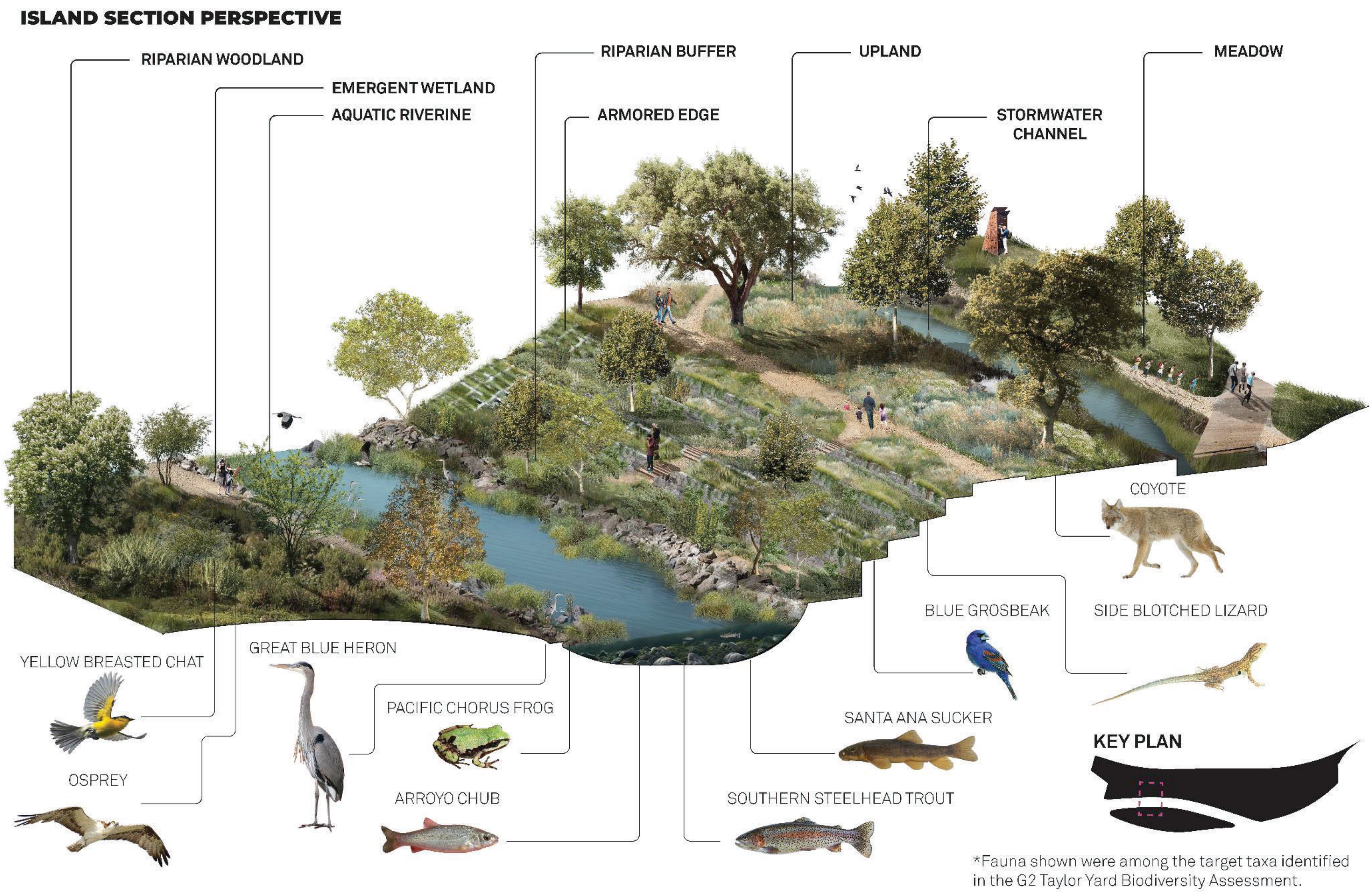


The results of the analysis for each metric was combined and weighted as previously discussed. Table 8-8 summarizes the results. Across all metrics, the Island site planning option out-performs the other two options. Figure 8-12 illustrates possible habitat for a selection of targeted taxa in the Island site planning option. However, none of the scores achieve the CHAP benchmark target of threefold total improvement (i.e. a 3.0 weighted average score).

Table 8-8. Results Summary and Weighting for all Metrics

			Island		Soft Edge		The Yards	
Metric	Weight	Existing Condition Baseline	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Habitat Quality	4	1	3.07	**4.92**	2.63	**4.21**	2.28	**3.65**
Habitat Variety	3	1	1.86	**2.23**	1.34	**1.61**	1.29	**1.55**
Edge Effects	2	1	0.73	**0.59**	0.67	**0.54**	0.63	**0.50**
Off-site Connectivity	1	1	2.23	**0.89**	1.25	**0.50**	1.00	**0.40**
Average		1	1.97	**2.16**	1.47	**1.71**	1.30	**1.53**

Figure 8-12. Habitat – Island Section Perspective



8.5 Conclusions and Next Steps

This iteration in the development of the preliminary design options did not meet the targeted CHAP benchmark of a threefold total habitat improvement. Moving forward, the Project team should explore the following design modifications and continue to assess performance:

1. Increase habitat quality and variety of landscapes by including more restoration areas that will achieve scores of 5 for habitat quality. The Ecosystem Plan targeted 10.8 acres of upland habitat type restoration, which should be achievable by re-designating some upland areas currently receiving 3s or 4s as restoration areas in the site planning options. Designing portions of the stormwater bioretention BMP as marsh or creek restoration of the historic "Arroyo de San Rafael" may also be feasible. Expanding the River flood zone corridor would provide additional high value restoration, which would be the only area to enhance channel habitat types and likely riparian strand/sand leading to the highest potential project scores. However, as discussed in Chapter 7, *River Hydraulics and Flood Management*, widening the River channel must be feasible hydraulically. Riparian strand and marsh restoration may also be possible with the stormwater bioretention BMP or restoration of the "Arroyo de San Rafael."
2. Cluster human activities while maintaining habitat connectivity. All the design options spread relatively intensive uses throughout the Project site. Clustering uses and moving them away from the River's edge will improve edge effects scores. However, too much clustering at one end of the Project site may also reduce upstream and downstream connectivity. The Project should strive to maintain connectivity between areas with lower edge effects scores.
3. Mitigation of edge effects for buildings and activities may also be possible for buildings through careful design and programming. In this assessment, all buildings were treated the same for edge effects. Buildings with lower intensity programmatic uses could be clustered, and building-noise mitigation measures could be designed to maximize performance.
4. Reduce hardscape in key locations for off-site connectivity. Generally, this includes areas within 100 feet of the River's edge. Reducing hardscape along a portion of the southeastern end of the site would also improve connectivity along the downstream River terrace.
5. Account for other ecosystem services benefits. Next steps should involve accounting for other ecosystem services benefits of the designs. When combined with biodiversity benefits, a net threefold improvement in comprehensive ecosystem function is possible.

9 PARK ACCESS AND SERVICES

The Project is intended to create an open space that offers access to nature and the River and provides a healthy and safe environment. This chapter provides analyses on several aspects that contribute to a safe, clean, and well-used park that serves the neighborhood and the region. This section discusses:

- Site Access and Transportation
- Open Space and Park Access
- Park User Safety
- Sustainability/Greenhouse Gas (GHG) Reduction
- Potential Economic Return

9.1 Site Access and Transportation

Adequate access, whether by walking, biking, public transportation, or car, is a necessary component of any open space or park. Neighborhood parks within walking and biking distance are important for local area residents. Larger parks such as the Project and the adjacent Rio de Los Angeles State Park draw from both local neighborhoods and a larger geographic population. The existing site has poor connectivity in all modes of travel because of a lack of connection across the River and only one connection across the train tracks by the access roadway. Lack of grid connectivity and proliferation of larger than average blocks also contribute to the site's poor connectivity. Opening access to the Project site will therefore have a great impact on enhancing connectivity locally and regionally and was a key consideration during development of the site planning options.

The major roadways connecting to the access roadway with public transit, bicycle infrastructure, and pedestrian infrastructure are San Fernando Road and more indirectly, Cypress Avenue. Upon completion of the Taylor Yard Bicycle and Pedestrian Bridge in 2021, additional access by foot and bicycle will be available from the west bank of the River. As part of the site planning options, a new pedestrian bridge is proposed that would provide direct access to Rio de Los Angeles State Park. The existing access roadway will remain, possibly improved, to provide vehicular access to the parking lot. Another bicycle and pedestrian bridge is proposed for the north end of the Project site, the Elysian Bridge, connecting over the River. These current and planned access points would enhance connectivity to the surrounding communities and provide new means of accessing the Project site.

9.1.1 Pedestrian and Bicycle Access

Given the Project site's proximity to the Los Angeles River Greenway Trail, which is part of a 5-mile-long trail for pedestrians and bicyclists that connects Griffith Park and Chinatown near downtown Los Angeles on the west bank of the River, and its role in River revitalization efforts, access to and from neighboring communities and more substantial active transportation infrastructure is a key focal point of the Project. The Los Angeles River Greenway Trail was prioritized by the U.S. Secretary of the Interior in 2012 in the National Recreational Trail System and is also within the historic footprint of the Juan Bautista de Anza National Historic Trail, which was certified by the National Park Service and the City in 2015. The Southern California Association of Governments also identifies the

Los Angeles River Greenway Trail as a regionally significant bikeway that connects the region within the 2016–2040 Regional Transportation Plan (RTP) and Sustainable Communities Strategy. The Los Angeles River Greenway Trail specifically has been included as part of the RTP's Regional Bikeway Network, with a primary purpose of serving "regional trips, commuting, recreational bicycling, taking local and existing planned bikeways, and providing a strategic regional focus." Short-range trip strategies focus on the "low hanging fruit," with suggestions to improve the existing sidewalk and bicycle networks to serve as connections to destinations, regional networks, and the transit system.

In addition to the RTP, the City adopted Mobility Plan 2035 as part of its General Plan (City of Los Angeles 2015), which provides a new framework for the City's major roadways and outlines several supportive policies related to active transportation. Additionally, supportive programs within Mobility Plan 2035 include the implementation of Greenway 2020, a locally led effort to complete the bicycle path along the entire 51-mile stretch of the River by 2020. Completion of the Los Angeles River Greenway Trail would provide a multi-generational trail and provide active transportation options to disadvantaged communities.

In addition to the Los Angeles River Greenway Trail, there is a Class II bikeway along Cypress Avenue in a north-south direction, which continues its way on Eagle Rock Boulevard in an east-west direction. As part of the Mobility 2035 plan, multiple new bicycle facilities are planned near the Project, including the following:

- Class I Bike Path connection from Los Angeles River Greenway Trail to the Project site and the Rio de Los Angeles State Park (the Taylor Yard Bicycle and Pedestrian Bridge)
- Class IV Protected Bike Lane on Cypress Avenue
- Class II Bike Lane along San Fernando Road

Pedestrian amenities generally include sidewalks, crosswalks, curb ramps, pedestrian signals, and streetscape and landscape amenities (e.g., benches, tree-lined buffers, planters, bulbouts, street lighting). The Project site is located near an established pedestrian network with sidewalks along major roadways (Cypress Avenue and San Fernando Road) that provide access.

San Fernando Road is the nearest public street from the Project site and has sidewalks on both sides. The sidewalk on the eastern side is narrow with obstacles for pedestrians (e.g., poles) that also impact travel for persons that rely on mobility devices. The sidewalk on the west side is large and includes several amenities like landscaped buffers between the street and the sidewalk, trees, benches at bus stops, bulbouts at intersections, and lighting for pedestrians. There are crosswalks at the Rio de Los Angeles State Park entrances at the intersection of San Fernando Road with Future Street and Macon Street.

Pedestrian and bicycle access to the Project was mapped using geographic information systems (GIS) to calculate a 15-minute walk and a 5-minute bicycle ride to the Project. The walk- and bikesheds were prepared with the Taylor Yard Bicycle and Pedestrian Bridge and with and without the proposed Elysian Bridge (Figure 9-1 and Figure 9-2). Factoring in the Taylor Yard Bicycle and Pedestrian Bridge greatly enhances the connectivity of the site. It connects the Project to the communities between the west bank and I-5. The addition of the proposed Elysian Bridge enhances the site's connectivity to the surrounding areas even more and demonstrates the extent to which the western community would be connected by foot to the Project, which is greatly improved from the existing access. The analysis shows that an even larger area of the western community would be able to access the Project by walking with the proposed Elysian Bridge.

In addition to general pedestrian and bicycle infrastructure improvements, provision of bike share facilities at the Project site and/or nearby transit stations would expand mobility for both transit users and residents of the adjacent communities. Bike and scooter share facilities are not currently available in the area surrounding the Project site. The City is, however, currently exploring its regulations and potential expansion of the Metro Bike program. The Mobility 2035 plan outlines “mobility hub” concepts, which are designed to improve multimodal travel opportunities for transit passengers and residents around stations; modes are not limited to public transit or bicycle and pedestrian infrastructure and focus on other first/last mile connections including rideshare, car share, and bike share concepts.

The Los Angeles Department of Transportation (LADOT) has outlined a plan for implementing mobility hubs that focus on bike share and electric vehicle car share throughout the City. At this time, the community surrounding the Project site is not slated as a mobility hub location. Given the regional significance of the Project site, as well as the neighboring Rio de Los Angeles State Park and Los Angeles River Greenway Trail, expanding the mobility hub concept to a nearby rail transit station may be a beneficial option to enhance connections both locally and regionally. Establishing a mobility hub at the park itself would likely be a challenge, because success is typically dependent upon demand generated by factors such as density, land use, and availability of multiple transit services, among others. Because these conditions are currently lacking at the Project site, a more feasible alternative would be to locate a mobility hub at an established station nearby that provides transit connections through multiple modes, including multimodal transit and bicycle. As part of this, pedestrian and bicycle facilities in the community would need to be improved to ensure safe access between the mobility hub and Project site, and policy considerations related to bike share programs would need to be incorporated (e.g., whether dockless bikes are permitted, or if there would need to be docking stations at the Project site). As development continues within the area, there could be an opportunity to develop a mobility hub at the planned multimodal transit station at the Taylor Yard Transit Village mixed-use development, or at a potential future rail station in the area where both Metrolink and Metro Rapid services may operate.

Figure 9-1. 15-Minute Walkshed With (left) and Without (right) the Proposed Elysian Bridge

Figure 9-2. Five-Minute Bikeshed With (left) and Without (right) the Proposed Elysian Bridge

9.1.2 Transit and Vehicle Access

Figure 9-3 shows the existing transit service in the vicinity of the Project site. The Project site is not served directly by rail services but is close to Metro and Metrolink rail lines, which run adjacent to the Project site. The Project site is within two miles of three rail stations– Heritage Square and Lincoln/Cypress stations along the Metro Gold Line, and the Glendale Station served by Metrolink (Antelope Valley and Ventura lines) and Amtrak Pacific Surfliner. All three rail stations are located on the east side of the site.

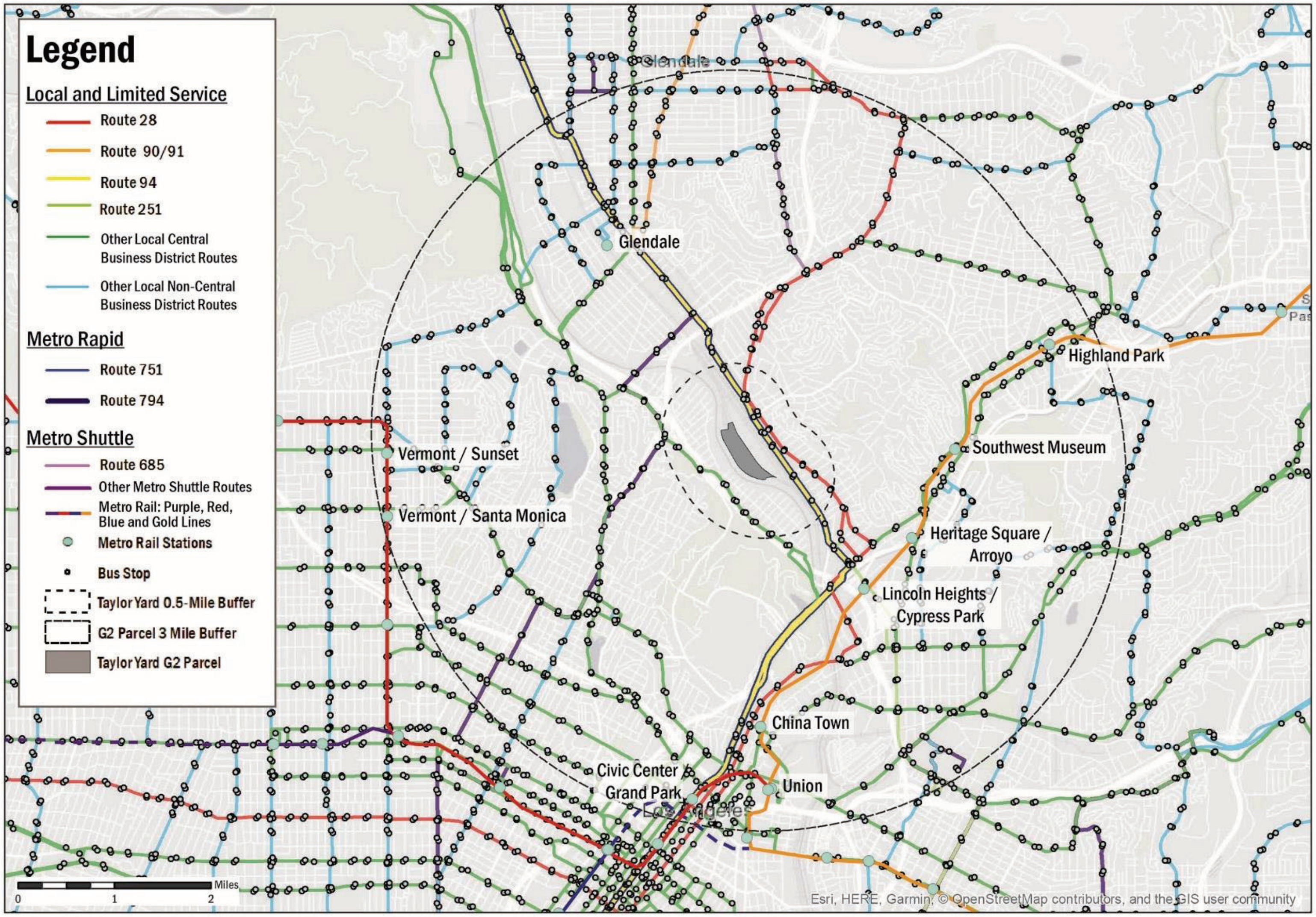
As shown in Figure 9-3, Metro local bus routes 28, 90/91, 94, and 251; Metro Rapid service routes 751 and 794; and various shuttles and circulators operate within the surrounding area. Only three of the Metro bus routes have stops within a ¼-mile walk of the Project site, and two stop within ⅓-mile (including one Rapid and one Shuttle). Metro is currently undergoing a major transit study, the NextGen Bus Study, which will provide many recommendations related to local and regional bus services. The new bus network resulting from the study may include enhancement to transit services near the Project site given the new development occurring in the area. It would be beneficial, as the transit study progresses, to include the Project in discussions during system- and service-development activities.

LADOT operates DASH services in downtown Los Angeles and 27 neighborhoods across the City, which provide frequent and inexpensive bus service to residents within each service area for local travel and connections to regional transit (including rail). Given the development that is occurring within the surrounding neighborhoods, operation of a new DASH service may be a consideration to increase connections to rail stations and Rapid stops nearby, as well as improve localized travel in the neighborhood.

Relocating existing transit stops along San Fernando Road to intersections that are closer to the Project site may assist transit riders in accessing the park. Based on the impact that moving transit stops can have on overall route operations and costs, relocating transit stops to the actual Project site may not be the most viable option; however, maintaining a ¼-mile walk may be feasible. Although there is some opportunity to move stops closer, such as relocating a stop from San Fernando Road and Arvia Street along Route 794 to the intersection of San Fernando Road and Future Street, this is not without challenges. Intersections along San Fernando Road are not all signalized or equipped with adequate pedestrian bridge infrastructure, in addition to the potential for ADA accessibility gaps. Further, moving stops on time-sensitive services like Rapid can impact overall efficiency and effectiveness if the stops are spaced too close or too far apart.

A more feasible strategy may be to coordinate transit improvements (including route operations and stop relocation) with development in the area, such as the plans for a multimodal transit station at the Taylor Yard Transit Village, which is immediately adjacent to the Project site. The proposed Taylor Yard Transit Village Station may be served by Metro local and regional (including Rapid) routes, and possibly Metrolink rail service in the future. In concert with strengthening local routes that will serve the new transit station and existing rail stations nearby, community mobility and accessibility to the park are likely to improve. Additional consideration should be given to how these new services can be integrated with the existing transit networks, as well as with pedestrian and bicycle facilities to access the park from the station.

Figure 9-3. Transit Service Serving the Project Site



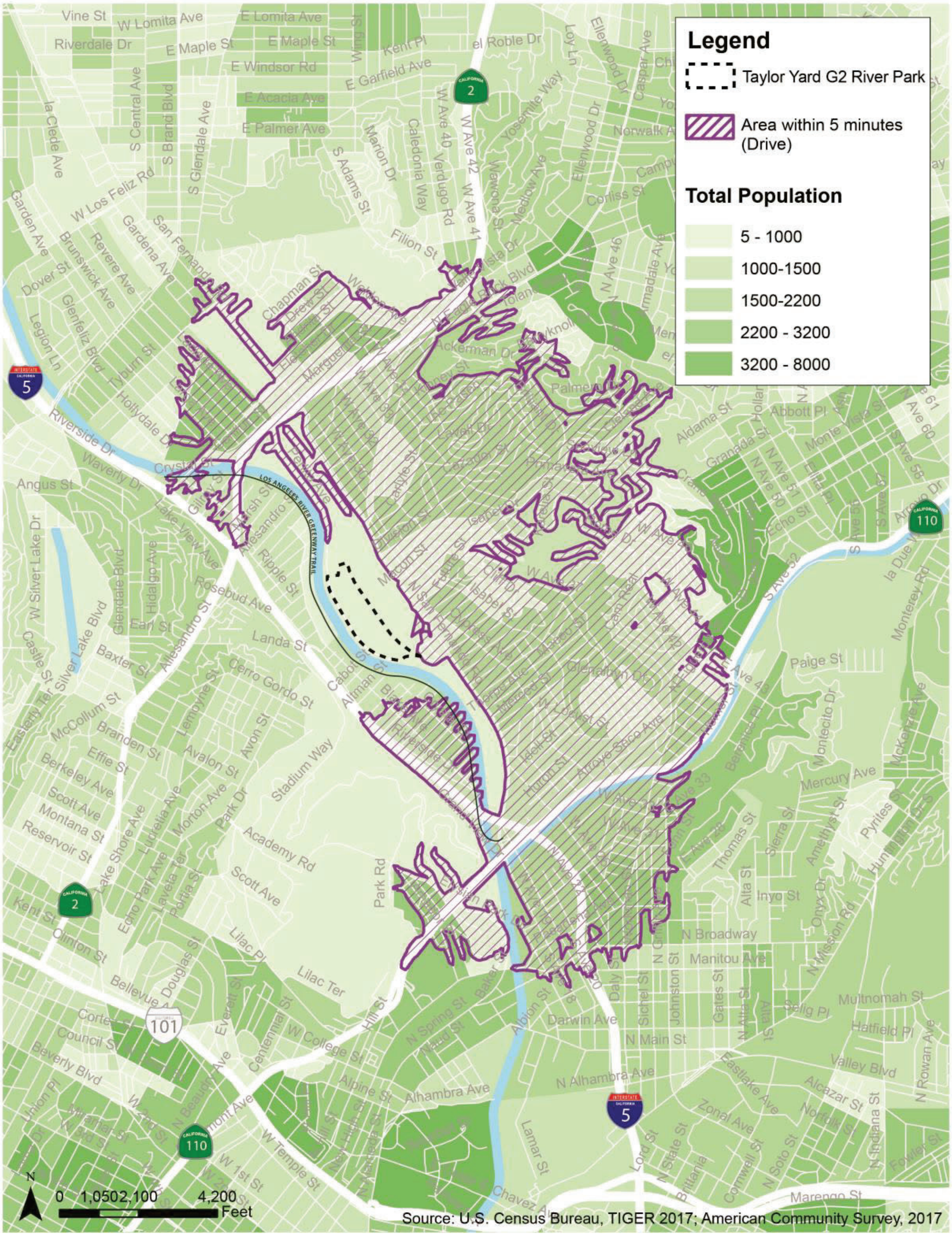
First/last mile connections via bicycle and pedestrian modes are relatively lacking between existing transit stations and the Project site. Metro's Long Range Transportation Plan (LRTP) includes a focus on coordinating pedestrian links between transit stations and the user's destination, as well as a specific action item to improve pedestrian linkages to bus centers and rail stations. Additionally, the LRTP includes strategies related to first/last mile improvements that enhance integration between the active transportation and public transit networks (Metro 2009). Improved pedestrian and bicycle access to rail stations would greatly improve access to the Project, as well as to the surrounding planned developments throughout the greater Project area. Projects such as filling in gaps within existing bike lanes and bike paths along Cypress Avenue and San Fernando Road, for example, would help to achieve better access; likewise, ensuring safe pedestrian paths and bridge locations at stations and at the Project site are imperative.

Vehicular access to the Project was mapped using GIS to calculate a 5-minute drive to the Project (Figure 9-4). The driveshed for the Project stays the same as the existing condition because the Taylor Yard Bicycle and Pedestrian Bridge and proposed Elysian Bridge are for pedestrians and bicyclists only.

9.1.3 Park Users

It is anticipated that park users will comprise a combination of local community and regional visitors, including more specialized types of users such as students, seniors, persons with disabilities, hikers, and wildlife enthusiasts. Students will likely travel to the Project from the Sonia Sotomayor Center for Arts and Sciences, a complex of four high schools and one middle school, and other surrounding schools and neighborhoods. It is expected that their mode of travel would be rolling, walking, or bicycling. Seniors, some from the neighboring Taylor Yard Senior Housing, and persons with disabilities will likely travel to the Project from surrounding communities. These individuals may take all modes of transportation depending on their abilities, with the addition of dial-a-ride or door-to-door van services and access services. Hikers will likely be interested in enjoying the Project and accessing it with their mode of preference, while also being interested in connections to nearby hiking resources in Elyria Canyon Park to the east, Elysian Park to the south, and Griffith Park to the northwest. Other specialized visitors, such as bird and wildlife enthusiasts, may visit the Project to view the habitat and biodiversity planned in the current site planning options. These specialized visitors would more than likely arrive by private vehicles or public transportation.

Figure 9-4. Five-Minute Driveshed to the Project



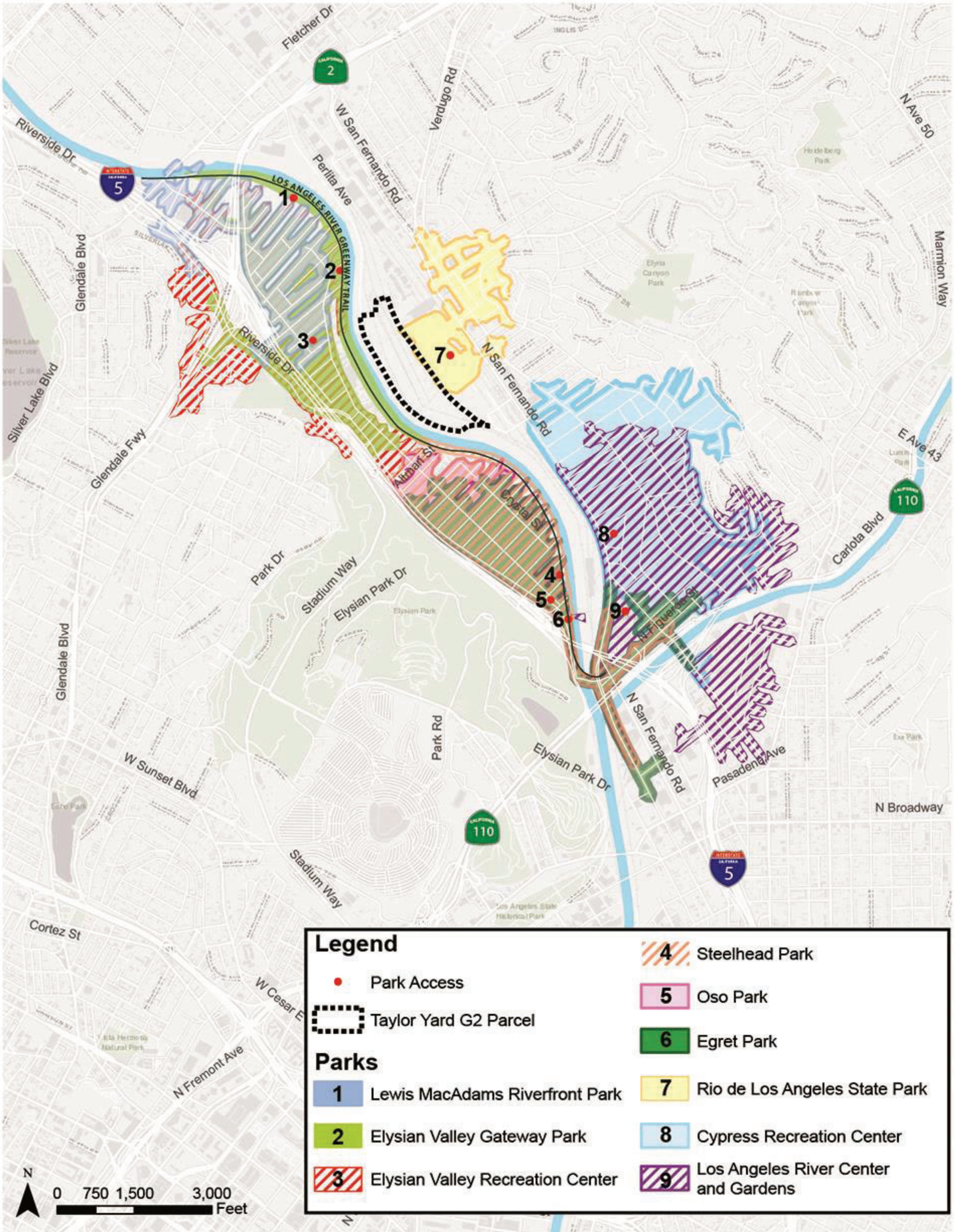
9.2 Open Space and Park Access

The Project site is in a highly urbanized area of northeast Los Angeles surrounded by industrial, commercial, residential, and educational land uses. Once constructed, the Project would serve as a public gathering space that provides an avenue for community cohesion for both the local neighborhoods and the greater Los Angeles region. It marks an important step for River revitalization in bringing people to the River. The local community heavily uses the adjacent Rio de Los Angeles State Park, and the addition of the Project would open access to the River and offer new linkages to communities. The Project would convert a site that currently acts as a barrier to a River asset that reintroduces the community to the River's natural ecosystems.

To ensure consistency with existing land use plans, the Project design focuses on habitat restoration, beautification, and the expansion of bicycle and pedestrian trails. Development of the site will include ways to connect with adjacent communities, not just physically, but culturally as well. The Project would illustrate the land use evolution from a major hub in the region's industrial history towards an emphasis on the preservation of Los Angeles' natural and indigenous resources. The Project design includes elements that weave in local culture such as pop-up art installations or galleries that feature community artists and onsite cafés that invite local restaurants on a revolving basis. These uses would not only strengthen community identity but could offer employment opportunities that help to support economic development goals. Elements within the site's design, such as art, site fixtures, and wayfinding signage, would help to implement the visions outlined in many of the existing plans by reflecting the rich history of the site and educating users on the importance of restoration and preservation of the River. Natural site components would include features such as a biological reserve, which would generate numerous benefits related to education and research, community stewardship, and habitat restoration, among others.

Implementation of the Project would enhance the neighborhood's access to parks, open space, and recreation, and increase the type and variety of amenities and recreational activities that the surrounding community would be able to easily access by foot or bicycle. Figure 9-5 illustrates the locations of the existing parks within a one-mile radius, or a 15-minute walk, once the Project is completed. The map includes the Taylor Yard Bicycle and Pedestrian Bridge, as well as the addition of the proposed Elysian Bridge.

Figure 9-5. Existing Parks Within One Mile of the Project Site



In addition to providing an opportunity to connect the community to the natural ecosystems of the River, the Project would provide valuable educational opportunities for all ages about the natural environment and benefits of restoring the natural ecosystems. One of the high schools on the Sonia Sotomayor Center for Arts and Sciences campus is the Los Angeles River High School, which is an environmental science school with the goal of fostering in students a deep understanding of the challenges facing the environment and helping students acquire the intellectual and practical skills to go out and be community builders and stewards of the environment. The Project's proximity to local schools provides a unique opportunity to serve as an outdoor classroom for the students and to introduce and immerse them in nature. The Project would also provide a valuable resource for exercise and healthy living for the residents of the Taylor Yard Senior Housing complex and fully comply with ADA requirements including ramps, accessible restrooms, and inclusive recreational options to provide an environment that is accessible for a full range of users.

9.3 Park User Safety

9.3.1 Crime

The Project site, the River, and the surrounding neighborhoods have a history of gang activity. However, gang activities in the area have declined in recent years because of increased policing and other changes in the community. Crime data for a six-month period was compiled by the Los Angeles Times Map My Neighborhood initiative. Data were collected for the three neighborhoods surrounding the Project site: Cypress Park, Elysian Valley, and Glassell Park (Table 9-1). Compared to all 209 Los Angeles neighborhoods, Elysian Valley and Glassell Park crime rates fell in the middle, and Cypress Park was slightly higher than average, suggesting crime rates for the area are typical of a large city (Los Angeles Times 2019).

Table 9-1. Crime Rates for Surrounding Neighborhoods

Crime Rates (July 9, 2018 - January 6, 2019)	Cypress Park	Elysian Valley	Glassell Park
Number of Violent Crimes	44	6	47
Violent Crime Ranking per 209 Los Angeles neighborhoods	35	139	79
Number of Property Crimes	102	73	215
Property Crime Ranking per 209 Los Angeles neighborhoods	90	91	97
Crimes per 10,000 People	134.5	101.5	105.6

Because of the isolated nature of the Project, it could provide opportunities for illicit behavior, such as drug-dealing and vandalism. During periods when there is less activity in the park, such as evening hours, visitors may feel less safe if the park is not designed and used in a way that deters criminal activity. Furthermore, the history of gang activity in the surrounding neighborhoods and along the banks of the River could further contribute to a perception of danger.

Development of the site planning options has considered guidelines such as the County of Los Angeles' park design guidance document "Park Design Guidelines and Standards" (CDPR 2017) which provides strategies to address safety concerns during the park design process. The guidelines draw from the Crime Prevention Through Environmental Design strategies, which emphasize using design techniques that activate the space and create the perception of community surveillance to deter crime. The National Recreation and Park Association (NRPA) also published a guide for creating safe park environments. The NRPA guide suggests locating programmed activities in highly visible locations (i.e., park perimeter, entrance, or main path), scheduling activities to create a human presence from early morning to evening, and developing activities that extend beyond sports facilities and playgrounds that will create more widespread use of the park (NRPA n.d.). The broken window theory is also applicable to park security in that ongoing maintenance of the park is critical in demonstrating a vested interest in the park and dissuading criminal behavior.

The Los Angeles Police Department (LAPD) Northeast Community Police Station within the Central Bureau serves the Project site. The Northeast Community Police Station is located at 3353 San Fernando Road, approximately 1.5 miles from the Project site. LAFD Fire Station 50 provides fire response services for the Project site. Fire Station 50 is located at 3035 Fletcher Drive, approximately one mile from the Project site. Fire Station 44 is located ⅓ mile from the Project site at 1410 Cypress Avenue. Fire Station 44, however, does not currently have the Project site within its service area. Emergency ingress and egress are incorporated into the site planning options. As the Project moves forward, LAPD and LAFD will be consulted to develop a comprehensive policing and response plan for the site and the surrounding neighborhoods to reflect the changing use. Special events held at the Project site would develop a specific security plan approved by LAPD and LAFD.

Park ranger presence at the park will also ensure a safe and welcoming park experience. Park rangers are sworn law enforcement officers responsible for safety and the preservation of park and open space. Each site planning option includes ranger presence at the park during open hours. Ranger service could be provided by RAP, MRCA, or another agency.

9.3.2 River Safety

The River, despite resembling a naturally occurring river near the Project site, is still primarily a flood control channel. Under normal conditions, the River usually contains a low volume of slow-moving water that is restricted to the channel bottom at a shallow depth. However, during periodic storms, the channel volume increases with rapidly moving water from the upper watershed and stormwater runoff. During and following these storms, water levels and flow velocities in the River channel rise quickly, dramatically increasing the risk of accidental death and injuries to people and animals venturing into the channel. Much of the River is fenced off from the public with “No Trespassing” signs to prevent accidental injury or death. As such, the site planning options incorporate safe experiences with the River that do not pose a risk during storm events or would be closed if rain is forecast. Final design will include other River safety measures to protect against accidental drownings or serious injuries.

9.3.3 Vectors

Water can harbor vectors, which are any arthropod, insect, rodent, or other animal of public health significance capable of transmitting the causative agents of human disease to humans. The Greater Los Angeles County Vector Control District (Vector District) controls mosquitoes, midges, and black flies throughout Los Angeles County. Some of the diseases borne by mosquitoes that affect Los Angeles County residents in the Vector District include West Nile virus, St. Louis encephalitis, Zika virus, Dengue fever, chikungunya, and heartworm. The Vector District controls these issues through an Integrated Vector Management strategy that includes coordinating with property owners, conducting surveillance, controlling sources and vectors, and public education. The result is a healthier community with a lower risk of disease outbreaks.

The site planning options include a bioretention BMP and River channel modifications to create areas of emergent vegetation that, without proper maintenance, could result in stagnant water that leads to mosquito breeding. During design, circulation, water surface agitation, and careful selection of plant species that allow for effective vegetation management must be incorporated to prevent stagnation. A comprehensive vegetation management plan will also be developed, in coordination with the Vector District, detailing requirements for vegetation control and access to ensure safe and suitable conditions for public use.

9.4 Sustainability/Greenhouse Gas Reduction

The Project presents an opportunity to further the sustainability goals established by the City by focusing on a balanced approach and addressing environment, economy, and equity. In 2015, the City released its Sustainable City pLAn (2015 Sustainable City pLAn). The 2015 Sustainable City pLAn is made up of short- and long-term targets in 14 categories to set the course for a cleaner environment and stronger economy. The Carbon and Climate Leadership category calls for a reduction of GHG emissions below 1990 baseline by at least 45 percent by 2025, 60 percent by 2035, and 80 percent by 2050 (City of Los Angeles 2015). The 2015 Sustainable City pLAn also includes goals to improve GHG efficiency in the City's economy, influence national and global action on climate change, and eliminate the City's use of electricity from coal-fired power plants.

The 2015 Sustainable City pLAn includes strategies and priority initiatives to achieve the Carbon and Climate leadership targets. The strategies most relevant to a development project contribute to the reduction of individual and citywide energy consumption through education and retrofitting, specifically:

- Reduce energy consumption of individuals and buildings
- Reduce imported water use and associated GHG emissions
- Increase education on GHGs and individual actions via libraries, zoo, local colleges/universities, and other public outlets

The 2015 Sustainable City pLAn includes outcomes and targets for sustainability-related outcomes. Many of these topics would have a direct effect of reducing GHG emissions. According to the Office of Sustainability, the City is on track for achieving a 45 percent reduction in GHG emissions by 2025 (City of Los Angeles 2019). Continued reductions are needed to achieve the bold goals set forth for 2035 and 2050.

In April 2019, Mayor Garcetti established the LA's Green New Deal, which calls for a 50 percent reduction in GHG emissions by 2025 by reducing emissions from buildings, transportation, electricity, and trash. The Project would make progress towards meeting these goals, especially goals related to planting and maintaining trees in low-income areas.

The Project presents many opportunities to implement GHG emissions reduction strategies resulting in net GHG reductions through design, construction, and operations. Project construction would generate GHG emissions from equipment exhaust, exhaust from worker vehicle trips, and electricity use. Although construction activities are temporary, GHG emissions can be minimized by reducing vehicle idle times, using local materials and workers to minimize vehicle miles traveled (VMT), and using lower emissions construction equipment.

Operational GHG emissions reduction strategies would include minimizing vehicular trips and energy efficient design. Providing multi-modal connections to the site would reduce VMT through encouraging visitors to walk, bike, or use public transit. The addition of electric vehicle charging stations would encourage electric vehicle use.

Site and building design would incorporate energy efficiency strategies including insulation in buildings; energy-efficient heating, ventilation, and air conditioning; passive heating and lighting (use of sunlight to heat and light spaces); and energy-efficient appliances. Energy efficiency reduces electricity consumption in buildings, and therefore reduces GHG emissions from the utility's generation source. Water conservation strategies can also reduce energy use. Water-efficient fixtures and irrigation systems, on-site stormwater capture and reuse, and landscaping with drought-tolerant plants can reduce water demand.

Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide (CO_2). Plants can capture CO_2 and release oxygen through photosynthesis. Approximately 800–1,000 trees would be planted throughout the Project site. Many of the trees would provide shade to on-site buildings for the additional benefit of reducing energy demands from cooling.

The GHG emissions reduction benefits of tree planting were quantified using the California Air Resources Board (CARB) Benefits Calculator Tool for the Urban Greening Grant Program with inputs developed using i-Tree Planting tool available at https://planting.itreetools.org/. The species of trees that would be planted include a mixture of species native to California. i-Tree estimates the amount of CO_2 saved using number of trees, species, and trunk diameter. CO_2 saved as a result of tree planting from the Project would be achieved from a mixture of three species with a variety of characteristics: Coastal Live Oak, California Sycamore, and White Alder.

The i-Tree Planting output was entered into the CARB Benefits Calculator Tool for the Urban Greening Grant Program. The Project benefits are summarized in Table 9-2. Implementation of the Project's landscape and habitat restoration component is anticipated to result in 3.4 million kilowatt-hours (kWh) of energy savings over a 40-year period, resulting in an energy cost savings of over $575,000.

Table 9-2. Project Landscape Benefits from CARB Benefits Calculator Tool Over a 40-year Period

Benefit Description	Value [A]
GHG Benefit of Carbon Stored in Live Project Trees (MT CO_2e)[B]	828
GHG Benefit from Energy Savings (MT CO_2e)[B]	1,586
GHG Emissions from Project Implementation (MT CO_2e)[B]	121
$PM_{2.5}$ Emission Reductions (pound; lb)	1,468
NOx Emission Reductions (lb)	21,833
ROG Emission Reductions (lb)	187
Water Savings from Project Implementation (gallon)	88,609,088
Energy Use Reductions (kWh)	3,431,122
Energy Use Reductions (therms)	143,545
Energy Cost Savings ($)	$575,958

[A] *MT CO_2e estimates of GHG emissions are conceptual; actual GHG emissions attributed to the Project would be evaluated at the time of environmental review.*

[B] *Metric tons of carbon dioxide equivalent (CO2e)*

Through educational signage and stewardship programming, the Project would also offer the ideal venue for education on GHGs emissions and individual actions and could stand as an example of how the City can reduce GHG emissions through Project design, construction, and implementation.

9.5 Potential Economic Return

The Trust for Public Land (TPL) completed a study in 2017 quantifying the economic benefits of the public park and recreation system in the City. The TPL study developed a methodology to quantify the economic benefits of existing parks to the Los Angeles economy for the following categories:

- **Enhanced property values** – Parks can increase property values in the surrounding communities because people often seek out neighborhoods with access to green space and recreational activities. TPL estimates that parks in Los Angeles raise the value of nearby residential properties by $2.29 billion and increase property tax revenues by $27.2 million a year.
- **Stormwater retention benefits** – By increasing the pervious surface area, parks and green spaces provide opportunities to capture precipitation, slow its runoff, and reduce the volume of water that enters the stormwater system. TPL estimates that the stormwater retention benefit is valued at $8.03 million annually.
- **Improved air quality** – Plants help filter air pollutants, improving air quality. TPL estimates that these health benefits are valued at $1.58 million annually.
- **Tourist revenue** – Visitors to parks spend money both on the park property as well as in the surrounding community, leading to job creation. TPL estimates visitors spend approximately $415 million annually in the local economy, which generates $27.5 million in local tax revenues.
- **Recreational use** – The time visitors spend enjoying the park itself also has an economic value, which TPL estimates at $334 million per year.
- **Human health** – Parks and recreation spaces provide the opportunity for greater physical activity, which translates to improved health outcomes. TPL estimates the annual medical cost savings resulting from park and recreation facilities is approximately $151 million.
- **Community cohesion** – Providing a community gathering space can enhance the sense of community among neighbors. TPL estimates that the value of the resulting community cohesion in volunteer time and financial contributions to parks is $12.5 million annually.

Where possible, the methodology used to calculate the economic benefits in the TPL study were applied to estimate the potential economic benefit of any of the three identified site planning options for the Project. However, because the Project does not yet exist, the methodology was applied to potential benefits rather than quantifiable existing benefits. Also, because the Project is in the planning stages, much of the data used by TPL (i.e., tree cover, number of visitors, and volunteer time and donations) do not yet exist, and a qualitative assessment of benefits is provided instead.

9.5.1 Enhanced Property Values

Within 500 feet of the Project are 49 residential properties, which primarily consist of units within the Taylor Yard Transit Village Master Plan. The development consists of 400 housing units of which 305 are affordable rental apartments and 95 are condominiums (41 of which are within 500 feet of the Project). An average estimated value of approximately $700,000 for the market-rate condominiums was assumed. A 5 percent increase in value would amount to an additional $35,000 per property for a total of $1.43 million in additional value for all 41 market-rate properties. If the properties sold at the higher value, this would translate into additional property tax revenue for the City. This is a conservative estimate, however, because the increased property values could extend farther than 500 feet from the Project site, which would spur further investment in the community.

9.5.2 Stormwater Retention Benefits

The Project team estimates that a total volume of 113.9 acre-feet of stormwater is expected to be captured and treated annually, including run-off from storm drains and on-site (WSP 2018). Using the TPL methodology to assign a value of $594 per acre-foot of stormwater, the stormwater feature alone would result in an estimated $67,657 annual benefit.

9.5.3 Improved Air Quality

The site planning options estimate that approximately 800–1,000 trees would be planted throughout the Project site. Based on the tree planting alone, the Project could result in the sequestration of up to 940 metric tons of CO_2 over a 40-year period. Planting new vegetation would also reduce other air pollutants, such as carbon monoxide, nitrogen dioxide, ozone, coarse dust particles, fine particles, and sulfur dioxide.

9.5.4 Tourist Revenue

The Project is envisioned as a regional destination that would attract visitors from across the region as well as tourists who are visiting the City and want to experience a Los Angeles landmark. Unique Project elements that could attract visitors include the kayak launch, an amphitheater, a café/restaurant, a youth enrichment center, a museum/cultural center, a research building, and a public facility. The Project could serve as a location for major events, such as concerts and festivals, which would attract many visitors from across the region in a single day. In addition to money spent within the Project itself on activities, visitors would also spend money in the surrounding community on food, entertainment, lodging, fuel, gifts, and other activities in the surrounding communities.

9.5.5 Recreational Use

The Project would provide numerous opportunities for visitors to engage in recreational activities, although unprogrammed and passive recreation is emphasized. Recreational activities identified in the TPL study that may be provided for as part of the Project include using playgrounds, picnicking, resting and relaxing, walking, and kayaking. Although the Project would be free to access, these activities provide a value to visitors, which can be estimated through willingness to pay for similar activities elsewhere. The unique opportunity to access the River could place a premium on visits to the Project; however, maintaining an affordable and inclusive park is a priority for the City.

9.5.6 Human Health

The Project would provide a plethora of opportunities to exercise and experience nature, which both have proven health benefits and result in health care savings. The Project could include up to 9.5 miles of multi-use trails, which could be used for walking or running. The site planning options also include a meadow area, which could be used for group exercise activities such as yoga, fitness bootcamps, or a pick-up game. Furthermore, the health benefits of the Project are not limited to increased physical activity but also include the benefits of reconnecting with nature, which can reduce stress and improve mental health, also resulting in health care savings.

9.5.7 Community Cohesion

As previously discussed, the Project would serve as a public gathering space that would provide an avenue for community cohesion for both the local neighborhoods and the greater Los Angeles region. It marks an important step for River revitalization in bringing people to the River. The local community heavily uses the adjacent Rio de Los Angeles State Park and the addition of the Project would open access to the River and offer new linkages to communities.

9.5.8 Green Jobs Development

The Project includes a proposed research building that could be like the LA Cleantech Incubator (LACI) located in the Arts District of downtown Los Angeles. LACI is a cleantech hub where entrepreneurs, engineers, scientists, and policymakers can collaborate, promote, and support the development of clean technologies and the City's innovation economy. The facility includes open workspace and private offices, conference rooms, and event space. The function of the Project's proposed research building is yet to be determined but has the potential to significantly contribute to green jobs development and opportunities for the local workforce to become trained in green jobs.

9.5.9 Equitable Distribution of Economic Benefits

The Project has the potential to attract significant investments in the surrounding communities resulting in concerns regarding gentrification, displacement, and the equitable distribution of any economic benefits. In response to the gentrification concerns surrounding recent local and state initiatives to raise funding for parks and open space in park-poor communities, the Los Angeles Regional Open Space and Affordable Housing (LA ROSAH) Collaborative was formed to address the challenge of green gentrification by developing and advancing strategies that counter displacement and promote access to affordable housing and open space. As part of the Collaborative, LA THRIVES, Enterprise Community Partners, and the Southeast Asian Community Alliance co-authored "Pathway to Parks and Affordable Housing and Joint Development" (LA THRIVES and LA ROSAH 2017), which identifies strategies for tackling the dual crises of a lack of affordable housing and open space through joint development that promotes equitable and sustainable development.

In 2018, Urban Displacement Project and the UCLA Center for Neighborhood Knowledge prepared a summary of anti-displacement policies across Los Angeles County. These policies can be grouped into four categories: those that produce new affordable housing, those that preserve existing affordable housing, those that protect tenants, and those that build the assets of low-income residents (Urban Displacement Project 2018). As identified in The

State of Anti-Displacement Policies in LA County , the following practices and policies have been adopted by the City and could be used by the surrounding communities:

- **New and Updated Policies** – Ensure that the City continues to work with partners to explore and deploy new policies that are not currently in practice and that it analyzes current policies to determine if policies need to be scaled up or down. As part of this process the City also must identify who would need to be involved to carry out the policies (e.g., City Departments, funders, partners).
- **Just Cause Eviction Ordinance** – Laws that allow tenants to be evicted only for specific reasons. These "just causes" can include a failure to pay rent or violation of the lease terms.
- **Rent Control/Stabilization** –Rent control protects tenants from excessive rent increases, while allowing landlords a reasonable return on their investments. Such ordinances limit rent increase to certain percentages, but California state law allows landlords to raise rents to the market rate once the unit becomes vacant. In October 2019, the State of California passed AB 1482, which limits rent increases state-wide to 5 percent, plus the local rate of inflation on any buildings older than 15 years.
- **Mobile Home Rent Control** – Places specific rent increase restrictions on the land rented by mobile homeowners or the homes themselves.
- **Single-Room Occupancy (SRO) Preservation** – Also called residential hotels, housing one or two people in individual rooms. Tenants typically share bathrooms and/or kitchens. These are often considered a form of permanent residence affordable for low-income individuals. SRO preservation ordinances help to preserve or create new SRO units
- **Condominium Conversion Regulations** – In addition to State laws regulating the conversion of multi-family rental property into condominiums (like subdivision mapping and homeowner association formation), the City has enacted a condominium conversion ordinance. This imposes procedural restrictions (like notification requirements) and/or substantive restrictions on the ability to convert apartment units into condominiums (such as prohibiting conversions unless the City or regional vacancy rate is above 5 percent, offering the right to return for 10 years if the unit is returned to the rental market, and offering the same rent if put back on the rental market within 5 years). The purpose of the ordinance is to protect the supply of rental housing.
- **Density Bonus Ordinance** – Allow developers of market-rate housing to build higher density housing, in exchange for having a certain portion of their units offered at affordable prices.
- **Commercial Linkage Fee** – Charges on developers per square foot of new commercial development. Revenues are used to develop or preserve affordable housing.
- **Community Land Trusts** – Nonprofit, community-based organizations (supported by the City or County) whose mission is to provide affordable housing in perpetuity by owning land and leasing it to those who live in houses built on that land.
- **Housing Trust Fund** – Designated source of public funds—generated through various means—that is dedicated to creating affordable housing.
- **First Source Hiring Ordinances** – Ensure that City residents are given priority for new jobs created by municipal financing and development programs.

Everyone deserves to enjoy the benefit of public investment in parks and open space in their community. The Project has the potential to demonstrate how the intersection of green infrastructure and affordable housing can ensure that existing residents and all Angelenos benefit from this investment.

9.5.10 Conformance with Regional and Local Economic Development Goals

The Los Angeles County 2016–2020 Strategic Plan for Economic Development was released in the beginning of 2016 and is the region's collaborative effort to define priorities that will lead to creation of well-paying jobs and help the County's key industries and workforce navigate the challenging transition to an information age economy. The Strategic Plan includes seven overall goals, each with a set of objectives and metrics. The Project would address the following three relevant goals from this plan:

- **Invest in Our People** – The Project would provide an opportunity for visitors of all ages to spend time outdoors, which has proven benefits to their physical and mental development.
- **Accelerate Innovation and Entrepreneurship** – The proposed research building could provide access to affordable shared spaces for research, lab, design, and co-working to assist entrepreneurs, inventors, and makers. The Project would use publicly owned land to spur applied research and development in key innovation growth areas.
- **Build More Livable Communities** – The Project would serve as an investment in basic infrastructure in a low-income community; provide connections to active transportation options along the Los Angeles River Greenway Trail; and provide opportunities for physical activity and connect residents with nature, which has proven mental health benefits. The Project could host regular markets, which provide access to fresh, local produce. The Project would advance the City's sustainability goals and provide both environmental and economic benefits.

The City released LA's Green New Deal in 2019. It is the City's vision for an inclusive green economy, and it updates and expands upon the 2015 Sustainable City pLAn. LA's Green New Deal includes 13 chapters, each of which is assessed on a set of eight benefits: climate mitigation, access and equity, quality jobs, workforce development, health and wellbeing, economic innovation, increased affordability, and resiliency. The Project would address the following chapters from LA's Green New Deal:

- **Environmental Justice** – The Project would provide localized air quality benefits by improving air quality. The surrounding communities include several high-scoring CalEnviroScreen census tracts, which are targets for improved infrastructure. Creating a public park and activating an otherwise underutilized space would create a safer environment and provide much-needed green space in an underserved area.
- **Local Water** – The Project would capture and treat an estimated volume of 113.9 acre-feet of stormwater, including run-off from storm drains and on-site stormwater, which would contribute to the City's goal of increasing stormwater treatment.
- **Mobility and Transit** – The Project would connect to the Los Angeles River Greenway Trail via the Taylor Yard Bicycle and Pedestrian Bridge and the proposed Elysian Bridge. Both bridges would connect the Elysian Valley and Cypress Park communities and provide access to the Los Angeles River Greenway Trail for communities on the east bank of the River.
- **Industrial Emissions and Air Quality Monitoring** – Planting new vegetation on the Project site would reduce air pollutants, such as carbon monoxide, nitrogen dioxide, ozone, coarse dust particles, fine

particles, and sulfur dioxide, a benefit that is particularly critical to the surrounding communities which, like much of the Los Angeles Basin, regularly experience poor air quality, in part due to the proximity of the I-5 freeway and the local topography.

- **Food Systems** - The Project could include regular markets, which would provide increased access to local, fresh produce.
- **Urban Ecosystems and Resilience** – The Project would introduce between 24 and 26 acres of new vegetation on a site that is currently predominantly concrete, helping to reduce the urban heat island effect and increase the tree canopy. Additionally, the Project aims to achieve the goals of the LARRMP and Ecosystem Plan to restore natural habitats to support biodiversity of the River and wildlife corridor/connectivity, and the goals of the Ecosystem Plan. The Project would create nearly 30 acres of open space for Angelenos and would contribute to the LA New Green Deal's 'no-net loss' of native biodiversity goal.
- **Prosperity and Green Jobs** – The proposed research building could provide access to affordable shared spaces for green/clean business development.
- **Lead by Example** – The City will pursue Envision™ certification, which requires the integration of green infrastructure and building design standards, community engagement, water conservation, and reductions to GHG emissions as part of the Project.

The City is also in the process of updating its Citywide Economic Development Strategy. In 2018, the City published a Draft Strategy with the following vision:

> *Los Angeles will leverage its position as a gateway to the Pacific Rim and other world markets to grow its economy for the benefit of all Angelenos. Building on our unparalleled culture of creativity and leadership in innovation, we will expand our global, national and regional presence by investing in our people, neighborhoods, and industries.*

To achieve the identified vision and goals, the Draft Strategy set forth actions. The Project would help the City achieve its long-term goals by strengthening the economy of the City communities of Glassell Park, Cypress Park, and Elysian Valley by catalyzing investment and job creation and revitalizing the neighborhoods.

10 COMPARISON OF SITE PLANNING OPTIONS

This chapter provides a discussion of the trade-offs among the three site planning options and assesses how effectively each meets the Project goals and objectives. These goals and objectives include a vision of bringing nature into the City; responding thoughtfully to the unique local community and climate; creating new linkages; restoring the environment; creating natural habitat; protecting and enhancing water resources; providing significant new open space and recreation opportunities for a full range of users; and providing social, cultural, and environmental value to the region. As site planning options, a degree of flexibility exists when looking forward through the design and construction stages. Therefore, this chapter focuses on highlighting the key substantive differences between each option.

10.1 Evaluation Methodology

Six evaluation categories were established to evaluate the consistency between the design options and the Project's established goals:

1. Habitat restoration and consistency with the Ecosystem Plan
2. Park user experience and public access
3. Potential economic return
4. Cost
5. Consistency with public input
6. Degree of technical feasibility

10.1.1 Habitat Restoration and Consistency with the Ecosystem Plan

The Project provides a unique opportunity to achieve the Ecosystem Plan's goals to restore ecosystem values in the Glendale Narrows. The Ecosystem Plan lays out a set of objectives to reach this goal, which include restoring Valley Foothill riparian strand and freshwater marsh habitats, increasing habitat connectivity, and increasing passive recreation.

The three site planning options were assessed to determine how effectively each would advance the goal of restoring natural habitats along the River and meeting the objectives of the Ecosystem Plan based on the metrics identified in Table 10-1.

Table 10-1. Metrics for Habitat Restoration and Consistency with the Ecosystem Plan

Objectives	Metrics
Restore natural habitats to support biodiversity	▪ Acres of restored historic ecosystems (5 in SBI) ▪ Acres of habitat oriented native plant landscape (4 in SBI) ▪ Utilization of native plant materials that support wildlife ▪ Creation of terracing to support greater number of habitat types ▪ Creation of bio-filter areas ▪ SBI scoring
Create wildlife corridors and support wildlife connectivity	▪ Terraced channel banks with native vegetation ▪ Areas that provide wildlife access from the River to marsh and riparian habitat ▪ Contiguous bands of riparian vegetation ▪ Habitat and wildlife viewing structures with roosting features ▪ Stormwater features that mimic natural tributary to River ▪ Linkages from the Project site to off-site habitat patches
Advance revitalization of the River	▪ Consistency with LARRMP ▪ Consistency with Ecosystem Plan

10.1.2 Park User Experience and Public Access

The Project would provide a major regional recreational destination and much-needed open space in a historically underserved and park-poor community. It is important that the Project provides a variety of recreational opportunities for a diverse population and easy access from both the immediate community and for those traveling longer distances. The site planning options were evaluated based on the metrics identified in Table 10-2 to determine how well each option meets recreational goals for the Project.

Table 10-2. Metrics for Park User Experience and Public Access

Objectives	Metrics
Provide public access to the River	▪ Number of public River access points ▪ Provision of safe access to boating on the River
Serve neighboring communities and the region	▪ Multi-modal connections to: — Adjacent neighborhoods — The River — Rio de Los Angeles State Park and the G1 parcel ▪ Connections to the internal trail system within the park to off-site pedestrian and bicycle paths and transportation ▪ Number of on-site parking spaces
Provide a high-quality environmentally and habitat-friendly place with activities for a full range of park users	Provision of any of the following: ▪ Multi-use meadows ▪ Separate paths for bicyclists and pedestrians ▪ Trails ▪ Picnic areas ▪ Nature play ▪ Arboretum ▪ Native meadow ▪ Outdoor classrooms ▪ Sculpture garden ▪ Open event space ▪ Nature center ▪ Native plant interpretive garden ▪ Habitat and wildlife viewing towers ▪ Amphitheater

10.1.3 Potential Economic Return

The development of the Project site into a park would provide direct and indirect economic benefits to the immediate surrounding neighborhoods, which are historically disadvantaged, and the broader region. Direct economic benefits include spending by visitors both within the park itself and in the surrounding community when coming to and from the park, which could result in the creation of new businesses and jobs. On-site programming also has the potential to offset capital and operations costs through events and educational/vocational facilities. Indirect economic benefits could include property value growth, water quality improvement, and improved health conditions due to improved air quality and recreation and exercise opportunities. The potential economic returns of each of the three site planning options were evaluated based on the metrics identified in Table 10-3.

Table 10-3. Metrics for Potential Economic Return

Objectives	Metrics
Create economic benefits in the neighboring community	▪ Number of daily visitors ▪ Creation of new businesses and/or jobs within and outside the park
Improve health outcomes in the surrounding community	▪ Amount of new vegetation ▪ Number of new trees ▪ Opportunities for exercise and active recreation
Improve water quality in the River	▪ Design capture volume (acre-feet) ▪ Average annual water capture (acre-feet) ▪ Bioretention BMP area (acres)

10.1.4 Cost

The Project funding strategy includes pursuing a variety of grants, City funds, and other sources. Because of constrained budgets and competition for funding, the cost of the site planning options is an important consideration. This evaluation criterion considers both the capital and operations and maintenance (O&M) costs of the Project as well as the costs and benefits of the Project to the surrounding community. The metrics to evaluate the cost of each of the three site planning options are identified in Table 10-4.

Table 10-4. Metrics for Cost

Objectives	Metrics
Design a Project that can be built with available funds	▪ Remediation cost ▪ Total capital cost ▪ Annual O&M cost ▪ Sustainable funding stream and financial plan ▪ Qualifies for relevant grants
Balance costs and benefits for the Project and community	▪ Remediation cost per acre ▪ Total capital cost per acre ▪ Annual O&M cost per acre ▪ Impacts to the community during construction ▪ Impacts to the community during operation

10.1.5 Consistency with Public Input

Throughout planning and development of the site planning options for the Project, BOE has engaged the community and stakeholders to help inform the park design. The three site planning options were assessed for how effectively each incorporates the needs of the surrounding community and stakeholders based on the metrics in Table 10-5.

Table 10-5. Metrics for Consistency with Public Input

Objectives	Metrics
Integrate community and stakeholder needs	▪ Access to nature — Trails — Open space ▪ Recreation — Flexible spaces — Site amenities — Performance spaces ▪ Interaction with and education about the River — River access — Educational/cultural facilities ▪ Concessions

10.1.6 Degree of Technical Feasibility

The Project site is constrained by several physical elements, including soil contamination, flood risk, power lines and towers, the adjacent rail corridor, and future development plans. The three site planning options were evaluated based on how they accommodate the given constraints, as shown in Table 10-6.

Table 10-6. Metrics for Degree of Technical Feasibility

Objectives	Metrics
Remediate contaminated soil	▪ Concrete demolition and removal ▪ Possible remediation scenario — Cap installation — Building liners — Hot spot removal and excavation — Riverfront soil excavation and placement
Maintain or improve flood protection	▪ Width of channel ▪ Flood risk
Design a Project compatible with existing LADWP power lines	▪ Incorporation of adequate setbacks from the towers, or ▪ Relocation of the power lines and towers
Design a Project compatible with adjacent rail corridor and future development plans	▪ Accommodation of existing and future planned rail lines

10.1.7 Proposed Rating Methodology

For each of the six goals, the site planning options were evaluated on the general level of alignment with the objectives and their specific elements. Table 10-7 describes the rating system used to evaluate the metrics.

Table 10-7. Metrics Rating Descriptions

Rating	Symbol	Description
Low	○	Site planning option generally aligns with the various elements associated with the specific goal and does not achieve full alignment due to a variety (e.g., five or more) of reasons
Medium	◖	Site planning option aligns with the various elements associated with the specific goal to a substantial degree and achieves partial, but not full, alignment due to a variety (e.g., three to four) of reasons
High	●	Site planning option aligns with the various elements associated with the specific goal to a high degree and achieves nearly full alignment of goals with a minimal amount (e.g., one or two) of variation

Each metric within each objective was weighted equally to develop an overall score for each objective. Then within each goal, the objectives were weighted equally to develop a score for each goal. Based on these scores, an overall ranking of the three options was developed to determine which site planning option best meets the Project goals and objectives.

10.2 Evaluation of Site Planning Options

This section discusses how effectively each of the three site planning options meet the stated Project goals and objectives and rates them accordingly. Each site planning option presents a set of trade-offs, meeting the various objectives at the cost of not meeting others.

10.2.1 Habitat Restoration and Consistency with the Ecosystem Plan

All three site planning options can be developed to be consistent with objectives of the Ecosystem Plan to restore native habitats. The Island and Soft Edge options can recreate riparian habitat within the River with the alterations to the Riverbank, and The Yards focuses on the restoration of upland habitats while relying on the bioretention BMP to provide wetland habitat features. Table 10-8 presents the design elements of each option that relate to the restoration of the natural River ecosystem.

Table 10-8. Evaluation of Habitat Restoration and Consistency with the Ecosystem Plan

Objectives	Metrics	Island 	Soft Edge 	The Yards 
Restore natural habitats to support biodiversity	Acres of restored historic ecosystems (approx.) (5 in SBI)	11.5	1.0	0
	Acres of habitat oriented native plant landscape (approx.) (4 in SBI)	8.4	17.2	11.6
	Utilization of native plant materials that support wildlife	●	●	●
	Creation of terracing to support greater number of habitat types	●	●	○
	Creation of bio-filter areas	●	●	●
	SBI scoring	2.16	1.71	1.53
Create wildlife corridors and support wildlife connectivity	Design aspects that promote wildlife corridor/connectivity	▪ Terraced channel banks with native vegetation ▪ Areas that provide wildlife access from the River to marsh and riparian habitat ▪ Contiguous bands of riparian vegetation ▪ Habitat and wildlife viewing structures with roosting features ▪ Stormwater features that mimic natural tributary to River ▪ Linkages from the Project site to off-site habitat patches	▪ Terraced channel banks with native vegetation ▪ Areas that provide wildlife access from the River to marsh and riparian habitat ▪ Contiguous bands of riparian vegetation ▪ Stormwater features that mimic natural tributary to River ▪ Linkages from the Project site to off-site habitat patches	▪ Habitat and wildlife viewing structures with roosting features ▪ Stormwater features that mimic natural tributary to River ▪ Linkages from the Project site to off-site habitat patches
Advance revitalization of the River	Consistency with LARRMP	●	●	◐
	Consistency with Ecosystem Plan	●	●	◐
Total Score		**HIGH**	**HIGH**	**MEDIUM**

The Island option presents high restoration potential of riparian habitat in the bioretention BMP, which consists of a day-lit historical creek that meets the River and creates a biodiversity hotspot, a protected habitat island, and a marsh channel. Although all the site planning options include a bioretention BMP, the Island includes individual stormwater and River water habitats. The Soft Edge option creates a habitat-rich River-edge riparian environment with ecological connections throughout the park. Stormwater habitat within the bioretention BMP would be fed by dry-weather flows from existing storm drains and could be seasonally flooded with River water. The Yards option would provide wetland habitat value in the bioretention BMP and opportunities for upland habitat throughout the site.

The SBI score (presented in Chapter 8 of this Report) considers habitat quality, which measures the value of landscapes and vegetation as habitat, regardless of the type of habitat or its spatial context. Habitat quality is assessed on a scale from 1 to 5 with 5 providing the highest quality. In the SBI, 5 is described as restoration of native habitat types or existing intact high-quality natural areas, and 4 is described as biodiversity-oriented landscapes that do not meet the criteria to be considered "restoration," or existing, degraded natural areas where natural landforms are intact, but vegetation has been degraded. The Island option would result in the largest area of restored habitat types at approximately 11.5 acres and about 8.4 acres of habitat-oriented native plant landscape. The Soft Edge option would result in a smaller area of restored habitats with about 1 acre of restored historic ecosystems and about 17.2 acres of habitat-oriented native plant landscape. The Yards would result in 0 acre of restored historic ecosystems and about 11.6 acres of habitat-oriented native plant landscape. All three site planning options would use native plant materials that support wildlife and incorporate a biofiltration area.

All three options would promote wildlife corridor connectivity. The design elements in the Island and Soft Edge options would be most effective in achieving this objective by incorporating terraced channel banks with native vegetation, areas that provide wildlife access from River to marsh and riparian habitat, contiguous bands of riparian vegetation, stormwater features that mimic natural tributary to the River, and linkages from the Project site to off-site habitat patches. The Island option also incorporates habitat and wildlife viewing structures with roosting features. The Yards option would provide less wildlife access from River to marsh and riparian habitat, less area of contiguous riparian vegetation, and no terraced channel banks with native vegetation.

As documented in Chapter 8, the Island option results in the highest SBI score, which considers habitat quality, habitat variety, edge effects, and off-site connectivity. All three site planning options would substantially improve habitat quality over existing conditions and would provide a moderate improvement in habitat variety over the existing conditions. All three site planning options are predicted to result in a negative edge effect due to increased human activity across most of the site. The three options vary the most in terms of off-site connectivity improvements, where The Yards would result in no change in off-site connectivity, Soft Edge produces somewhat of an improvement, and the Island produces substantial improvement.

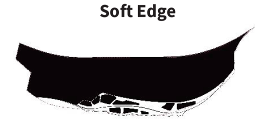
The SBI methodology is meant to help the Project achieve habitat performance to similar levels targeted by the Ecosystem Plan. With this Project's metrics, a 3-times improvement (SBI score of 3 versus the existing condition score of 1) is necessary to achieve consistency with the Ecosystem Plan. Although the estimates are somewhat conservative, currently the schemes achieve scores of 1.53 to 2.16. While this iteration of the preliminary design options did not meet the targeted CHAP benchmark of a threefold total habitat improvement, the Project team will continue to modify the design as outlined in Chapter 8.

Although none of the three site planning options as currently designed meet the Ecosystem Plan's biodiversity objectives, the Island and the Soft Edge are more effective than The Yards in restoring the River's natural riverine and riparian habitat. Although The Yards uses the bioretention BMP to restore riparian habitats on the Project site, these features would not interact with the River to a degree equal to the other options, and contiguous wildlife corridors would not be created. Both the Island and Soft Edge options incorporate removing the concrete Riverbank and constructing riparian terraces as laid out in the Ecosystem Plan, resulting in substantial restoration of riparian and riverine habitat.

10.2.2 Park User Experience and Public Access

The three site planning options would all provide valuable open space for the surrounding community and greater Los Angeles area. The designs were developed with the goals of providing safe public access to the River, serving the neighboring communities and the region, inspiring a network of River parks, and creating an open space experience that provides access to nature. The options also aim to provide a high quality environmentally and habitat-friendly place with activities for a full range of park users. The metrics for this goal are compared in Table 10-9.

Table 10-9. Evaluation for Park User Experience and Public Access

Objectives	Metrics	Island	Soft Edge	The Yards
				
Provide public access to the River	Number of public River access points	4	4	4
	Provision of safe access to boating on the River	●	●	●
Serve neighboring communities and the region	Multi-modal connections to:			
	▪ Adjacent neighborhoods	●	●	●
	▪ The River	●	●	●
	▪ Rio de Los Angeles State Park and the G1 parcel	●	●	●
	Connection of the internal trail system within the park to off-site pedestrian and bicycle paths and transportation	●	●	●
	Number of on-site parking spaces	400	400	400
Provide a high-quality environmentally and habitat-friendly place with activities for a full range of park users	Provision of any of the following:			
	▪ Multi-use meadows	●	●	●
	▪ Separate paths for bicyclists and pedestrians	◖	◖	◖
	▪ Trails	●	●	●
	▪ Picnic areas	●	●	●
	▪ Nature play	●	●	●
	▪ Arboretum	●	●	●
	▪ Native meadow	●	●	●
	▪ Outdoor classrooms	●	●	●
	▪ Sculpture garden	●	●	●
	▪ Open event space	●	●	●
	▪ Nature center	●	●	●
	▪ Native plant interpretive garden	●	●	●
	▪ Habitat and wildlife viewing towers	●	●	●
	▪ Amphitheater	●	●	●
Total Score		**HIGH**	**HIGH**	**HIGH**

Each site planning option would provide safe public access to the River. The Island and Soft Edge options provide a more interactive experience with the River, while The Yards provides viewing and observation from the current elevation of the site. The Island option includes a River Exhibition Pavilion extending over the River and island, a Low Flow Walkway at the River's edge, and a kayak launch and landing. Along the Riverbank, the Soft Edge option includes a bio-plateau, terraces, and Esplanade in addition to a kayak launch and landing. Because the current configuration of the Riverbank is maintained in The Yards option, it provides opportunities for River and nature viewing from the amphitheater, viewing platforms, and balconies.

Each site planning option enhances the connectivity to the surrounding communities by creating new linkages across the railroad tracks and the River, which previously served as barriers to the Project site. All three options provide a new pedestrian and bicycle bridge across the railroad tracks to Rio de Los Angeles State Park and the proposed Elysian Bridge across the River, in addition to the Taylor Yard Bicycle and Pedestrian Bridge currently under construction. Each site planning option would include 400 on-site parking spaces at the south end of the site.

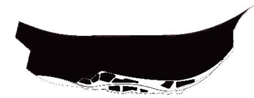
A variety of activities are provided to appeal to a wide set of users and are consistent across all three site planning options. Each option, therefore, meets the objective of providing safe public access to the River, serving neighboring communities and the region, and providing a high-quality environmentally and habitat-friendly place with activities for a full range of park users.

10.2.3 Potential Economic Return

All three site planning options would result in economic benefits for the local communities and Los Angeles region through both direct monetary investments as well as indirect environmental and social benefits.

The Project is envisioned as an asset to the local community, a regional destination that would attract residents from across the City, and a destination for tourists who are visiting the City and want to experience a Los Angeles landmark. Based on similar parks around the country, it is anticipated that the Project would attract between 850,000 and 1,250,000 annual visitors. Unique Project elements included in each site planning option that would attract visitors include the kayak launch for boating access to the River, performances at the amphitheater, the museum/cultural center, and the public facility. Each option could also serve as the location for major events, such as concerts and festivals, which could attract many visitors from across the region in a single day. In addition to money spent within the park itself on activities, visitors would also spend money in the surrounding community on food, entertainment, lodging, fuel, gifts, and other factors. The metrics for this goal are compared in Table 10-10. Because the programming for all three site planning options is similar, the potential economic return related to visitation is also similar.

Table 10-10. Evaluation for Potential Economic Return

Objectives	Metrics	Island 	Soft Edge 	The Yards 
Create economic benefits in the neighboring community	Number of annual daily visitors	850,00 to 1,250,000	850,00 to 1,250,000	850,00 to 1,250,000
	Creation of new businesses/jobs within and outside the park	●	●	●
Improve health outcomes in the surrounding community	Amount of new vegetation (approx.)	25.5 acres	24.8 acres	23.6 acres
	Number of new trees (approx.)	1,000 trees	1,000 trees	800 trees
	Opportunities for exercise and active recreation	●	●	●
Improve water quality in the River	Design capture volume (acre-feet)	10.9	10.9	10.9
	Average annual water capture (acre-feet)	113.9	113.9	113.9
	Bioretention BMP area (acres)	3.0	3.0	3.0
Total Score		**HIGH**	**HIGH**	**HIGH**

All three site planning options would provide numerous opportunities for visitors to engage in recreational activities with an emphasis on passive recreation. Recreational facilities that are included in the site planning options include playgrounds, spaces for picnicking, flexible meadow area, walking, and kayaking. Although the Project would be free to access, these activities provide a value to visitors, which can be estimated through willingness to pay for similar activities elsewhere.

The site planning options include facilities such as cafés, a youth enrichment center, a museum/cultural center, a park office, and a research building. These facilities would need to be staffed by recreation directors, docents, servers, maintenance workers, and workers from many other trades. The youth enrichment center and research building could provide an opportunity for green jobs training for the local workforce.

The anticipated improved health outcomes for nearby residents and visitors are based on the amount of new vegetation and opportunities to be physically active. The Island option results in the greatest amount of new vegetation at about 25.5 acres of new plantings. The Soft Edge and The Yards would generate slightly less, with approximately 24.8 acres and 23.6 acres of new vegetation, respectively. Both the Island and Soft-Edge options would result in the planting of approximately 1,000 new trees, and The Yards would result in the planting of approximately 800 new trees.

All site planning options would provide similar opportunities for exercise and active recreation with multi-use trails, meadows, and kayaking opportunities. Furthermore, the health benefits of the Project are not limited to increased physical activity, but also include the benefits of reconnecting with nature, which can reduce stress and improve mental health, also resulting in health care savings. It is anticipated that the health benefits would be similar across all three site planning options.

Each site planning option includes a 3-acre bioretention BMP for treatment of urban stormwater runoff, with an average annual capture of 113.9 acre-feet. Again, because each planning option include the same sizing for the bioretention BMP, the scores are equal for the objective to improve water quality in the River.

The total scores for the potential economic benefit of all three planning options are similar. The development of the Project would result in economic revitalization of the surrounding community as well as the greater Los Angeles region.

10.2.4 Cost

Capital Cost

The capital cost comparison, shown in Figure 10-1, includes rough order of magnitude projected total costs for each site planning option. Overall, the Island option has the greatest cost for full build out, although only slightly more than the Soft Edge option. The Yards is the least costly option.

Base Cost

Certain site features and improvements are comparable for each site planning option. For example, costs for the civil, water quality BMP, landscaping, buildings, and lighting are all generally similar across the three options and are reflected in the base cost category. Costs for these components are not expected to vary between the different options.

Remediation

The bulk of the difference between the two higher cost options and The Yards lies in the remediation costs; this item represents almost half of the total Project cost for the Island and Soft Edge options. These estimates all assume remediating the soil above industrial standards and include soil removal and treatment or disposal, as well as soil handling, site preparation for capping, and capping costs. The Island and Soft Edge options propose significant changes to the River channel and Riverbed, while The Yards overlays human activities and natural elements on the historic rail yards without dramatically altering the land structure. It also would retain the River's concrete trapezoidal channel.

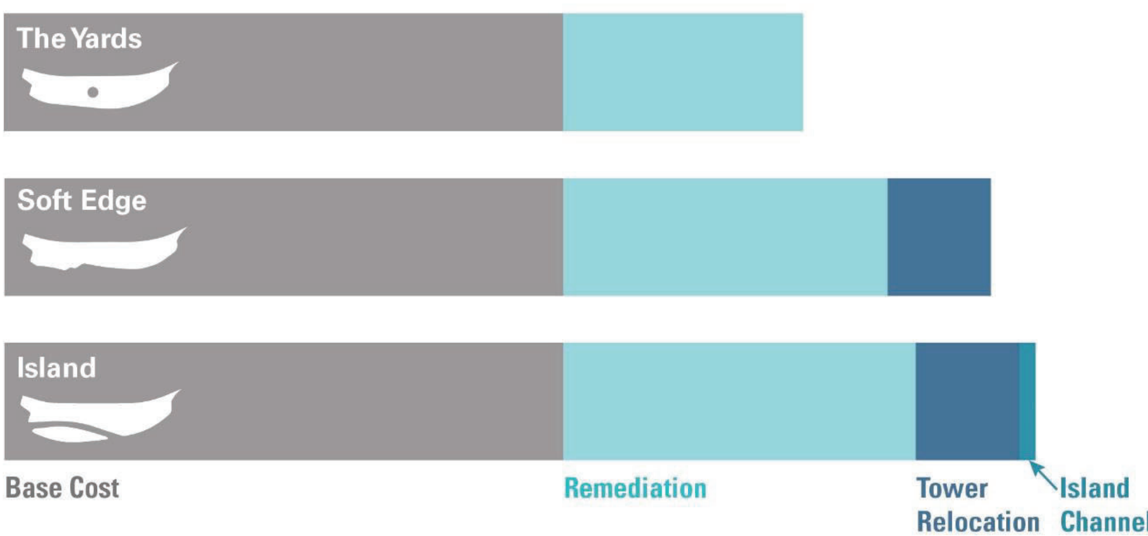
LADWP Tower Relocation

An additional source of cost for the Island and Soft Edge options is the relocation of the existing LADWP power lines. In The Yards option, the towers would remain as they are, adjacent to the Riverbed.

Island Channel

The Island option has additional costs associated with its configuration due to the need to excavate land to create a new channel and island on the edge of the Project site. These costs would be unique to the Island option and are not reflected in the capital costs for either The Yards or the Soft Edge options.

Figure 10-1. Site Planning Options Capital Cost Comparison



Operating and Maintenance Cost

Highly activated signature parks require significant annual operating funding to pay for ongoing activities such as routine operations, landscaping and horticulture, security, programming, marketing, and fundraising. The Project team developed a high-level estimate of potential costs based on the range of design options.

Annual operating costs for activated parks can range widely on a per-acre basis. For example, Brooklyn Bridge Park in New York City, New York, is 85 acres and costs $31 million per year to maintain (as of 2018), or about $365,000 per acre. The smaller scale Bryant Park, which is located within a more urban environment also in New York City, costs more than $2 million per acre to operate (as of 2017). Annual budgets for urban signature parks cover much-needed funding that pays for maintenance of well-used spaces and robust public programming like community events, cultural programs, daily activities, and a variety of concessions.

Based on similar parks, the annual operating costs for the Project would range from $5.31 million to $6.60 million, or $126,000 per acre to $157,000 per acre (Table 10-11). This estimated range is based on several assumptions confirmed through the Project site planning option development process. First, this overview estimates costs across the entire 42-acre Project. This includes a 12.5-acre easement within the Project site that would be operated by MRCA. Second, the estimated range in operating costs is based on site planning options, which include an estimated range of highly active park areas requiring more intensive care and maintenance, as well as more passive park areas. These assumptions are likely to evolve with planning option refinement, and this estimate is preliminary. Because the programming is similar for all three site planning options, the estimated O&M costs are also similar.

Table 10-11. Estimated O&M Expenses for the Project

	Annual Total	Per Acre
Low	$5,310,000	$126,000
Medium	$5,950,000	$142,000
High	$6,600,000	$157,000

Sustainable Funding Stream Financial Plan

Based on the analysis of potential revenue generation and operating costs, significant financing would be required for both capital and ongoing operating costs. A funding and financing plan would be developed to leverage and monetize the unique value proposition of the park, capture this value, and generate revenue that can support ongoing capital and operation funding.

Capital Cost Funding Sources

The Project budget is being incrementally implemented as remediation, development, and funding sources are identified and approved. A balanced budget strategy that considers both capital funding needs, and the need for sustainable sources of income, is required. The partnership between the City and MRCA on this Project creates a strong coalition of experience in the delivery of nature-based and sustainable water quality projects and opens opportunities to apply for further potential funding streams. Another potential funding partner is State Parks to ensure a cohesive and safe environmental throughout the Project site, G1 parcel, and Rio de Los Angeles State Park.

Since Project inception, the Project team has been tracking and aggressively pursuing applicable grant opportunities that may fund activities related to Project design and development. Opportunities include federal, state, and local sustainability, community development, cleanup, and transportation programs. Numerous grant applications have been submitted by the City resulting in over $4 million raised so far for site assessments, planning, design, implementation, and cleanup. As the Project progresses closer to implementation, it will qualify for more and broader grant opportunities. Table 10-12 summarizes potential sources of funds.

Table 10-12. Potential Funding Sources

Approximate Potential Funding Sources	Comments
State Proposition 1	Water quality, supply, and infrastructure bond, grant application processes through multiple State programs
State Proposition 84 (MRCA)	Safe drinking water, water quality and supply, flood control, river and coastal protection bond, grant awarded by Wildlife Conservation Board to MRCA for easement purchase
County Measure A	Safe, clean neighborhood parks and beaches measure, to be awarded through grant program. Annual allocation application requires processing
County Measure W	Safe, clean water measure, to be awarded through grant program, pending guidelines
State Cap & Trade Proceeds	Program to lower GHG emissions, grant application processes through multiple State programs
Private Sponsorship & Philanthropy	Grant application processes to seek funding from multiple organizations
City Proposition O	Water quality improvement bond, City Council-approved a planned future allocation, pending development and approval of a concept report
State Proposition 68	Parks, environment, and water bond, grant application processes through multiple State programs
Federal Sources	Potential grants or partnerships with: U.S. Bureau of Reclamation, National Park Service, USEPA, etc.

O&M Funding Plan

Potential O&M funding sources are detailed in Chapter 11, *Operations and Maintenance*, of this report. The Project's operating budget could be based on three revenue scenarios: conservative, moderate, and aggressive. These scenarios estimate the potential range of annual earned income, from $1.5 million to $2.8 million in earned income per year, and the potential range of O&M costs from $5.3 million to $6.6 million.

After deducting earned revenue estimates from O&M cost estimates, estimates indicate that there will be an annual operating funding gap of between $2,470,000 to $5,080,000 as shown in Table 10-13.

Table 10-13. Estimated Operating Funding Gap

		Operating Revenues		
Operating Expenses		Conservative	Moderate	Aggressive
		$1,520,000	$2,130,000	$2,840,000
	$6,600,000	$5,080,000	$4,470,000	$3,760,000
	$5,950,000	$4,430,000	$3,820,000	$3,110,000
	$5,310,000	$3,790,000	$3,180,000	$2,470,000

Table 10-14 presents the overall cost rankings for each planning option. As discussed above, the Island and Soft Edge site planning options carry the highest capital cost because of the relocation of the LADWP power lines and excavation of the Riverbank. The O&M cost is similar for all three site planning options because they would have similar programming. Further discussion on O&M costs is provided in Chapter 11.

Table 10-14. Evaluation for Cost

Objectives	Metrics	Island 	Soft Edge 	The Yards 
Design a Project that can be built with available funds	Remediation cost	$$$	$$$	$$
	Total capital cost	$$$	$$	$
	Annual O&M cost ($ millions)	$5.31 to $6.60	$5.31 to $6.60	$5.31 to $6.60
	Sustainable funding stream and financial plan	◖	◖	◖
	Qualifies for relevant grants	●	●	◖
Balance costs and benefits for the Project and community	Remediation cost per acre	$$$	$$$	$$
	Total capital cost per acre	$$$	$$	$
	Annual O&M cost per acre ($ thousands)	$126 to $157	$126 to $157	$126 to $157
	Impacts to the community during construction	moderate	moderate	moderate
	Impacts to the community during operation	minimal	minimal	minimal
Total Score		**LOW**	**LOW**	**MEDIUM**

10.2.5 Consistency with Public Input

The community engagement strategy that was incorporated into the site planning option development process for the Project is discussed in Chapter 5, *Community and Stakeholder Engagement*, of this report. The key findings of the community survey that was available online and in print at various community events between January and March 2018 are as follows:

- **Nature** – Respondents have a high interest in natural components such as open space, trails, and habitat.
- **Recreation** – Outdoor recreation including walking, hiking, and cycling ranked high.
- **River** – Respondents overwhelmingly reported familiarity with the River, and results showed a high interest in River interactions and education.

Although not specifically reflected in the survey results, the desire for a safe environment and high-quality, affordable concessions were mentioned during numerous community meetings and discussions. The three site planning options – Island, Soft Edge, and The Yards – were presented at meetings and online in spring 2019. Public comments have since been received by e-mail, comment cards, and verbally at meetings or other community events, and are summarized in the following section.

Island

Comments received for the Island site planning option showed support for the potential of habitat creation on the island. Multiple commenters mentioned that they would prefer the island only be accessible to wildlife to allow for habitat protection. The importance of flood risk management was also mentioned, and the desire for as much contiguous habitat and open space as possible.

Soft Edge

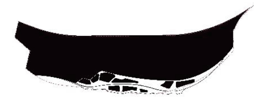
Comments received for the Soft Edge option were like those received for the Island option. Multiple commenters mentioned that both the Island and Soft Edge option were the most consistent with expectations for site development. Terracing at the River's edge creates a unique interaction with the River, although River safety and the impacts of washing out the bio-plateau during storm events were raised as concerns.

The Yards

Comments received for The Yards option supported the preservation of the industrial history of the Project site, particularly the roundtable. Because this site planning option explores the possibility of maintaining the current channel configuration, the most common responses received were that the option does not reflect previous planning efforts for the Project site and should find a way to incorporate more types of habitat.

As evaluated in Table 10-15, Island and Soft Edge are highly consistent with the public input received. The Yards receives a medium score based primarily on the inability to experience the River in the same way as the other options.

Table 10-15. Evaluation for Consistency with Public Input

Objectives	Metrics	Island 	Soft Edge 	The Yards 
Integrate community and stakeholder needs	▪ Access to nature			
	— Trails	●	●	●
	— Open space	●	●	●
	▪ Recreation			
	— Flexible spaces	●	●	●
	— Site amenities	●	●	●
	— Performance spaces	●	●	●
	▪ Interaction with and education about the River			
	— River access	●	●	◖
	— Educational/cultural facilities	●	●	●
	▪ Concessions	●	●	●
Total Score		**HIGH**	**HIGH**	**MEDIUM**

10.2.6 Degree of Technical Feasibility

The Project team considered numerous constraints that must be addressed while developing the three site planning options. Some planning options better address the unique challenges and opportunities of the Project site than others.

Remediation of Contaminated Soil

The remediation of the Project site under any of the three site planning options would result in a park that is safe for recreational activity. All three options may require some combination of soil removal and disposal, installation of an engineered cap, and/or soil treatment. The site planning options that involve cutting away the River's edge would require more extensive soil excavation and likely off-site disposal of hazardous soil, which increases the costs and complexity of the remediation process.

Flood Protection

Any modification to the River configuration and vegetation, like that proposed in the Island and Soft Edge site planning options, could either decrease or increase water surface elevation and the corresponding flood risk along the River. Specifically, any increase in the cross-sectional area that allows reduced flow velocities and increased channel roughness created by expected riparian habitat would increase water surface elevation (California Coastal Conservancy 2002). The site planning options for the Project, however, would only be implemented if current flood protection can be maintained or improved.

Modeling indicates that the location of the island itself is related to potential improvements in flood risk. Aligning the island with the existing channel boundaries and farther upstream could potentially yield positive benefits in flood risk protection. With modifications to the island location and the addition of a straight channel between the island and the Project site, River water velocities would increase over existing conditions, thereby potentially reducing water surface elevations during more common flood events. The Yards site planning option would not alter the River channel and therefore would not impact existing flood protection.

Existing Power Lines

One key design differentiator is how each site planning option deals with the existing LADWP power lines and towers that parallel the east bank of the River and the west edge of the Project site. Each site planning option incorporates adequate setbacks from the existing towers or relocates the power lines and towers with appropriate setbacks.

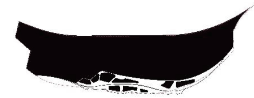
The Island and Soft Edge options require relocating the towers to allow for the terraforming of the west bank of the River to allow for concrete channel removal and habitat restoration, while The Yards would preserve the towers in their existing location. Relocation of the towers would require extensive coordination with LADWP.

Compatible with Adjacent Rail Corridor and Future Development Plans

An additional site constraint is the existing railroad corridor that parallels the east edge of the Project site. This is a heavily used facility in active daily operation with plans for future local expansion as well as the eventual addition of high-speed rail. All site planning options allow for the accommodation of the existing and planned future rail lines along this corridor. Additionally, the potential River Park Metro or Metrolink Station as called out in Metro's Los Angeles-Glendale-Burbank Feasibility Study could also be accommodated in the site planning options, although not currently shown given the uncertainty of the proposal.

Evaluation of the degree of technical feasibility is shown in Table 10-16. All three site planning options are technically feasible. The options that involve cutting back the Riverbank and relocating the LADWP power lines would require additional resources. They would also require additional excavation and off-site disposal of hazardous soils, but also present potential reductions to flood risk dependent on the exact configuration of the island. In addition, relocation of the LADWP power lines is a substantial expense that would require careful coordination with other agencies to ensure that power transmission is not disturbed.

Table 10-16. Evaluation for Degree of Technical Feasibility

Objectives	Metrics	Island 	Soft Edge 	The Yards 
	Concrete demolition and removal	15.5 acres	15.5acres	15.5 acres
Remediate contaminated soil	Possible remediation scenario			
	▪ Cap installation	37acres	35 acres	42 acres
	▪ Building liners	4.5 acres	4.5 acres	4.5 acres
	▪ Hot spot removal and excavation	Up to 13.5 acres at 5-foot depth	Up to 14.5 acres at 5-foot depth	Up to 16 acres at 5-foot depth
	▪ Riverfront soil excavation and placement	3.15 acres at 40 feet + 1.85 acres at 20 feet	1.85 acres at 10 feet + 1.75 acres at 20 feet + 3.37 acres at 30 feet	None
Maintain or improve flood protection	Width of channel	375 feet at widest point	345 feet at widest point	unchanged
	Flood risk	potential reduction	unchanged	unchanged
Design a Project compatible with existing LADWP power lines	Incorporation of adequate setbacks from the towers, or	n/a	n/a	●
	Relocation of the power lines and towers	●	●	n/a
Design a Project compatible with adjacent rail corridor and future development plans	Accommodation of planned development	●	●	●
	Accommodation of existing and future planned rail lines	●	●	●
Total Score		MEDIUM	MEDIUM	HIGH

10.3 Summary of Planning Option Trade-Offs

Table 10-17 summarizes the evaluation of the three site planning options by the metrics described in Tables 10-8, 10-9, 10-10, 10-14, 10-15, and 10-16. Each option would provide enormous benefit to the community and would address the goals and objectives established for the Project. By relocating the LADWP power towers along the Riverbank, the Island and Soft Edge options are the most consistent with the Ecosystem Plan's objectives to restore the natural ecosystems of the River. These two alternatives also provide unique opportunities for the public to interact with the River through educational and recreational facilities that truly differentiate this site from other parks. Island and Soft Edge would, however, cost substantially more due to the costs associated with the relocation of the power towers and the reconfiguration of the Riverbank. They would also involve the removal and relocation of substantially more soil, which could pose a challenge due to the contamination on the site.

Because The Yards site planning option does not reconfigure the Riverbank and result in the same ecological and recreational benefits, it is less effective in meeting Project goals and objectives. The Yards is the most affordable of the three site planning options, however, and it avoids the technical challenges of relocating the power towers and excavating within the River channel.

Table 10-17. Summary of Evaluation of Site Planning Options

Goal	Island 	Soft Edge 	The Yards 
Habitat restoration and consistency with the Ecosystem Plan	High	High	Medium
Park user experience and public access	High	High	High
Potential economic return	High	High	High
Cost	Low	Low	Medium
Consistency with public input	High	High	Medium
Degree of technical feasibility	Medium	Medium	High
Overall Score	HIGH	HIGH	MEDIUM

11 OPERATIONS AND MAINTENANCE

This section provides an overview of O&M expenses, potential revenue sources to offset costs, and a discussion on O&M requirements and roles. A financing strategy has not yet been developed for the Project, however, so the potential revenue sources discussed here may or may not ultimately be pursued but provide a current understanding of the opportunities and challenges.

11.1 Operating Expenses

As discussed in Chapter 10, *Comparison of Site Planning Options*, highly activated signature parks require significant annual operating funding to pay for ongoing activities such as routine operations, landscaping and horticulture, security, programming, marketing, and fundraising. Annual operating costs for activated parks can range widely on a per-acre basis. For example, Brooklyn Bridge Park in New York City, New York, is 85 acres and costs $31 million per year to maintain (as of 2018), or about $365,000 per acre. The smaller scale Bryant Park, which is located within a more urban environment also in New York City, costs more than $2 million per acre to operate (as of 2017). Annual budgets for urban signature parks cover much-needed funding that pays for maintenance of well-used spaces and robust public programming like community events, cultural programs, daily activities, and a variety of concessions.

Based on similar parks, the annual operating costs for the Project would range from $5.31 million to $6.60 million, or $126,000 per acre to $157,000 per acre (Table 11-1). This estimated range is based on several assumptions confirmed through the Project planning and the site planning option development process. First, this overview estimates costs across the entire 42-acre Project. This includes a 12.5-acre easement within the Project site that would be operated by MRCA. Second, the estimated range in operating costs is based on initial planning options, which include an estimated range of highly active park areas requiring more intensive care and maintenance, as well as more passive park areas. These assumptions are likely to evolve with planning option refinement, and this estimate should be viewed as preliminary.

Table 11-1. Estimated O&M Expenses for the Project

	Annual Total	Per Acre
Low	$5,310,000	$126,000
Medium	$5,950,000	$142,000
High	$6,600,000	$157,000

The purpose of this estimate is to understand a range of total Project operating costs at a high level to identify potential revenue sources and develop a strategy for long-term financial sustainability for the Project. Although most signature parks benefit from opportunities to earn revenue, through on-site concessions, programs, and event rentals, such earned income rarely exceeds 20 percent of total operating expenses, even in the most well-managed and activated parks.

In addition, there are elements of the Project's site planning options not accounted for in the operating expense estimates. The public facility, museum/cultural center, youth enrichment center, and research building are facilities that are anticipated that would be built by the City and may be operated by another entity separate from the park operator.

11.2 Overview of Revenue Sources

To develop an estimate of revenue potential to support ongoing park operations, the funding capacity of four primary categories of potential funding is summarized as follows:

- **Venue rentals**
  - **Private special events** – As noted, the unique location and the quality of the surrounding landscape could be a major draw for private events. For this analysis, it was assumed that a multi-purpose event facility of approximately 8,000 square feet would be constructed on-site, allowing for the accommodation of private events of up to 500 guests. Estimated potential revenues from such a facility are based on an assumed number of events per year, explained in further detail below. Assumptions related to the number, scale, and revenue potential of events are based on the revenue capacity of existing comparable facilities.
  - **Community events** – Event-based revenues include all potential revenues from community events, such as concerts, cultural festivals, food fairs, and other ticketed events. For this analysis, it is assumed that all such events would be executed by an independent third-party operator who would pay a permit and facility lease fee, or similar, for the rights to operate the event for a limited amount of time, ranging from a day to several days. In such a structure, these fees comprise the only revenue that the park operator would receive, and the event operator, in turn, would be responsible for all costs associated with implementation of the event, including equipment rentals, staffing, security, and other event needs. Revenue estimates from such events are based on actual fees paid by event operators executing similar events in the Southern California region.
- **Food and beverage concessions** – The food and beverage concessions category includes all revenues generated by on-site concessionaries, including a restaurant, café, and kiosks. Although the ultimate revenue potential of in-park concessions would be contingent upon the type of lease structure, among other factors, it is assumed that in-park concessionaires would pay a monthly “participation rent,” which is generally determined by taking a share of gross revenues generated by the concessionaire.
- **Miscellaneous revenues** – This category is predominantly made up of parking revenues. A total of 400 parking spaces for the Project was estimated, limiting the total potential revenue generated by charging a parking fee. Other per-visitor revenues may be captured on-site, such as spending on food and beverage or renting a kayak; although community input received to-date has also indicated a strong preference for free and low-cost amenities, like kayak rentals, to promote community use in an area with limited access to public recreation and open space. Estimated parking revenues are based on car-use assumptions such as turnover and an estimated number of days the Project is open to the public.
- **Real estate development** – Real estate development, including residential development, at the Project site is not currently under consideration. A high-level real estate scan to evaluate potential revenue from on-site real estate development on the Project site using recent land sales transactions from a relevant market area was conducted for information purposes only. Sales transactions for residential, commercial, and industrial-zoned parcels from 2014 to present were reviewed. Using average sale prices, the potential

ground-lease revenue that could result if a small portion of the Project site were ground-leased for mixed-use development was extrapolated.

11.3 Project Funding Opportunities and Challenges

The Project is envisioned to be a beloved public space and the "crown jewel" of River revitalization. It would be actively programmed with a variety of activities for people of all ages and backgrounds. Given its unique characteristics and some limitations of the site, the Project faces specific opportunities and challenges regarding its capacity for overall revenue potential.

11.3.1 Opportunities

- The Project's unique natural setting could make it an attractive venue for private events, such as weddings, quinceañeras, filming, and photo shoots.
- The Project's adjacency to the River and its focus on both environmental sustainability and community programming could engender public goodwill and make it a prime space for private sponsorship.
- The Project could host larger scale ticketed events that produce more revenue than smaller private events, although larger events would need to be balanced with the needs of the local community.

11.3.2 Challenges

- Due to the Project's proximity to residential neighborhoods and the Sonia Sotomayor Center for Arts and Sciences, political opposition to certain proposed programming could present some challenges.
- The Project's on-site parking would contain 400 parking spaces, potentially limiting the number of attendees to the Project or to various events. The Project could consider shuttled parking options, or similar agreements with LADOT Transit such as the Griffith Park DASH service.
- The Project site, as currently conceived, only has one vehicular access entrance that may impact loading operations and ease of access to the parking lot from more remote areas of the Project.
- An active railway on the eastern edge of the Project site creates a physical barrier that may limit more expansive programming.

11.4 Overview of Revenue Estimates

11.4.1 Venue Rentals

Venue rental revenues include income derived from facility rentals for private and community events. Across Los Angeles, there is significant demand for such facilities in natural settings, particularly for special occasions such as weddings and quinceañeras, as well as local public events like movie screenings and craft fairs.

Based on a review of rental fees of comparable special event facilities in the region such as the Los Angeles River Center and Gardens, Orcutt Ranch Horticulture Center, and Wattles Mansion and Gardens, it is estimated that the

Project could generate between $360,000 and $690,000 in net annual revenues for hosting special events, subject to further refinement of the design and capacity of the event facility by the design team.

In addition, the Project site still carries traces of its former use, making it a uniquely industrial backdrop that could be appropriate for a wide range of events, generating revenue through a daily rental rate as well as a ticketing surcharge levied for use of the site. The revenue potential of a range of events that could be appropriate for the Project was evaluated, including small-scale concerts or festivals, food festivals, movie nights, and other one-off public or private events. To arrive at a revenue capacity estimate for event-based revenues, the likely frequency and scale of a variety of event types was discussed with City stakeholders, then the potential revenue that could be generated by events was estimated, based on a review of similar local and national precedents.

11.4.2 Food and Beverage Concessions

A mix of kiosks and other concessions such as cafés and restaurants will be important to activate the park, provide amenities for visitors, and generate revenue. Each site planning option for the Project includes a restaurant, a café, and two kiosks, although the exact size of each space has yet to be determined. To arrive at a food and beverage revenue estimate, it was assumed that the City would collect a portion of gross revenues generated by each concessionaire, similar to the concessionaire lease structures in other parks in the region. Examples include Griffith Park's Trails Café with woodland outdoor seating, which serves sandwiches and pastries, and the Echo Park Boathouse, which offers casual, lakeside breakfasts and lunches. Based on these examples, it is estimated that the Project could generate between $830,000 and $1.5 million in net annual revenues from food and beverage concessions.

11.4.3 Miscellaneous Revenues

The Project would have opportunities for additional earned income from parking and film/photoshoots, consistent with similar parks in Southern California.

The current site planning options for the Project include 400 parking spaces. Assuming a modest parking fee of $5 per day, the City could collect between $80,000 to $160,000 in parking revenue from daily visitors. This revenue estimate could move up or down, depending on a variety of factors including changes to parking supply, the potential for visitors to be deterred from attending because they cannot or choose not to pay for parking, changes to the City's on-street parking management program, and potential discounts or preferred rates for local residents.

The Project's scenic grounds provide an ideal backdrop for movies, wedding engagement shoots, and other photo opportunities. The modest amount of revenue from collecting these types of fees is estimated to be between $4,000 and $12,000 in net annual revenues.

11.4.4 Additional Sources

Additional sources of revenue include miscellaneous earned income from event permits, recreation fees, sponsorship, philanthropy, and grants, to be informed by discussion with City agencies. At this concept stage, these revenues are anticipated to be minimal in respect to other revenues generated and described above.

11.4.5 Real Estate Development

The sources of operating revenue described above account for between $1.6 million to $3 million in total earned revenues, resulting in a likely operating funding gap of between $2.37 million to $5.05 million. Another potential source of revenue – not contemplated in the site planning options advanced by the Project team – may be on-site real estate development, which could generate annual ground lease payments over the duration of a long-term lease with a private development entity. On-site development could also provide daily activation from new residents, workers, or visitors, depending on the use. To evaluate potential ground lease revenues as a potential source for ongoing operating funding, recent area land sale transactions and current market and lending conditions were reviewed. Annual ground rents could range between $730,000 to $1.3 million on a 2-acre parcel, $1.5 million to $2.5 million for a 4-acre parcel, and $2.2 million to $3.8 million for a 6-acre parcel.

11.5 Overview of Operating Budget

The Project's estimated operating budget is based on three revenue scenarios: conservative, moderate, and aggressive. These scenarios estimate the potential range of annual earned income, from $1.5 million to $2.8 million in earned income per year, and the potential range of O&M costs from $5.3 million to $6.6 million.

After deducting earned revenue estimates from O&M cost estimates, it is estimated there would be an annual operating funding gap of between $2,470,000 to $5,080,000 as shown in Table 11-2.

Table 11-2. Estimated Operating Funding Gap

Operating Expenses	Operating Revenues		
	Conservative	**Moderate**	**Aggressive**
	$1,520,000	**$2,130,000**	**$2,840,000**
$6,600,000	$5,080,000	$4,470,000	$3,760,000
$5,950,000	$4,430,000	$3,820,000	$3,110,000
$5,310,000	$3,790,000	$3,180,000	$2,470,000

11.6 Operating Structure

RAP operates and maintains City parks. LASAN operates and maintains stormwater treatment facilities, such as the proposed bioretention BMP. USACE operates and maintains the River in this reach, and MRCA is responsible for O&M within its easement. A Project management structure that supports dedicated and effective management of Project facilities and the overall landscape will be required in coordination with MRCA and USACE.

11.6.1 Operations and Maintenance Requirements

General O&M activities for the site planning options fall into three major categories as follows:

- Landscape, amenities, and buildings
  - Landscape maintenance includes watering, pruning, mowing, placement of mulch, removal of leaf litter, and other activities related to maintenance of a healthy plant community. Appropriate plant

materials selection and construction practices must be in accordance with RAP and MRCA's practices and policies.

  - Irrigation systems installed at the park will require regular inspection to ensure controllers and values are operating properly, plants are being watered appropriately, and broken or leaking pipes are repaired quickly. Temporary irrigation will likely be required in native habitat areas during plant establishment that may ultimately be removed. The site planning options contemplate the use of recycled water and drip irrigation where appropriate, requiring close coordination and buy-in from RAP.
  - Fencing, signage, trails, and other fixtures will need to be inspected regularly for cleanliness, trip hazards, vegetation creeping onto the trails, and damage. Fences that prevent access to restricted areas, such as the active railroad tracks, must be maintained regularly. Trash receptacles will need to be emptied regularly and will require lids to prevent litter from wind or wildlife.
  - Building facilities will require custodial services and regular inspections and maintenance of the heating, ventilation, and air conditioning systems; fire protection system; furnishings; and equipment. Periodic inspections for pests, termites, mold, and other general preventive maintenance will also be needed.

- The bioretention BMP will require trash and debris removal, vegetation management, slope stabilization, periodic clearing of the inlet and outlet structures, pump maintenance, and cleaning out/dredging of accumulated sediment over time to ensure effective water quality treatment. Vector control will be a key O&M factor as is discussed in Chapter 9, *Park Access and Services*. Design and construction of the bioretention BMP will require close coordination and approval by LASAN.
- O&M of the River will require inspections, management of invasive vegetation and sediment, and provisions for irrigation to restoration features during drought.

11.6.2 Park Management

Park management will include general O&M as described above, security, programming, marketing, and fundraising to support park operations. In addition, rental of on-site facilities such as event venues and concessions may require specialized experience, including legal/administration, and event operations and coordination. The park management structure could include a dedicated park-stewardship entity that serves as the City's operating partner. Highly activated signature parks of similar design quality and aspiration often benefit from such a public-private partnership that ensures high-capacity management and flexibility.

Further details of the management structure for the park require refinement through discussion between the City, MRCA, and USACE to ensure coordinated maintenance and security strategies among the agencies to create a clean and safe environment for park users.

12 EVALUATION OF THE ISLAND OPTION

A preferred site planning option cannot be recommended at this time. To better understand the Project's engineering challenges and potential costs, the Project team conducted further analysis of the Island site planning option because it is the most complex of the three options. This chapter includes grading requirements, drainage designs, utility requirements, and ROW requirements. A Class C cost estimate, projected schedule, and a high-level fatal flaw analysis were also prepared for the Island site planning option.

12.1 Site Plan

As detailed in Chapter 6, *Site Planning Options*, the Island site planning option uses the creation of an island to provide a unique moment in the River where the public can experience the River up close. The existing power lines would be relocated, and the River channel would be re-formed to create an island that separates River flows, mimics fluvial geomorphic processes of deposition and erosion, and provides multiple layers of riparian and upland habitat. The Island site planning option is illustrated in Figure 12-1.

Figure 12-1. Island Site Planning Option

12.2 Grading and Drainage Design

Figure 12-2 and Figure 12-3 show the rough grading for the Island option, including proposed major and minor contours and the contaminated soil boundary. The earthwork volume figures show that 75,000 cubic yards of net fill would have to be imported. This import volume assumes that suitable on-site soil can be used for the development of topographic features, remediated with an engineered cap, and imported fill provided on top of the cap. This approach requires DTSC approval.

On-site grading is subject to the following requirements:

- The slopes of the planted areas must be 1 percent minimum and 2:1 maximum.
- The slopes within the asphalt paved parking lot area must be 1 percent minimum and 5 percent maximum. ADA parking stalls require 2 percent slope in all directions.
- The slopes of walkways must not exceed 5 percent. Slopes greater than 5 percent require a construction of an ADA compliance ramp. The maximum cross-slope is 2 percent.

Drainage design would follow the City's hydrology, hydraulic, and storm drain design criteria. Impervious surfaces require stormwater quality treatment before discharge to the River, which would occur through the lined bioretention BMP and other vegetated-swale BMPs. Grading and drainage design within the mainland of the Project site is based on an overall concept to sheet flow as much stormwater as possible to the bioretention BMP in the center of the Project site. This concept is detailed in the Final Proposition O Project Concept Report (Appendix D). The Final Proposition O Project Concept Report preferred alternative (Alternative 4) is summarized in the report as follows:

> *"The fourth water quality alternative will capture all the on-site flows for the G2 parcel and wet weather runoff from the City-UPRC Drain and Eagle Rock Drains upstream of the parcel. The surface flows will deliver the design capture flow to the bioretention BMP that will treat the water prior to release to Los Angeles River Reach 3. The Site will be graded so that the onsite runoff is collected in the water quality BMP feature and treated."*

The bioretention BMP, located in the center of the site (shown in green in Figure 12-4 and Figure 12-5) is located in a slightly different location as that depicted for the conceptual layout for the Draft Proposition O Project Concept Report but would serve the same function. The bioretention BMP would convey flow from north to south with an outlet to the River and be designed to provide: (1) equivalent or greater surface treatment area, (2) the same subsurface biotreatment section, and (3) allowance for treatment of diverted low flows from the City-UPRC and Eagle Rock Drains. Areas within the mainland of the Project site that cannot drain by sheet flow to the bioretention BMP would require drainage inlet pickup and pipe conveyance, where possible. Areas of the Project site that cannot gravity flow to the bioretention BMP, such as the south parking area, would require separate stormwater BMP treatment prior to discharging to the River. Sample concepts and images of other stormwater BMP treatment features are shown in Figure 12-6 and Figure 12-7. Grading and drainage design for the island itself assumes sheet flow of pervious surfaces to the River. The island and site edges would require some armoring to prevent scour and erosion along the River's edge during a rain event.

Figure 12-2. Island Site Planning Option Rough Grading Exhibit (1 of 2)

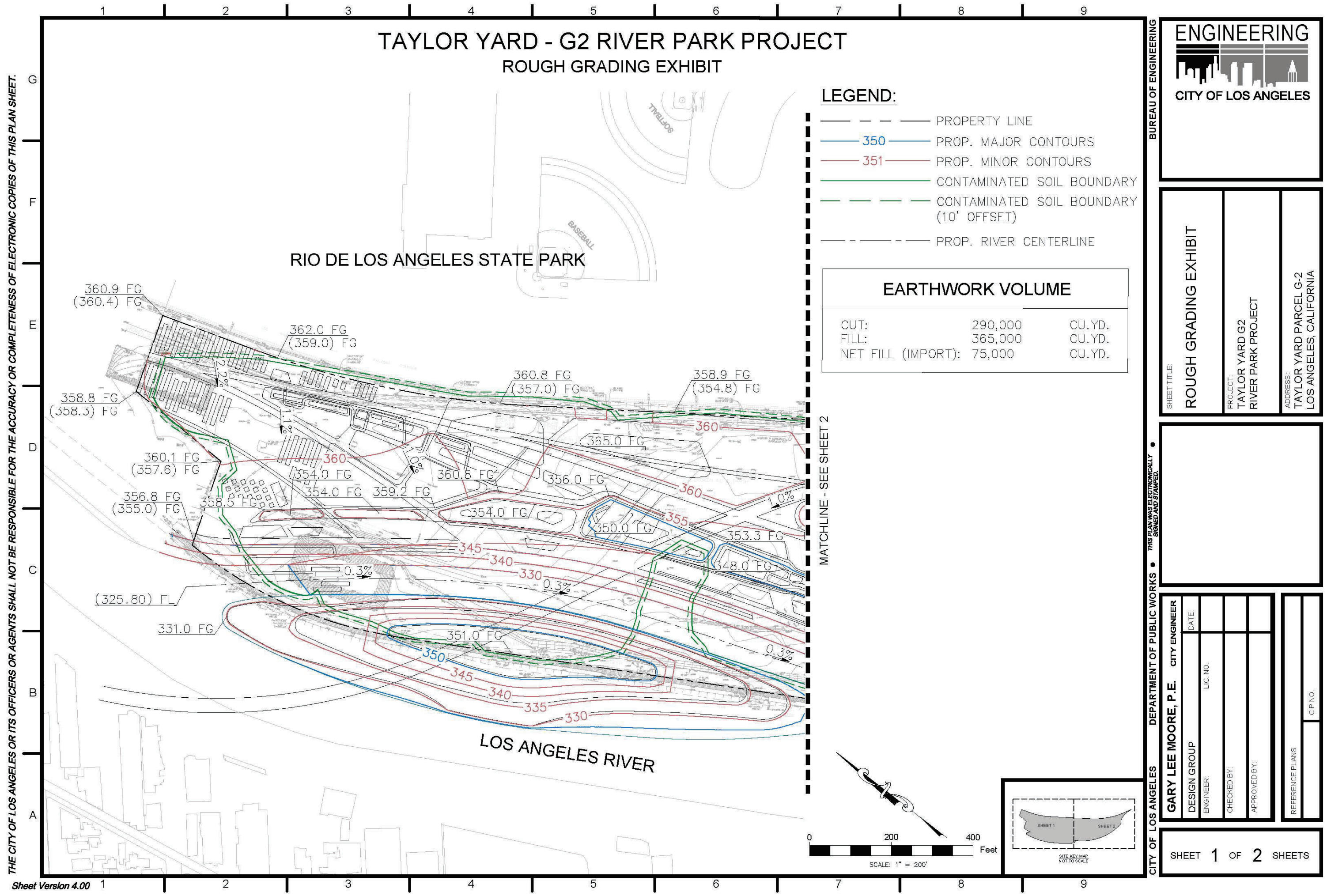


Figure 12-3. Island Site Planning Option Rough Grading Exhibit (2 of 2)

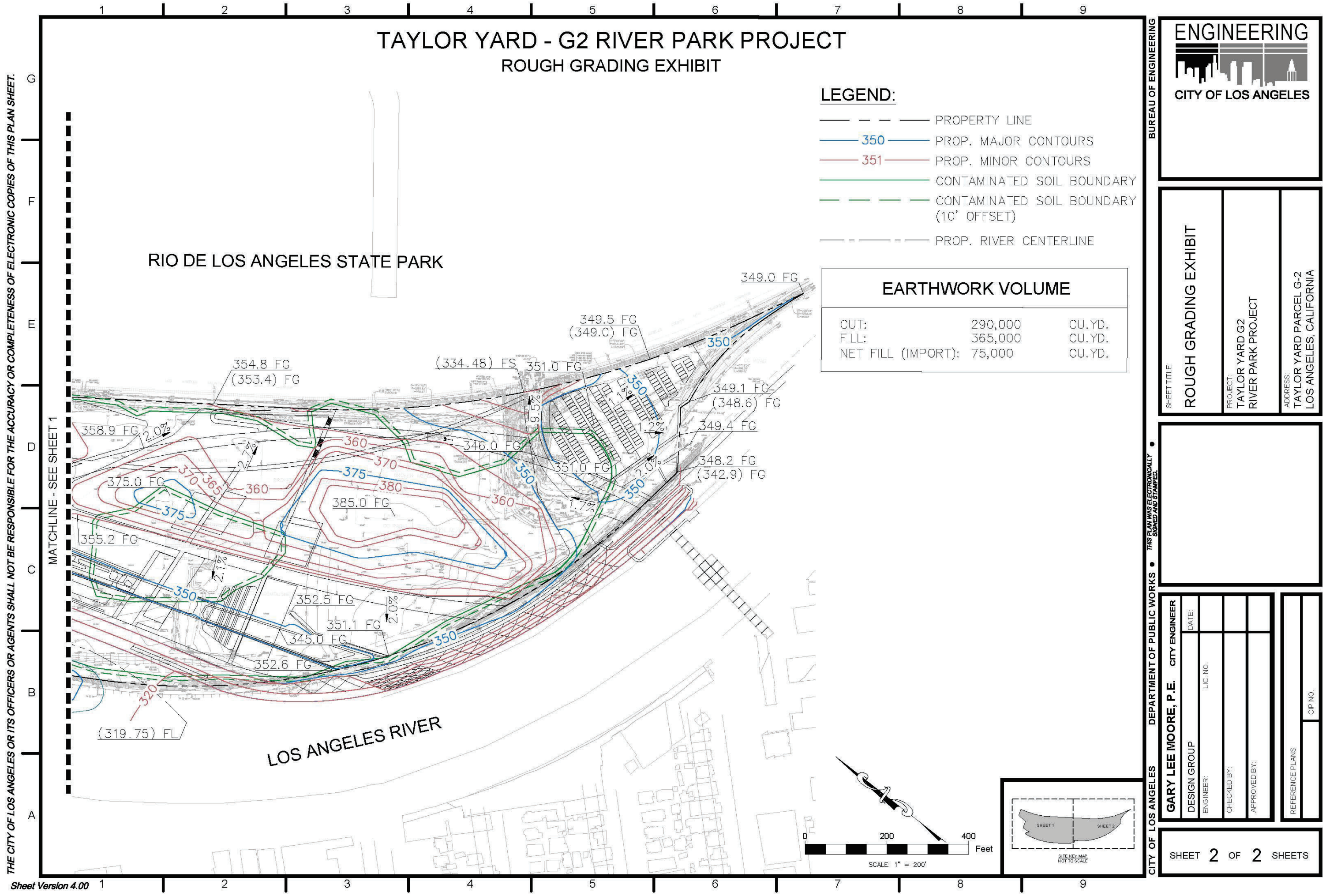


Figure 12-4. Island Site Planning Option Drainage Exhibit (1 of 2)

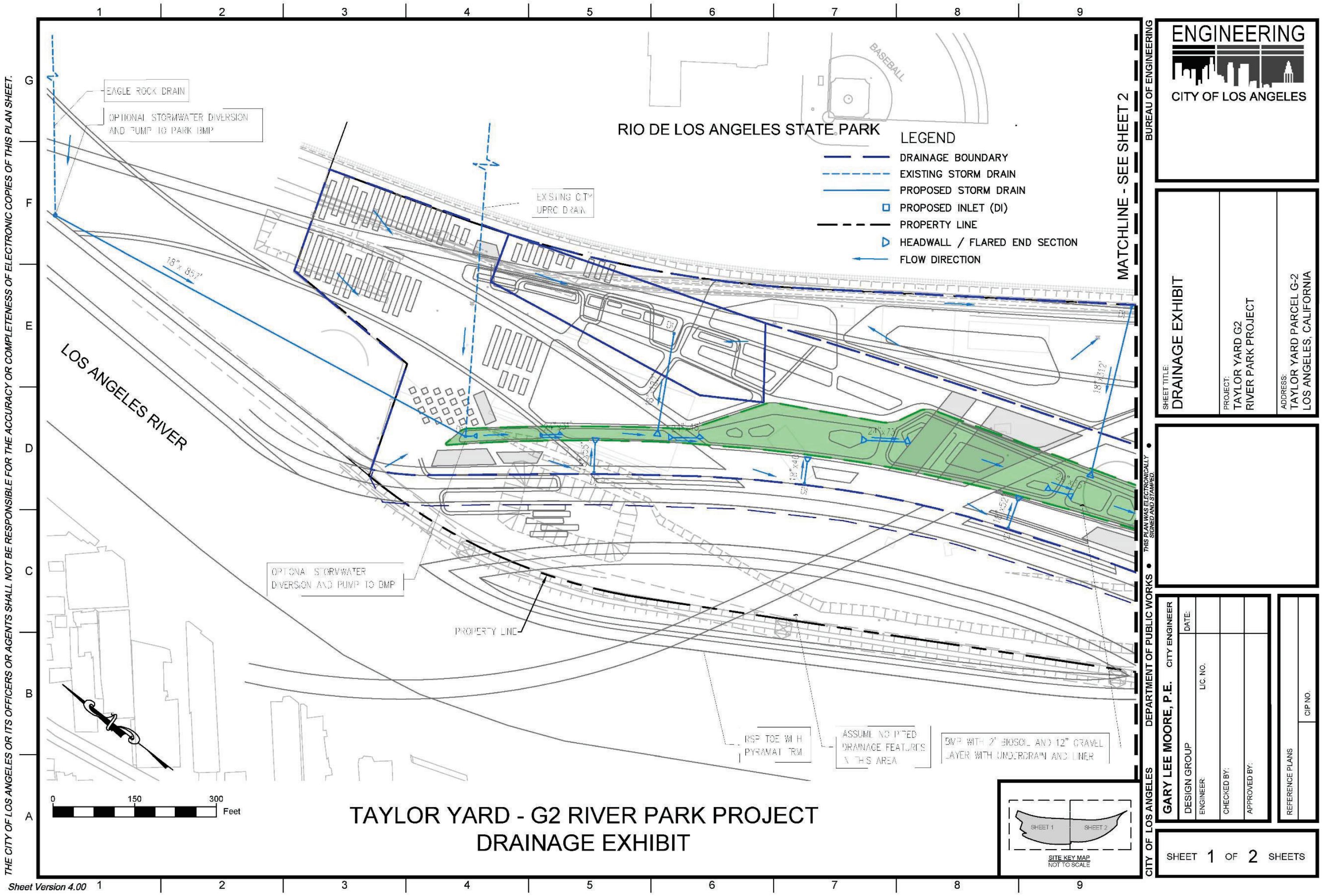


Figure 12-5. Island Site Planning Option Drainage Exhibit (2 of 2)

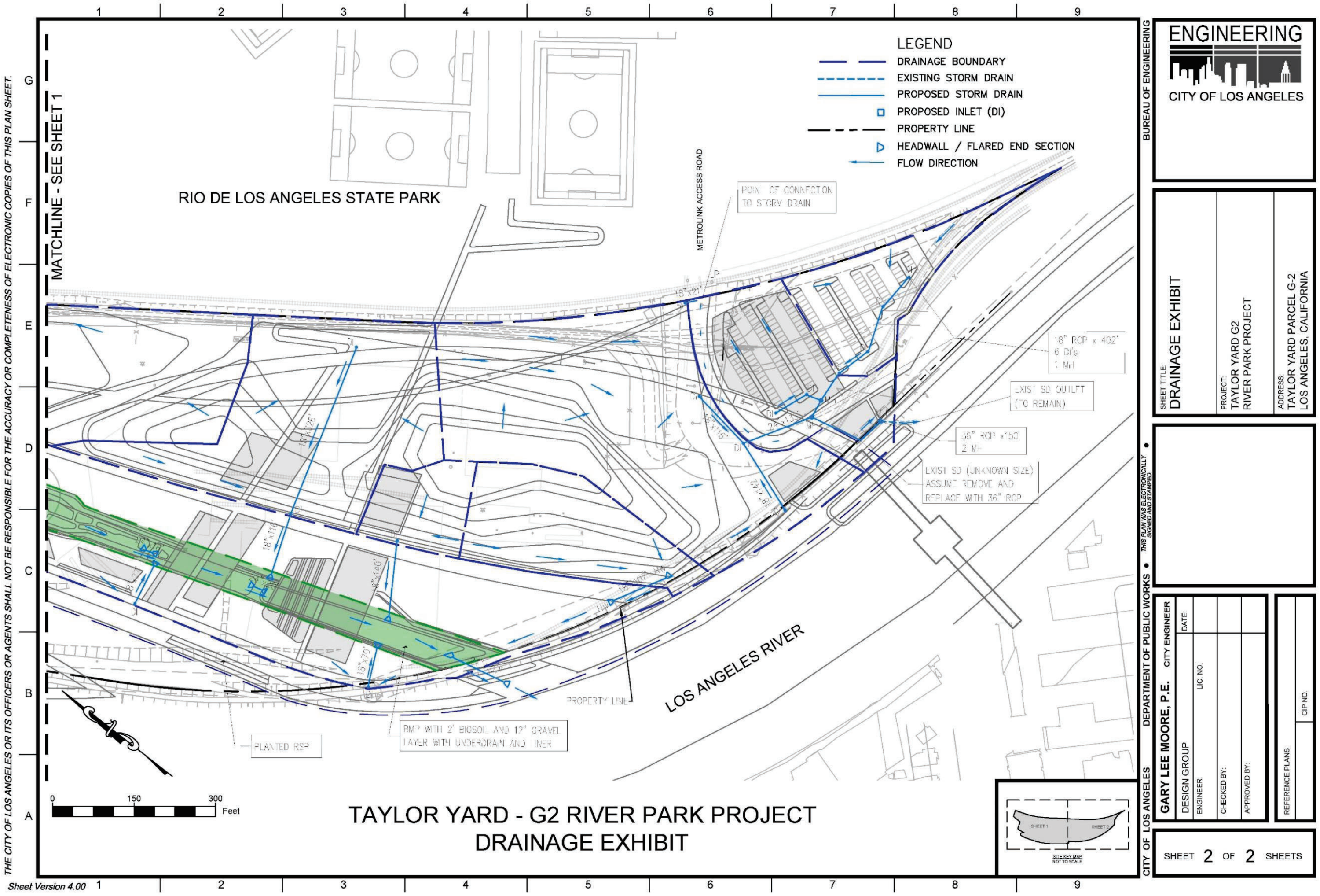
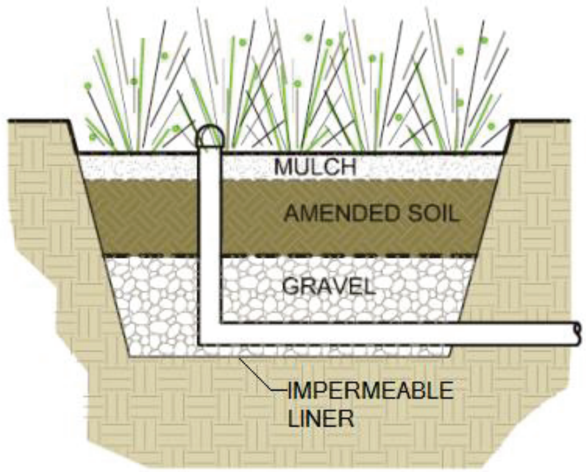


Figure 12-6. Sample Stormwater BMP Treatment Features

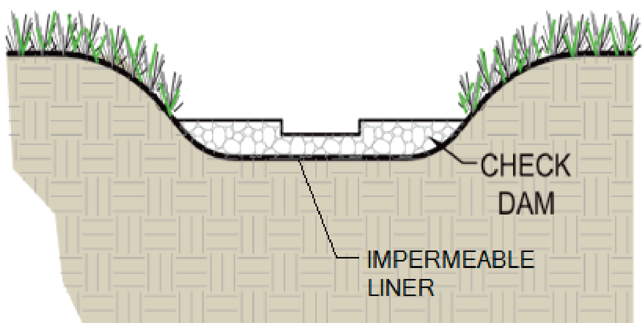
Bioretention with Underdrain

Bioretention facilities are landscaped shallow depressions that capture and filter stormwater runoff. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, and biodegraded by the soil and plants. Because they are not contained within an impermeable structure, they may allow for infiltration. For sites not passing the infiltration feasibility screening for reasons other than low infiltration rates (such as soil contamination, expansive soils, etc.), an impermeable liner may be needed to prevent incidental infiltration.



Vegetated Swales

Vegetated swales are open, shallow channels with dense, low-lying vegetation covering the side slopes and bottom that collect and slowly convey runoff to downstream discharge points. An effective vegetated swale achieves uniform sheet flow through the densely vegetated area for a period of several minutes. The vegetation in the swale can vary depending on its location and is the choice of the designer. Most swales are grass-lined.



Source: City of Los Angeles 2016

Figure 12-7. Sample Image of Vegetated Bioretention/Biofiltration Swale

12.3 Utilities

The Project would require the construction of new wet and dry utilities that could conflict with existing easements. This section identifies the potential utility needs of the Project site and surrounding access points to existing services.

12.3.1 Water

Anticipated Water Demand

Water demands were calculated for the Project based on the Island site planning option and design considerations that must be included during the design phase. Because riparian and wetland habitats require water for survival, recycled water, potable water, stormwater runoff, including dry-weather flow, and/or River water could be used for planned plant palettes and vegetation on the Project site.

Water requirements and irrigation demand for the Project were estimated using the State of California's Division of Agriculture and Natural Resources' (ANR) Simplified Landscape Irrigation Demand Estimation (SLIDE) equation. The equation is a simple calculation to produce an estimate of the water required by a land use and/or landscape area for a given period. The basic SLIDE equation is:

Landscape Water Demand (gal) = $ET_o \times PF \times LA \times 0.623$

where,

ET_o is inches of historical average or real-time reference evapotranspiration data in inches for the period of interest

PF is the Plant Factor from ANR
LA is the landscape area, in square feet
0.623 is the factor to convert inches of water to gallons (this factor is omitted if the estimated water demand is desired in inches)

The ANR states that:

> "the only ET_o adjustment needed for estimating the water requirements of a landscape area is a PF which accounts sensibly and accurately for the water demand characteristics of the plant types present. The estimated water demand will need to be met by precipitation, irrigation, or a combination, in order for plants to perform acceptably. Irrigated landscapes should be designed so that each irrigation station is composed of plants with similar water requirements in what is known as a hydrozone. When plants of different water requirement categories are mixed in the same irrigation station, the water demand of the entire zone is that of the plant category with the highest PF."

Table 12-1 presents the maximum amount of annual water demand that the Project could have where the upper range of acres was assumed for irrigation requirements. It is assumed that water would be required for both dry and wet seasons.

Table 12-1. Estimated Water Demand – Winter and Summer Months

Design Component	Plant Factor(PF)	Landscape Area (LA)		Water Demand (gal)	
		Acres	SF	Summer	Winter
Native vegetation with trails, outlook vistas, and paths (passive and educational recreation)	0.5	16	696,960	933,543	325,655
Wetlands/marsh	1	10	435,600	1,166,929	407,068
Native plant nursery	0.8	1	43,560	93,354	32,565
Bioretention BMP and streams	0.5	8	348,480	466,772	162,827
Various educational structures, including bathrooms, River steps, and parking	0	7	304,920	TBD	TBD
Total Acres		42	1,829,520	2,660,598	928,115

To better understand water demands and sources for wetlands- and habitat-focused public parks, seven Southern California parks were studied. Six of the seven parks have been constructed and in operation for 2 to 20 years. A key takeaway from these projects was that all parks with stormwater and dry-weather flow as the primary water sources for wetlands and lakes require a potable water backup system to guarantee enough water to maintain wetland and park features. Even for parks with large detention ponds, the stormwater and dry-weather flows are not enough to maintain wetland features. This information suggests that there may be times when stormwater may not be enough to maintain the Project's wetland and park features. Recirculation designs will be considered, but a backup source of water may be needed to guarantee enough year-round water supply. Implementation of low impact development (LID) ordinances and dry-weather diversions upstream would likely further reduce dry-weather flows in the future.

Potential Water Supply Sources

Four potential water supply sources for the Project were considered – stormwater, recycled water, potable water, and River water:

- **Stormwater** – Stormwater use would be based on the quantity and quality of both the dry-weather and wet-weather stormwater flows. Climate change is impacting the intensity of storm events and the implementation of stormwater BMPs in the upstream watershed. The estimated quantity of stormwater available to the Project year-round and over time will be important to determine, particularly the dry-weather and wet-weather flows. How stormwater will be used to offset the water supply demands will determine sizing of the piping and pumping systems.
- **Recycled water** – Recycled water is a reliable option for meeting much of the water demand at the Project site. Recycled water can be used for all irrigation needs planned as well as for toilets, fountains, and other potential non-potable requirements. Because recycled water is produced at water reclamation plants, it is a year-round supply, unlike stormwater. For the Project site, using recycled water is feasible because LADWP already has a 16-inch-diameter recycled water pipeline in San Fernando Road. A connection would be required in San Fernando Road likely to a lateral on the access roadway.
- **Potable water** – Potable water will be required for the Project site. The quantity will depend on how much recycled water is supplied and whether potable water will be provided throughout the site as a backup supply. Although the water demand for the entire Project site could be provided by potable water, this would not meet the goals and objectives of the LA's Green New Deal (City of Los Angeles 2019). Use of both recycled water and stormwater is desired to offset the potable water demands and to only use potable water where it is a must, such as for drinking water. Potable water demands will be determined during future design stages when the final structures, facilities, and uses are determined. At that time, decisions will be made as to whether potable water pipelines should be installed as a backup supply.
- **River water** – The logistics of using water from the River to irrigate the Project site would include using a pump station, filters, and a piping system from the River to specific vegetated areas on the upper area of the site. The exact location of this system, and the quantity of flows, would need to be determined. Of concern is that the dry season has limited River flows that are relatively small, comprising a base flow that rarely rises above the bottom of the River channel. By comparison, the wet season has storm runoff that varies depending on the magnitude of the storm event with these flows varying substantially. During the design phase, the viability of using water from the River will be determined.

Water Supply Design

Figure 12-8 and Figure 12-9 show the layout of the proposed recycled, potable, and fire protection water systems and the approximate locations of the existing water mains. Two potential points of connection for the water system to these water mains are located on the northeast and southeast side of the Project site at San Fernando Road.

Both proposed water pipelines must be approved, designed, managed, and installed by LADWP. LADWP would assess the fiscal viability of the infrastructure and ensure that the recycled water would not be conveyed into a storm drain that discharges directly into the River. Construction of this pipeline would also be coordinated with the Los Angeles County Health Department Cross Connection and Water Pollution Control Program, which is responsible for the oversight of new and converted recycled water re-use sites from the planning stage through final approval.

The fire protection water system would connect on the northeast side of the Project site. Figure 12-8 and Figure 12-9 also show the approximate location of the 11 on-site existing fire hydrants from a site survey conducted by Surveying & Drafting Services, Inc. in 2014. Most hydrants would be relocated to provide sufficient coverage for the Project site with a minimum spacing of 300 feet between hydrants.

12.3.2 Storm Drain

Several storm drains discharge into the River near the Project site, as discussed in Chapter 2, *Site Constraints*. As shown in Figure 12-8 and Figure 12-9, connections to the existing storm drains are anticipated:

- Under the access roadway and existing railroad bridge at the south end of the Project site,
- At the existing storm drain outlet at the south boundary of the Project site near the new Taylor Yard Bicycle and Pedestrian Bridge, and
- At a new storm drain outlet to the River that would be required at the end of the bioretention BMP.

12.3.3 Sanitary Sewer

The sewer system is anticipated to connect to the existing 18-inch main along San Fernando Road via a proposed force main from a new sewage lift station. As Figure 12-8 and Figure 12-9 show, the proposed sanitary sewer system runs from this anticipated connection to the southern end of the Project site, where it then splits at a sewage lift station to run north and south. To the south, the line connects with proposed buildings, and to the north the line runs parallel to the riverbed, connecting several proposed buildings and ending near the northeast corner of the Project site.

12.3.4 Dry Utilities

The approximate locations of existing dry utilities, such as gas and communications, are similar to the locations of the water and sewer mains along San Fernando Road. Figure 12-8 and Figure 12-9 show the potential point of connections for gas and communications needed for the Project. For electrical, the potential point of connection is anticipated to be at an existing power pole at the southeast corner of the intersection of San Fernando Road and the access roadway.

Electric power will be required for powering the lighting of trails and open activity areas, and to power the lighting and equipment in the buildings on the Project site. The approximate power needs of the site were estimated assuming a maximum of 50,000 linear feet of trails and a total of no more than 5 acres of buildings, arenas, and other open activity areas with an average illuminance of 50 lux on the trails and 500 lux in the buildings and open activity areas. It was assumed that the major trails would have to be well lit in the most environmentally efficient way, both from the aspect of electricity consumption and from a light pollution perspective. At the same time, the lighting levels would have to provide a safe and secure environment for park visitors. Although the nature of lighting sources and actual installation is not yet known, a combination of metal-halide, high-pressure-sodium, and/or light-emitting diode (LED) bulbs would be a viable option. The power consumption per lumen of these light sources is similar.

The power requirements for lighting of the 50,000 linear feet of trails would be approximately 150 kilowatts (kW), and for the buildings and open activity areas around 370 kW, totaling 520 kW. The trail power requirement can be reduced, however, if LED solar panel-powered fixtures are installed and reduced even further with a battery energy storage system located within the park. If other equipment, such as air conditioning in the buildings, does not require more than 200 kW, the total power requirement for the Project is estimated as 720 kW, or 800 kilovolt-ampere (kVA). Standard distribution class transformers rated between 1,000 kVA and 2,000 kVA could supply this amount of power.

The amount of power requires higher distribution level voltage, either single- or three-phase. The Project site could be connected to the nearest existing distribution line at the appropriate voltage level (4.8 kV or 34.5 kV), providing that the line has the spare capacity to accept the new load. A separate, more detailed study, and input from LADWP, will be required to determine the exact interconnection location. The connection can be via single-phase or three-phase buried cable. The high voltage cable would connect to an enclosed transformer and switchgear in the park, to distribute the power to the different areas and trails at the 120-volt and the 240-volt level. For planning purposes, an estimated power requirement of 1,000 kVA for the Project can be used, which will be refined as design progresses. More detailed study and information about local distribution networks is required to determine the exact point of interconnection.

Figure 12-8. Island Site Planning Option Utilities Exhibit (1 of 2)

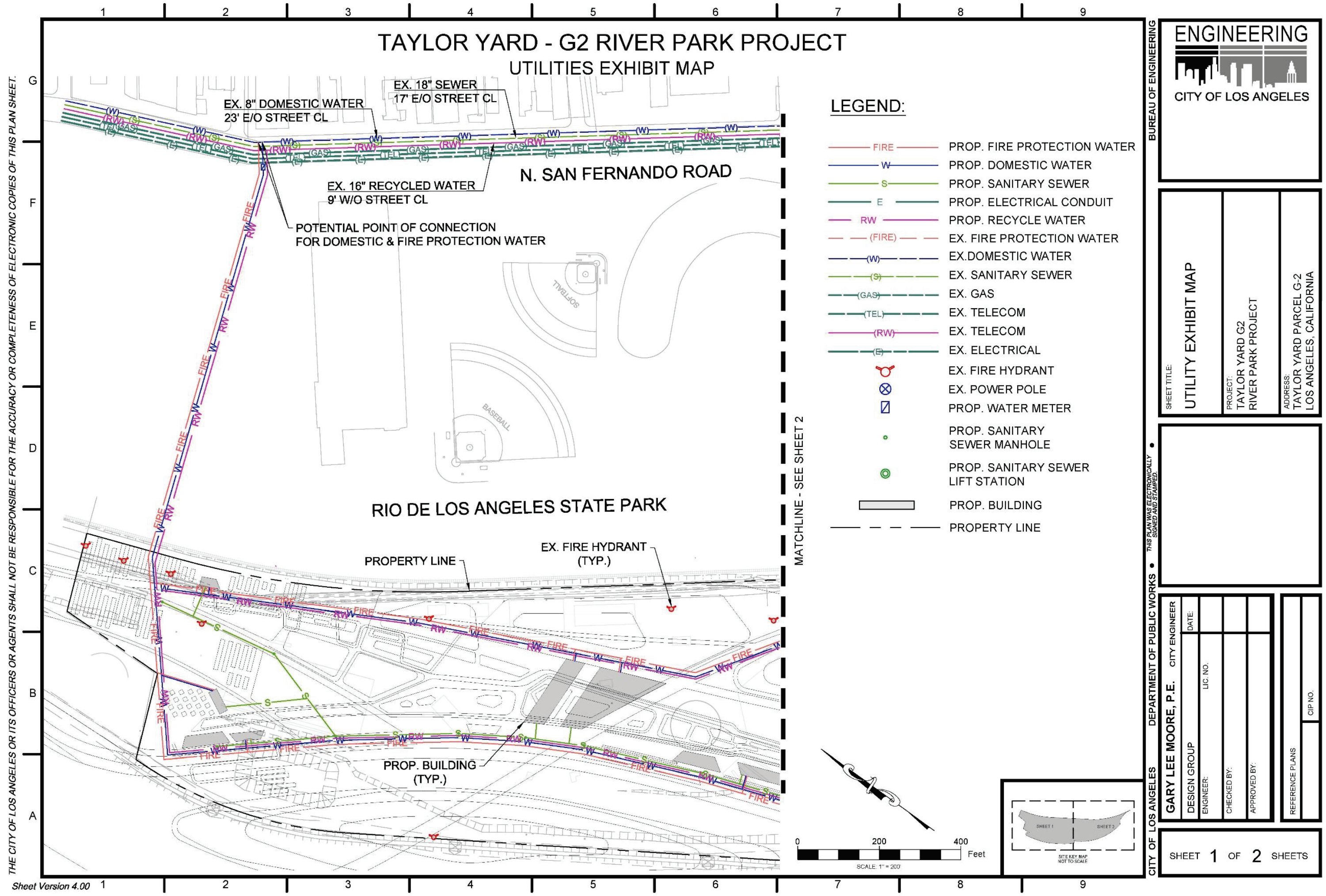
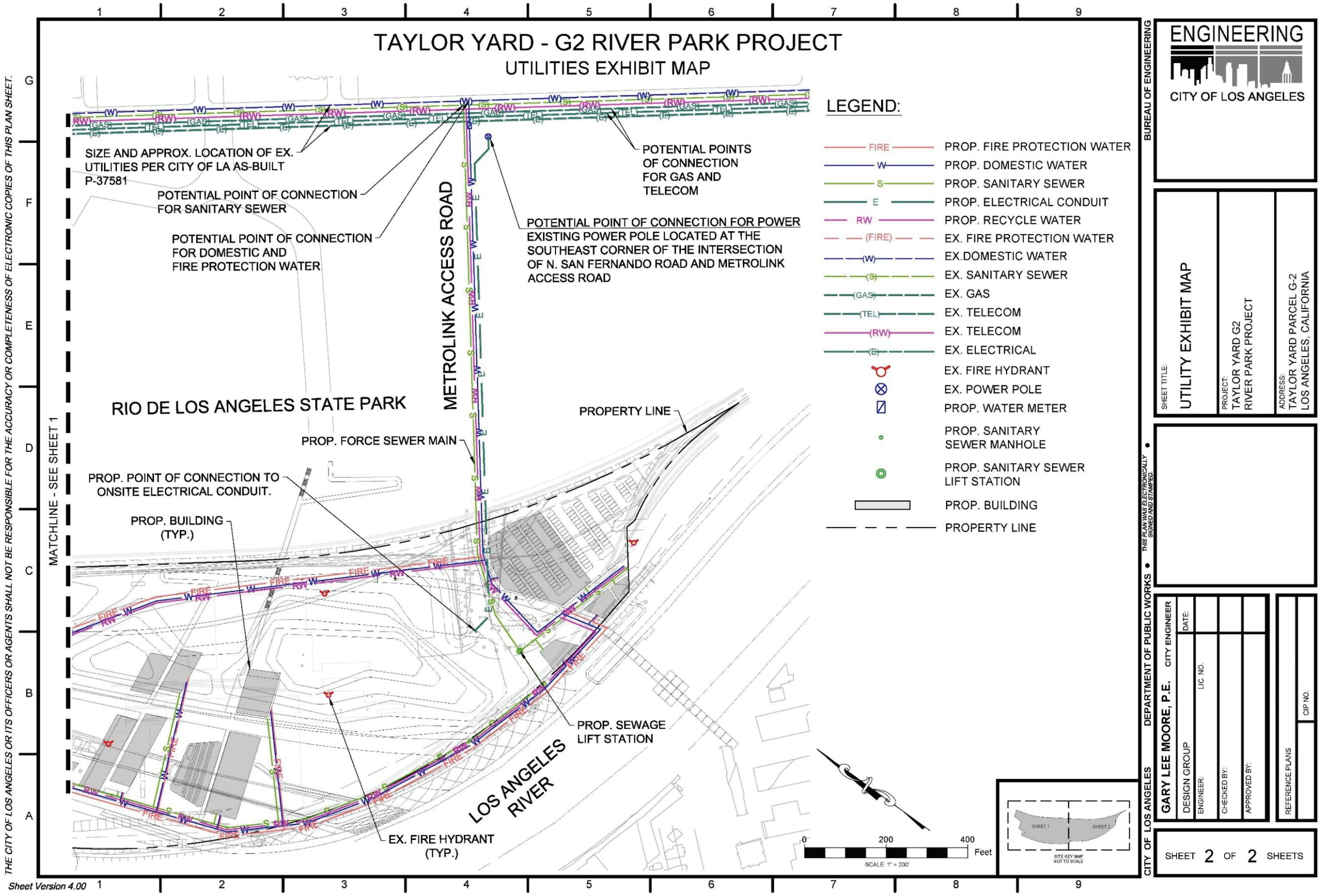


Figure 12-9. Island Site Planning Option Utilities Exhibit (2 of 2)



12.4 Cost Estimate

12.4.1 Class C Cost Estimate Methodology

The Class C cost estimates presented in this chapter reflect the general conceptual nature of the Island site planning option. Cost estimates for the Soft Edge and Yards planning options are not presented, as their total estimated costs are lower than that of the Island. Site planning was completed for the grading work, which provided quantities used to develop specific items in the Class C cost estimate. The estimate is based on several assumptions and includes appropriate escalation and contingencies to account for unknown or estimated quantities. Escalation provides for increases in costs over time due to inflation, while contingency sets aside funds to account for unknowns in the cost estimating process at the time the estimate was generated.

12.4.2 Class C Cost Estimate

Project costs include all the necessary items to provide a finished product. Costs include planning, design, construction, and post-construction work. As Table 12-2 shows, the estimated cost for planning and design for the base cost associated with the Island option is $437,101,000. This base cost includes the following Project components: remediation, site improvements, civil, water quality BMP, landscaping, lighting, storm drains, pedestrian bridge across the railroad corridor to Rio de Los Angeles State Park, camping/restroom facilities, park office, kayak launch and landing, café, parking, and utilities. The remediation cost of approximately $200 million is based on hazardous soil transport and disposal for riverfront excavation, temporary water treatment, site cap preparation and installation of a site-wide cap, sub-slab vapor mitigation and active extraction for buildings, vapor extraction system, hotspot removal and treatment, asbestos removal, and DTSC fees.

There are a variety of other scope items that are planned to be included as part of this Project, which would cost $361,185,000. These items include LADWP power line relocation, pedestrian bridge across the River to Elysian Valley, youth enrichment center, public facility, research building, and museum/cultural center.

The estimated Project grand total is $798,286,000.

The estimated Project cost has been updated to March 2022 dollars in Chapter 17, Updated Cost Estimates.

Table 12-2. Class C Estimate

Island Site Planning Option Estimated Project Costs[A] Summary *(as of December 2019[B])*	
Project Component	**Amount**
Base Island Site Planning Option	
Subtotal Site Remediation	$199,180,000
Subtotal Park Improvements and Facilities	$141,000,000
Base Island Site Planning Option Sub-Total	**$340,180,000**
Base Island Site Planning Option Escalation - 4% per year	$62,975,000
Base Island Site Planning Option Project Contingency - 10%	$33,946,000
Base Island Site Planning Option Total	**$437,101,000**
Other Scope Items	
Subtotal LADWP Power Line Relocation	$22,393,000
Subtotal New Pedestrian and Bicycle Bridge to Elysian Valley	$36,800,000
Youth Enrichment Center	$11,135,000
Public Facility	$44,539,000
Research Building	$55,673,000
Museum/Cultural Center	$111,346,000
Other Scope Items Sub-Total	**$281,886,000**
Other Scope Items Escalation - 4% per year	$51,525,000
Other Scope Items Project Contingency - 10%	$27,774,000
Other Scope Items Total	**$361,185,000**
Total Estimated Costs for Island Site Planning Option	**$798,286,000**

[A] includes both soft and hard costs *[B] project costs are updated to March 2022 dollars in Chapter 17, Updated Cost Estimates*

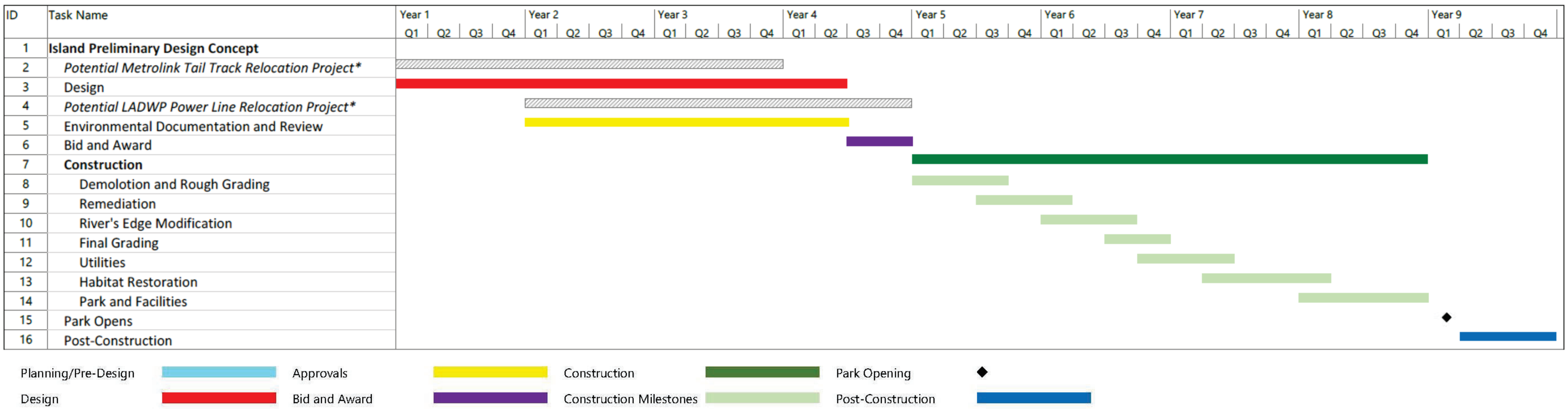
12.5 Schedule

The Project schedule presented in Table 12-2 incorporates expected timelines for all phases of Project development leading up to and including planning and pre-design, design, environmental documentation and review, bid and award, construction activities, and post-construction activities. The schedule provides an estimate of basic components of Project delivery with an outline of expected duration to complete each activity. Activities are overlapped when practical to represent concurrent tasks. It is important to note again that the City intends to remediate and activate the Project site in a series of projects, which is not reflected in this schedule. As projects at the site are identified and approved for implementation on shorter timeframes, the schedule proposed here would require modification.

The Project is wrapping up the planning and pre-design phase. Once the project scope is drafted, design, environmental documentation, and review would begin and take approximately three and a half years. The comments and feedback from the environmental documentation and review process and other permitting conditions would be appropriately incorporated and the design phase would wrap up with the production of a complete bid package, including construction plans and specifications. The bid package would then be released for contractor bids and the construction contract would be awarded by the Board of Public Works, which typically takes six months. Construction could then begin shortly after and last approximately four years. The expected sequence of construction activities, many of which may occur concurrently within the Project site as steps are completed in one location and not yet commenced in another location, include demolition, remediation, grading, River's edge modifications, installation of utilities, and habitat restoration. The Project is anticipated to open to the public eight years after design begins.

Also shown on the schedule are two projects not included in the scope of this Project but that are relevant in terms of implementation sequencing. Metrolink's Potential Tail Track Relocation Project, discussed in Chapter 2, must be completed prior to any modifications to the River's edge to avoid impacts to operations at the CMF. The Potential Power Line Relocation Project, discussed in Chapter 4, would be administered by LADWP and is also required prior to modifications to the River's edge. The schedules for these two projects have not yet been established and are outside the purview of this report, so they are shown in Figure 12-10 for reference only.

Figure 12-10. Island Site Planning Option Project Schedule



*Not part of the Taylor Yard G2 River Park Project

13 PERMITS AND APPROVALS

This chapter presents a summary of the various permits and approvals that would be required for the Project to proceed into construction.

13.1 Air Quality

Construction in the City is subject to approvals from the South Coast Air Quality Management District (SCAQMD). SCAQMD grants approvals for projects for regional air quality regulations and would require four permits.

13.1.1 Permit to Construct and Permit to Operate

To obtain a permit from SCAQMD, a general application form for a Permit to Construct and Permit to Operate (Form 400-A) and the California Environmental Quality Act (Form 400-CEQA) is required. In addition, a supplemental application form for each piece of equipment that requires a permit will be necessary (Form 400-E-xx). Also, an additional asbestos survey would be required to demolish and develop the entirety of the site; only a portion of the property has been surveyed to-date. Because of the presence of asbestos, SCAQMD Rule 1403 requires that the developer remove friable and non-friable asbestos prior to maintenance, repairs, renovation, or demolition that would disturb the material. Work involving the disturbance of asbestos-containing material also requires 10 working days' prior notification to SCAQMD and notification to the Division of Occupational Safety and Health (Cal/OSHA). A Procedure 5 cleanup plan must be filed with SCAQMD prior to abatement work.

13.1.2 VOC-Impacted Soils

Prior to the commencement of a Soil Vapor Extraction (SVE) unit; or excavating, handling, monitoring, or treating known or suspect VOCs-contaminated soil per Rule 1166, an SVE Operation Notification Form must be submitted to SCAQMD. A mitigation plan for VOC-impacted soils must be approved by the SCAQMD Executive Officer prior to commencement of excavation or hauling. The mitigation plan must be submitted with an application, and a copy of the approved plan must remain on-site during excavation. See Rule 1166 http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1166.pdf.

13.1.3 Asbestos Survey and Remediation Plan

SCAQMD requires survey, notification, and work practice requirements to prevent asbestos emissions during building and demolition activities. See AQMD Rule 1403 http://www.aqmd.gov/home/rules-compliance/compliance/asbestos-demolition-removal. The asbestos survey would determine what practices to prescribe and apply to which phase of the subsequent remediation plan.

13.2 Biological and Jurisdictional Resources

13.2.1 Endangered Species Acts

The Endangered Species Act (16 U.S.C. Section 1531 et seq.) is a federal act that regulates the conservation of threatened and endangered plants, animals, and habitats. It is administered by the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration, Fisheries Service. Section 2081 of the Fish and Game Code prohibits any action that “takes” listed species of wildlife designated as endangered, threatened, or candidate species. Section 2081, incidental take permits (ITPs), requires early consultation to avoid potential impacts to species and to develop appropriate planning to offset project-caused losses of listed species.

The California Endangered Species Act is a State act that regulates the conservation of threatened and endangered plants, animals, and habitats within California and is administered by CDFW. Similar to the federal act, the law prohibits any action that “takes” any listed species of endangered, threatened, or candidate species. ITPs may be applied for through the administering agency.

If a species is listed under both the federal and State Endangered Species Acts, a consistency determination may be sought through the State agency to coincide with findings made by the federal agency.

13.3 Civil/Design/Construction

13.3.1 Soils/Geology Report

The Los Angeles Department of Building and Safety (LADBS) requires a project that is located within a seismic hazard zone, an earthquake fault surface rupture study area, or the Hillside Grading Area to submit a soils and/or geologic report at the time of applying with the Department of City Planning.

13.3.2 Haul Route Approval

In compliance with the Los Angeles Municipal Code (LAMC), Section 91.7006.5.2, LADBS may designate routes of ingress and egress and may impose conditions and require safety precautions for pedestrian and vehicular traffic as it determines are required in the interest of public health, safety, and welfare. LADBS requires a public hearing before the Board of Building and Safety commissioners for any import or export of more than 1,000 cubic yards of earth material in a grading hillside area.

13.3.3 Grading Permit

A grading permit is required to import or export any earth materials to or from any grading site, per LAMC Section 91.106. Any grading project involving more than 100 cubic yards of excavation and involving an excavation in excess of 5 feet in vertical depth at its deepest point measured from the original ground surface requires a grading permit. LADBS would require a grading permit for the proposed Project.

13.3.4 Sewer/Storm Drain Permit

A sewer/storm drain permit (LAMC Section 64.12) (also referred to as an “S” permit) is required to make, construct, alter, or repair any house sewer connection, bonded house sewer connection, special house sewer connection, industrial waste sewer connection, industrial waste storm drain connection, storm drain connection, special drainage connection, or any portion of any such sewer or storm drain connections, including sampling maintenance holes, or connect any house sewer, soil pipe, or plumbing to any such sewer or storm drain connections or to a sewer or storm drain. A sewer/storm drain permit from BOE would be required for the proposed Project.

13.3.5 Building Permit

In compliance with LAMC Section 91.106.1.1, a building permit is required to erect, construct, alter, repair, demolish, remove, or move any building or structure or commence any liquid washing, compressed air cleaning, or steam cleaning of exterior surfaces of any building. A building permit would be required from LADBS for the proposed Project.

13.3.6 Electrical Permit

An electrical permit is required in compliance with Section 93.0101 of the LAMC. The electrical permit provides guidelines for appropriate electrical wiring, systems engineering, and fire protection.

13.3.7 Construction “B” Permit

A construction “B” permit (LAMC Section 62.106.b) is issued for extensive public works improvements including the widening of streets and alleys; the changing of existing street grade; construction of bridges and retaining walls; and the installation of sewer, storm drains, street lighting, and traffic signals. Construction plans are usually required and must be signed by a California licensed civil and/or electrical and/or traffic engineer. A construction “B” permit from BOE should not be required for the proposed Project.

13.3.8 Excavation Permit

As specified in Section 62.105 of the LAMC, BOE requires a permit for construction projects that require public ROWs to be trenched or excavated.

13.3.9 California Public Utilities Commission

The California Public Utilities Commission (CPUC) is the state agency that regulates investor-owned electric utilities as well as other investor-owned utilities that provide gas, water, and telecommunication services. When investor-owned utilities wish to sell, lease, or encumber their facilities, they must seek CPUC approval via an application process. CPUC conducts its environmental evaluation in accordance with both CEQA and its own environmental rules.

13.3.10 Zone Change

The overall objectives of planning and zoning are to protect public health, safety, and welfare; to promote compatibility between various land uses and developments; and to provide for an attractive and efficient community. Zone changes may be initiated by the Board of Supervisors, the Regional Planning Commission, or by individual property owners who desire to develop property with a land use or density that is not permitted by the existing zoning classification. The zone change must be consistent with the adopted General Plan, including local area and community plans that reflect the County's policy regarding land use. The current zoning of the Project site is for industrial land use. A zone change would be required to convert the land use to open space/public facilities. The Planning, Land Use, and Zoning Report is provided in Appendix E.

13.3.11 Landscape Plans

The Department of City Planning, RAP, and MRCA provide guidance, review, and approval for landscape plans. Landscape plans are required for tree removal and tree planting, as well as other landscaping features and plans for open space areas.

13.3.12 Construction and Maintenance Agreement

A construction and maintenance agreement, which provides rules and regulations for construction work performed in proximity to the tracks, would be required in consultation with Metrolink.

13.3.13 Worksite Traffic Control Plan

A worksite traffic control plan would be required for the Project. The purpose of the Transit and Transportation Construction Traffic Management Committee plan is to minimize the loss of traffic capacity within various major transit and transportation construction impact areas resulting from construction activity, including Metro Rail, Light Rail, busway, utility, private development, street improvement, street maintenance, and major public works projects in accordance with LAMC Section 62.250. LADOT would review and approve the plan.

13.3.14 Fire Permits

The operation or installation of any equipment, appliances, or systems to handle hazardous materials requires plan review for conformance with the Los Angeles Fire Code and National Fire Protection Association standards and subsequent approval by LAFD.

13.3.15 Project Feasibility Phase

For USACE projects, the feasibility phase commences upon funding by the non-federal sponsor and federal government following a signed Feasibility Cost Sharing Agreement. During this phase, a public review of the draft feasibility report and environmental document occurs, and the Chief of Engineer's Report is signed. The feasibility phase ends with the Assistant Secretary of the Army for Civil Works' transmittal to Office of Management and Budget.

13.3.16 Preconstruction, Engineering, and Design Funding

For USACE projects, the preconstruction, engineering, and design phase commences upon authorization of project construction by Congress, which at times will overlap with completion of the feasibility phase. The focus is to complete all the detailed technical studies and design needed to begin construction of the project. Costs are shared in the same proportions as construction costs.

13.4 Cultural Resources

13.4.1 AB 52 Consultation

Assembly Bill 52 establishes a misdemeanor for unlawfully and maliciously excavating upon, removing, destroying, injuring, or defacing a Native American historic, cultural, or sacred site, that is listed or may be eligible for listing in the California Register of Historic Resources.

13.4.2 Section 106 – Programmatic Agreement

Section 106 of the Historic Preservation Act requires federal agencies to consider the effects of their actions on historic properties by identifying historic properties, assessing adverse effects, and resolving those adverse effects. Nationwide Programmatic Agreements are the result of a federal agency working with the Advisory Council on Historic Preservation and State Historic Preservation Officers to come up with a process tailored to the particular type of undertaking subject to Section 106.

13.4.3 City Artworks and Cultural Facilities

Section 19.85 of the Los Angeles Administrative Code provides a percent-for-arts program related to all future public works construction in the City. This program provides significant added financial support toward the City's ability to create effective processes for the commissioning of new City artworks and cultural facilities and services.

13.5 Hazardous Materials

13.5.1 Resource Conservation and Recovery Act (RCRA) and Non-RCRA Hazardous Waste Permit

The RCRA requires anyone who owns or operates a facility where hazardous waste is treated, stored, or disposed to have a RCRA hazardous waste permit issued by USEPA.

13.5.2 Remedial Investigation and Feasibility Study

The Remedial Investigation & Feasibility Study (RI/FS) is a process focusing on defining the nature and extent of contamination, assessing risk to human health and the environment, and developing a cleanup strategy to eliminate potentially harmful human health and environmental impacts. The RI/FS process generally applies to larger, technically complicated projects anticipating cleanup action. Data collected in the RI influence the development of remedial alternatives in the FS, which in turn affects the data needs and scope of treatability studies and additional field investigations. Based on the site evaluation, possible end points could include no further action, the need for a Land Use Covenant, or long-term stewardship. The need for an FS will be determined in conjunction with DTSC.

13.5.3 Human Health Risk Assessment

A Human Health Risk Assessment (HHRA) is the process to determine if contaminants detected at a site are of concern to human health and the environment. The HHRA falls under the evaluation step of the CLRRA voluntary agreement process and involves using environmental data to estimate the nature, magnitude, and probability of adverse health effects on people who may be exposed to the contaminated environmental media (e.g., soil, soil gas, groundwater, surface water), now and in the future. Voluntary agreement projects use the HHRA to make decisions about allowable use or reuse of the property, and to facilitate an effective assessment and cleanup strategy to ensure safe end use.

13.5.4 Work Plan for Remedial Design Implementation

Pursuant to Health and Safety Code Section 25355.5, DTSC may enter into agreements to provide oversight services. Section 25355.5 allows DTSC to enter into agreements with parties that may allow for remediation to remove the threat of a release, or to characterize a site, preparation of a response plan (or removal action workplan), and completion of the necessary response actions. The City entered an agreement with DTSC under CLRRA, as discussed in Chapter 3.

13.5.5 Land Use Covenants

Land use covenants are a method that DTSC uses to protect the public from unsafe exposures to residual contamination that is left in place upon closure of a hazardous waste disposal facility, as part of either a short- or long-term stabilization action, corrective action, or remedial action. A decision document identifies the remedy for environmental contamination that best fits the site conditions (e.g., a removal action workplan, corrective measures study, or a preliminary endangerment assessment, or equivalent). A decision document identifies the land use covenant restrictions (see: https://www.dtsc.ca.gov/SiteCleanup/Brownfields/land-use-covenant-quick-ref-guide.cfm).

13.5.6 O&M Plan and O&M Agreements

The O&M Plan presents the policies and procedures for future long-term operation, maintenance, and monitoring of the selected remedy. The primary goal of the O&M Plan is to prevent uncontrolled exposures to site contaminations of concern and to protect the health of persons at the site. The property owner enters into an oversight agreement with DTSC, as required by Health and Safety Code Section 25300, which requires the owner to implement an O&M Plan under DTSC oversight. The O&M Plan addresses an inspection and monitoring program, minimization measures, and an administrative record of inspections and repairs.

13.5.7 Rule 1466 – Control of Particulate Emissions from Soil with Toxic Air Contaminants

In accordance with SCAQMD Rule 1466, earth-moving activities at the site must be carried out following methodologies designed to minimize fugitive dust emissions that could potentially contain toxic air contaminants, and perimeter air monitoring should be conducted to confirm methods are effective. Notification will be provided to SCQAMD at least 72 hours and no more than 30 days prior to conducing earth-moving activities that meet these requirements.

13.5.8 Rule 1166 – VOC Emissions from Decontamination of Soil

Remedial activities requiring earth movement in areas where soil VOC concentrations may exceed 50 parts per million should proceed in accordance with SCAQMD Rule 1166, including notification and monitoring requirements. A VOC Contaminated Soil Mitigation Plan may be required in accordance with Rule 1166 Attachment A.

13.5.9 Rules 201 and 203 – Permit to Construct/Authority to Operate

If soil vapor mitigation systems are installed beneath buildings or to manage soil vapor through extraction wells, a permit to construct or operate may be required through the SCAQMD.

13.6 Land Use

13.6.1 Master and Community Plan Conformance Review

The Department of City Planning will review the site planning options for conformance with applicable adopted plans, including the Los Angeles River Revitalization Master Plan and Northeast Los Angeles Community Plan.

13.6.2 Public Benefits Project Permit

The public benefits project permit is required per LAMC Section 14, Article 4. The ordinance sets forth guidance for Project performance standards on a variety of property types under development.

13.6.3 Conditional Use Permit

The Los Angeles County Department of Regional Planning issues a conditional use permit (CUP) which is required for land uses that may need special conditions to ensure compatibility with surrounding land uses. To be approved, a CUP must be consistent with the existing adopted General Plan, including local area and community plans, which reflect the County's policy regarding land use, and the Los Angeles County Code Title 22 Planning and Zoning. Manufacturing zones have an extensive list of uses allowed via approval of a CUP.

13.6.4 Special Events Permits

Programming on the Project site is intended to include special events. Such events may require special event permits issued and managed by LAPD's Emergency Operations Division, Special Events Permit Unit.

13.7 Water Quality

13.7.1 NPDES Permit, Stormwater Quality Management Program and BMPs

USEPA in compliance with the CWA, requires a National Pollutant Discharge Elimination System (NPDES) permit for discharging pollutants through a point source into a Waters of the U.S. The permit contains limits on what you can discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or human health. In compliance with the permit, the permittee may be required to implement a Stormwater Quality Management Program and BMPs with the goal of reducing the amount of pollutants in stormwater and urban runoff.

An NPDES permit could be required to manage impacted pumped groundwater, encountered as part of the excavation dewatering operations for Riverfront soil management under the Soft Edge or Island options. This permit is furnished through the State Water Resources Control Board and would allow for the discharge of treated groundwater to surface waters under a compliance monitoring program.

13.7.2 Construction General Permit

If construction activities require dewatering, compliance with Order No. R4-2008-0032 Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (General NPDES Permit No. CAG994004), will be required from LARWQCB. The General NPDES Permit is currently expired and under review for re-enrollment. The General Permit requires demonstration that pollutant concentrations in the discharge shall not cause violation of applicable water quality standards for the receiving waters through water sample analysis and reporting.

The construction NPDES General Permit requires all permitted dischargers to:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which specifies BMPs that will prevent construction pollutants from contacting stormwater and with the intent of keeping products of erosion from moving off-site into receiving waters.
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation.
- Perform inspections of all BMPs.

Prior to the start of Project construction, the City will submit a Notice of Intent to obtain coverage under the General Permit, the permit fee, and a site map. The SWPPP must address the use of appropriately selected, correctly installed, and maintained pollution reduction BMPs.

13.7.3 CWA Section 404 Permit

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into Waters of the U.S., including wetlands. Activities in Waters of the U.S. regulated under USACE and this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and mining projects. The CWA requires a Section 404 permit before dredged or fill material may be discharged into Waters of the U.S., unless the activity is exempt from Section 404 regulation.

13.7.4 CWA Section 401 Water Quality Certification

USACE leads the CWA and requires the local state to certify any activity, including the crossing of rivers or streams during road, pipeline, or transmission line construction, that might result in discharges of dredged or fill material into a federal water body. LARWQCB issues and ensures the proposed activity does not violate state or federal water quality standards.

13.7.5 Flood Construction and Annual Access Permit

LACFCD owns, operates, and maintains a number of major dams, debris basins, open channels, underground storm drains, catch basins, spreading grounds, and sea water barrier projects among other facilities, and the associated ROWs. Pursuant to the Los Angeles County Code, any work, encroachment, or activity within or affecting the LACFCD ROW, facilities, interests, or jurisdiction requires a flood control permit. A flood construction permit will be required when bridging, relocating, or retrofitting catch basins; or connecting, crossing, encroaching, excavating, landscaping, modifying, overbuilding, or transferring drainage. A flood access permit is required for discharge, temporary use and access, or annual discharge or temporary use and access.

13.7.6 Section 1602 Permit – Streambed Alteration Agreement

CDFW is responsible for protecting and conserving fish and wildlife resources and the habitats upon which they depend. The Lake and Streambed Alteration Program reviews projects that would alter any river, stream, or lake and conditions projects to conserve existing fish and wildlife resources.

CDFW must be notified if a project would do any of the following:

- Divert or obstruct the natural flow of any river, stream, or lake
- Change the bed, channel, or bank of any river, stream, or lake
- Use material from any river, stream, or lake
- Deposit or dispose of material into any river, stream, or lake

CDFW would review the notification and issue a lake or streambed alteration agreement when necessary to protect fish and wildlife resources.

13.7.7 Recycled Water Use Permit

The State Water Board adopted Water Reclamation Requirements for Recycled Water Use on June 7, 2016. The General Order establishes standard conditions for recycled water use and conditionally delegates authority to an Administrator to manage a Water Recycling Program and issue Water Recycling Permit to recycled water users. Only treated municipal wastewater for non-potable uses can be permitted, such as landscape irrigation, dust control, industrial/commercial cooling, decorative fountains, etc.

Recycled water is limited to use that is approved by the California Department of Public Health, the Regional Water Quality Control Board – Los Angeles Division, and the County of Los Angeles Department of Public Health (LACDPH). Reclaimed / recycled water systems shall have no connection to any potable water system, with or without mechanical backflow prevention devices. Recycled/reclaimed wastewater systems shall be constructed in compliance with applicable potable water system construction standards as well as those specified in "The Purple Book," California Health Laws related to recycled water, (California Health and Safety Code, Water Code, Titles 22 and 17 of the California Code of Regulations) and the Los Angeles County Code (LACC), Title 28 – Plumbing, Appendix J.

The LACDPH Cross Connection and Water Pollution Control Program is responsible for the oversight of new and converted recycled water re-use sites from the planning stage through final approval. Plans and specifications for recycled / reclaimed wastewater distribution systems, as well as the use and operation of such systems shall be submitted to LACDPH for review and approval prior to construction or implementation.

Table 13-1 lists the various permits and approvals that would be required for the Project, organized by issuing agency.

Table 13-1. Permits and Approvals for the Project

Issuing Agency	Permit/Approval	Notes
South Coast Air Quality Management District	Permit to Construct and Permit to Operate: Form 400-A	
	CEQA: Form 400-CEQA	
	Equipment Permit: 400-E-xx	
	SVE Operation Notification	
	VOC-Impacted Soils Mitigation Plan	
	Asbestos Survey and Remediation Plan	
US Fish and Wildlife Service	ITP	Informal Section 7 consultation may be required for indirect impacts to sensitive and migratory birds (LBVI)
California Department of Fish and Wildlife	California Endangered Species Act Consultation: Incidental Take Permit	
	Soils/Geology Report Approval	
	Haul Route Approval	

Issuing Agency	Permit/Approval	Notes
City of Los Angeles, Department of Building and Safety	Grading Permit	
	Building Permit	
	Electrical Permit	
City of Los Angeles, Bureau of Engineering	Construction "B" Permit	
	Excavation Permit	
	Sewer/Storm Drain Permit	
California Public Utilities Commission	CPUC permit	
California Regional Planning Commission	Zone Change Approval	
City of Los Angeles Department of City Planning	Landscape Plans (including Tree Removal Plans and Tree Planting Plan) Review and Approval, Zone Change Approval	
Metrolink	Construction and Maintenance Agreement	
Los Angeles Department of Transportation	Worksite Traffic Control Plan	
Los Angeles Fire Department	Fire Permits	
U.S. Army Corps of Engineers and U.S. Civil Works	Feasibility Phase: ▪ Environmental Impact Statement Filing ▪ Preconstruction, Engineering, and Design Funding ▪ Chief of Engineer's Report ▪ Assistant Secretary of the Army for Civil Works' Approval	Ecosystem Plan Requirement Per Division Commander endorsement Submitted with IFR and ROD to the Assistant Secretary of the Army for Civil Works Submitted to the Office of Management and Budget and onward to Congress
The Native American Heritage Commission	Assembly Bill 52 Consultation	
State Historic Preservation Office	Programmatic Agreement - Section 106	
City of Los Angeles Department of Cultural Affairs, Public Arts Division	City Artworks and Cultural Facilities	

Issuing Agency	Permit/Approval	Notes
Department of Toxic Substances Control	▪ RCRA and Non-RCRA Hazardous Waste Permit (Part A) ▪ RI/FS ▪ HHRA ▪ Work Plan for Remedial Design Implementation ▪ Land Use Covenants ▪ O&M Plan and O&M Agreements	
Los Angeles Department of City Planning	Master and Community Plan Conformance Review Public Benefits Permit	
Los Angeles County Department of Regional Planning	CUPs	Manufacturing zones have an exhaustive list of conditional uses
City of Los Angeles, Bureau of Street Services	Special Event Permits	
California Regional Water Quality Control Board, Los Angeles	▪ NPDES ▪ Stormwater Quality Management Program ▪ BMPs ▪ Construction NPDES General Permit ▪ SWPPP	
U.S. Army Corps of Engineers	Section 404 of the CWA	
	Section 401 of the CWA	
	Flood Construction Permit	Only if a Flood Control Facility or ROW is impacted
	Flood Access Permit (Annual)	
California Department of Fish and Wildlife	Section 1602 – Streambed Alteration Agreement	
California Water Board	Recycled Water Use Permit	Required if using recycled water
County of Los Angeles Department of Public Health	Cross Connection and Water Pollution Control Program	Oversight of new and converted recycled water re-use sites

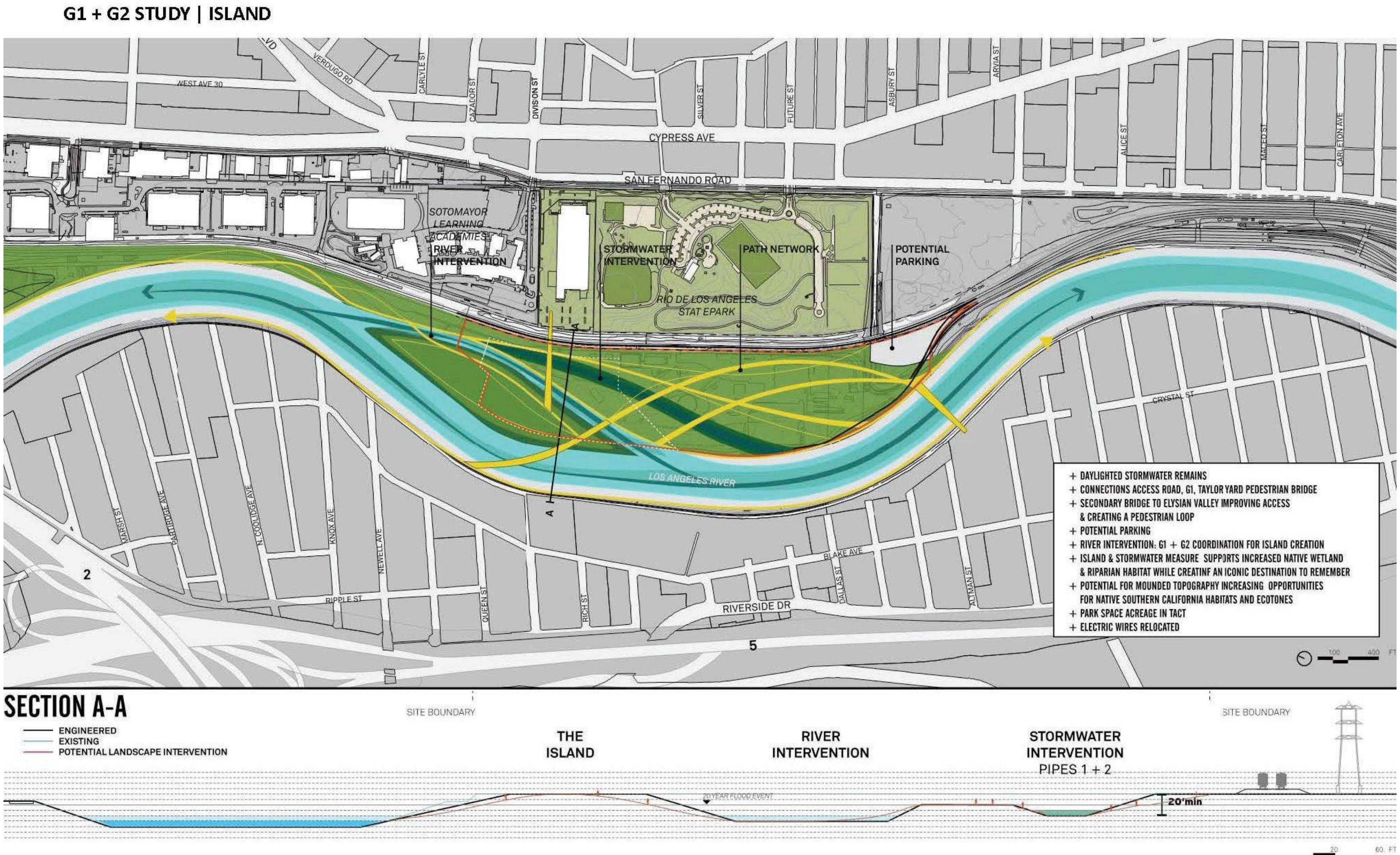
14 NEXT STEPS

The Taylor Yard G2 River Park Project is a complex project. Over the last two years, the City, stakeholders, and other partners gained valuable insight into the Project site and its relationship to the River through deep technical studies, community and stakeholder engagement, and thoughtful design thinking. Three site planning options were developed for the Project: Island, Soft Edge, and The Yards. Although the Island and Soft Edge emerged as most promising when evaluated according to Project goals and objectives, the viability of the future design will depend upon funding availability and contributions of potential strategic partners.

This report demonstrates that the establishment of a formal partnership among the City, the MRCA, and State Parks to design, construct, finance, operate, maintain, and manage a project that encompasses the entire 100-acre area – the Project site, the G1 parcel, and Rio de Los Angeles State Park – makes sense. Implementing a 100-acre project could achieve significant mutual benefit by creating greater ecosystem value, increasing the amount of contiguous habitat, maintaining and potentially improving flood management in the River, creating functional unity and better access for the community, and could increase the number of potential funding partners. The three parties have executed a Letter of Intent to formalize such a partnership, called the *100-Acre Partnership at Taylor Yard*, which now provides a wider context for the Project and its potential.

The 100-Acre Partnership context adds both promise and complexity to the Project, which means that concerted, meaningful community engagement is essential. It is particularly important for the public to understand that each step taken is advancing the long-term goal: *to ensure the delivery of a multi-benefit habitat-focused open space that is integrated with the surrounding communities and yet stands as a world-class public space.* The steps to achieve this goal are articulated below. An initial concept for the 100-acre site is illustrated in Figure 14-1.

Figure 14-1. 100-Acre Initial Concept for Study



14.1 Near-Term Next Steps (1-3 years)

14.1.1 Taylor Yard G2 Parcel

7. Wrap up the initial phase of planning by finalizing this report and submitting it to the Project's oversight committee, the Municipal Facilities Committee, and City Council for consideration.
   Lead: BOE

14.1.2 100 Acre Partnership at Taylor Yard

On January 10, 2020, the City executed a Letter of Intent to establish a "100 Acre Partnership" with the California Department of Parks and Recreation and the Mountains Recreation and Conservation Authority, to embark on a 100-acre project comprised of the Taylor Yard G1 "Bowtie" parcel, the Taylor Yard G2 parcel, and the Rio de los Angeles State Park. The purpose of this letter was to express the Parties' mutual intent to create a unified Los Angeles River Park at Taylor Yard in recognition of the significant mutual public benefits to be realized by cooperating on the design, construction, financing, operation, maintenance, and management of that endeavor.

1. Execute a Memorandum of Understanding or similar formal agreement among the City, the MRCA, and State Parks to jointly plan, implement, and operate projects within the 100-acre area.
   Lead: BOE
   Assistance: Mayor's Office, RAP, LASAN, Office of the Chief Legislative Analyst, City Attorney
2. Continue community and stakeholder engagement with a robust community-oriented engagement strategy.
   Lead: MRCA, State Parks
   Assistance: BOE
3. Develop an Equity Strategy document and then implement its policy and program recommendations. The Strategy will assess potential impacts to the surrounding communities and their vulnerable populations, and it will recommend plans and actions to mitigate those impacts. Assure that the strategy includes the convening of various City departments and key community stakeholders to provide guidance on the creation of the recommendations and establish a fund that could provide financing for the solutions.
   Lead: Mayor's Office
   Assistance: Housing and Community Investment Department (HCID), Bureau of Engineering (BOE), City Planning, Los Angeles Department of Transportation (LADOT), Economic and Workforce Development Department (EWDD)
4. Start remediation at the Project site using current and future cleanup funding, and complete environmental site assessments for the G1 parcel.
   Lead: BOE
   Assistance: LASAN, State Parks, MRCA
5. Complete conceptual design for the G1 parcel and additional hydrologic and hydraulic modeling of the River.
   Lead: State Parks

Assistance: BOE, MRCA, LASAN

6. Pursue funding for the implementation of athletic field improvements at Rio de Los Angeles State Park.
   Lead: RAP
   Assistance: BOE, State Parks

7. Prepare for and then release a Request for Interest (RFI)/Request for Proposals (RFP) to engage design professionals to deliver the Project.
   a. Develop a strategic funding plan.
   b. Develop conceptual graphics representing the opportunities within the 100-acre area.
   c. Meet with potential governmental, private, and philanthropic partners to gain a better understanding of the variety of interest and their initial ideas for innovative design, construction, financing, operation, programming, and management of the Project.
   d. Release the RFI/RFP and evaluate responses.
      Lead: BOE
      Assistance: Mayor's Office

14.1.3 Paseo del Río Project

To begin advancing the restoration of the Project site, and in alignment with the 100-Acre Partnership, the City, the MRCA, and State Parks are collaborating on an early activation project currently envisioned for the Project site, called the Paseo del Río Project. The Paseo del Río Project is intended to span the Project site, including the MRCA easement, and the G1 parcel. This project would not preclude implementation of the larger Taylor Yard G2 River Park Project. It will provide near-term riverfront public access, which may include trails; native habitat; water quality improvement features; greenspaces; trail recreational opportunities; kayak launches and landings; gathering spaces or outdoor classrooms; passive elements; and amenities such as access points, parking, restrooms, gates, lighting, and interpretive signage.

Applications for potential grant funding for planning, design, community and stakeholder engagement, and construction were prepared by each of the three entities collaboratively for submission in early 2020. Next steps for the Paseo del Río Project include:

1. Receive and execute grant agreement(s) for implementation funding.
   Lead: BOE, MRCA, State Parks
   Assistance: Mayor's Office

2. Complete design, environmental clearance, and construction of the Paseo del Río Project on the Project site, including any necessary zoning change.
   Lead: BOE
   Assistance: MRCA, Mayor's Office, RAP, LASAN

14.1.4 Water Quality and Initial Park Improvements Project

As described in Appendix D of this report, a water quality project as an initial park improvement is intended to be implemented at the Project site on the MRCA easement area. The next steps for implementing this project are:

1. Secure the Proposition O future funding allocation in the amount of $12.4 million.
   Lead: LASAN
   Assistance: BOE, Mayor's Office
2. Begin design of the Water Quality and Initial Park Improvements Project.
   Lead: BOE
   Assistance: MRCA, LASAN

14.2 Long-Term Next Steps

1. Prepare a community plan update consistent with the equitable development strategy, and evaluate infrastructure and transportation needs to effectuate land use and community development benefits for the surrounding area.
   Lead: City Planning
   Assistance: BOE, LADOT, EWDD, Housing and Community Investment Department
2. Pursue funding to ensure that the long-term Project is inevitable – to ensure its implementation is seamless and proceeds in parallel with the nearer term actions.
   Lead: BOE
   Assistance: Mayor's Office, RAP, Los Angeles River State Park Partners
3. Pursue a "split delivery" approach with the USACE that would officially recognize the City as the delivery lead for Reach 6 of the federal Los Angeles River Ecosystem Plan, which includes the Project area, while retaining as much federal funding as possible.
   Lead: BOE
   Assistance: Mayor's Office, USACE

15 ACKNOWLEDGMENTS

The completion of this report marks a major milestone for the Project and River revitalization. Many government agencies, advocacy and community groups, and residents dedicated their time to ensure the vision for the Project effectively serves the local community and the region and stands as a world-class example of remediation, environmental restoration, and partnership. The relationships fostered will be invaluable as the Project continues forward. BOE extends its deepest thanks to all participants.

City of Los Angeles

Office of Mayor Eric Garcetti

Office of Councilmember Gilbert Cedillo

Office of Councilmember Mitch O'Farrell

Office of the Chief Legislative Analyst

Office of the City Administrative Officer

Office of the City Attorney

Department of City Planning

Department of Cultural Affairs

Department of General Services

Department of Public Works, Board of Public Works

Department of Public Works, Bureau of Sanitation

Department of Recreation and Parks

Department of Water and Power

Los Angeles Police Department

Agency Partners

California Coastal Conservancy

California Department of Parks and Recreation

California Department of Toxic Substances Control

Mountains Recreation and Conservation Authority

Santa Monica Mountains Conservancy

Consultant Team

WSP USA, Inc.

Studio MLA

Arancha Muñoz-Criado

CWE

Council for Watershed Health

ECORP Consulting, Inc.

EWC

HR&A Advisors

Isaac Brown Ecology Studio

Mujeres de la Tierra

SCST

Community Leadership Committee

Alliance of River Communities

Anahuak Youth Sports Association

Atwater Village Neighborhood Council

Audubon Society

The City Project

Clockshop

Elysian Valley Riverside Neighborhood Council

Glassell Park Neighborhood Council

Greater Cypress Park Neighborhood Council

Greater Northeast LA Bears Football and Cheer

LA River Expeditions

LA River Kayak Safari

Lincoln Heights Neighborhood Council

Los Angeles Conservation Corps

Los Angeles Neighborhood Initiative

Los Angeles Neighborhood Land Trust

Los Angeles River State Park Partners

Los Angeles Unified School District

Natural Resource Defense Council

Nightingale Middle School

Northeast Los Angeles Athletic Fields Alliance

North East Trees

Sierra Club

Sotomayor Center for Arts and Sciences

Unidos por NELA

William C. Velasquez Institute

Technical Advisory Stakeholder Committee

Office of County of Los Angeles Supervisor Hilda Solis

Office of California Assembly Member Wendy Carrillo

Office of California Senator Maria Elena Durazo

Office of U.S. Senator Dianne Feinstein

Office of U.S. Senator Kamala Harris

Office of U.S. Representative Adam Schiff

County of Los Angeles, Department of Public Works

County of Los Angeles, Department of Parks and Recreation

County of Los Angeles, Flood Control District

County of Los Angeles, Metropolitan Transportation Authority

California Department of Parks and Recreation

California High Speed Rail Authority

Fernandeño Tataviam Band of Mission Indians

Los Angeles River Cooperation Committee

Metrolink

National Park Service

The Nature Conservancy

River LA

The River Project

Trust for Public Land

The Nature Conservancy

United States Army Corps of Engineers

16 REFERENCES

Baldwin, B. G., D.H Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual; Vascular Plants of California, Second Edition. University of California Press, Berkeley, CA.

BOE (City of Los Angeles, Bureau of Engineering) and USACE (U.S. Army Corps of Engineers). 2007. Final Programmatic Environmental Impact Report/Programmatic Environmental Impact Statement for the Los Angeles River Revitalization Master Plan. Available at: http://boe.lacity.org/lariverrmp/CommunityOutreach/LARiverFinalPEIRPEIS_one_larger_file_043007.pdf.pdf. April.

BOE. 1961. Los Angeles County Flood Control District. 1958 Storm Drain Bond Issue. Project No. 480 Unit 3, Fletcher Drive, Portion of Line "B." Concrete Conduit Sta. 71+94.76 to Sta. 77+50 Plan, Profile & Section. Drawing No. 278-480-D5.3 Sheet 3 of 7. August.

CAHSRA (California High-Speed Rail Authority). 2018. California High-Speed Rail Authority, Burbank to Los Angeles Project Section, Staff Report: State's Preferred Alternative. Available at: https://hsr.ca.gov/docs/brdmeetings/2018/brdmtg_111518_Item2_and_5_Detailed_Staff_Report_for_the_Burb_LA_Project_Section.pdf. November.

Calflora: Information on California plants for education, research and conservation. [web application]. 2017. Berkeley, California: The Calflora Database [a non-profit organization]. Available at: http://www.calflora.org/. Accessed January 10, 2018.

California Coastal Conservancy. 2002. Taylor Yard Multiple Objective Feasibility Study. Final Report. Available at: https://static1.squarespace.com/static/5a21b552bce176df59bb9c8e/t/5a74f1a8652dea12dfbdc9b1/1517613489268/16-LINK-tayloryardfeasibilitystudy2002.pdf. June.

CDM (Camp, Dresser, and McKee, Inc.). 2014a. Final Remedial Action Plan. Prepared for Union Pacific Railroad Company, Roseville, CA. Available at: https://www.envirostor.dtsc.ca.gov/public/deliverable_documents/8006086587/RAP-TYARDG2-02032014.pdf. February 3.

CDM. 2014b. Data Gaps Investigation Work Plan. Taylor Yard Parcel G-2. Los Angeles, CA. Prepared for Union Pacific Railroad Company, Roseville, CA. Available at: https://www.envirostor.dtsc.ca.gov/public/deliverable_documents/8136549234/Data%20Gaps%20Work%20Plan_DFT%20to%20DTSC_Taylor%20Yard_COMPLETE-20140915.pdf. September 15.

CDM. 2011. Feasibility Study. Taylor Yard Parcel G-2, Los Angeles, CA. Prepared for Union Pacific Railroad Company, Roseville, CA. Available at: https://www.envirostor.dtsc.ca.gov/public/deliverable_documents/6141921818/FS%20Revised_092111_TEXT_Part1%20%26%20Part%202.pdf. September 21.

CDM. 2007. Revised Human Health Risk Assessment for the Taylor Yard. Los Angeles, CA. Prepared for Union Pacific Railroad Company, Roseville, CA. November.

CDM. 2004. Taylor Yard Remedial Investigation Data Summary Report. Project No. 2205-42300-RI.14Techmemo. Prepared for Union Pacific Railroad Company by CD. December 28, 2004.

CDPR (Los Angeles County Department of Parks and Recreation). 2017. Park Design Guidelines and Standards. Department of Parks and Recreation, Planning & Development Agency. Available at: http://file.lacounty.gov/SDSInter/dpr/1029701_ParkDesignGuideline2017.pdf. May 22.

CDPR. 2016. Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment. Prepared by PlaceWorks, Inc. Available at: https://lacountyparkneeds.org/wp-content/uploads/2016/06/FinalReport.pdf. May 9.

City of Los Angeles. 2019. LA's Green New Deal: Sustainable City pLAn. Available at: http://plan.lamayor.org/.

City of Los Angeles. 2016. Planning and Land Development Handbook for Low Impact Development [LID], Part B, Planning Activities, 5th Edition.

City of Los Angeles. 2015. Sustainable City pLAn. April 2015. Available at: http://plan.lamayor.org/. April 29.

City of Los Angeles. 2014. Initial Study/Mitigated Negative Declaration for Taylor Yard River Parcel G2 Project. Los Angeles Department of Public Works, Bureau of Engineering, Environmental Management Group. August 2014.

City of Los Angeles. 2007. Los Angeles River Revitalization Master Plan. Available at: http://boe.lacity.org/lariverrmp/CommunityOutreach/pdf/LARRMP_Final_05_03_07.pdf. April.

CNDDB (California Natural Diversity Database). 2017. Rarefind 3, updated April 2017. Sacramento, CA. Available at: https://www.wildlife.ca.gov/Data/CNDDB. Accessed January10, 2018.

County of Los Angeles. 2019. Los Angeles River Master Plan Update – Hydrology and Hydraulics Workshop PowerPoint. March 20.

County of San Diego. 2019. BMP Design Manual, Appendix K – Guidance on Green Infrastructure, 2019. Available at: http://treesandstormwater.org/gi-bmp-manual-includes-guidance-design-and-maintenance-strategies/.

DTSC (Department of Toxic Substances Control). 2018. California Land Reuse and Revitalization Act (CLRRA) Quick Reference Guide. Site Mitigation and Restoration Program. Available at: https://dtsc.ca.gov/brownfields/california-land-reuse-and-revitalization-act-clrra-quick-reference-guide/.

DWR (California Department of Water Resources). 1961. Planned Utilization of the Groundwater Basins of the Coastal Plain of the Los Angeles County, Bulletin No. 104, Appendix A, Groundwater Geology.

Gumprecht, B. 1999. The Los Angeles River: Its Life, Death, and Possible Rebirth. Johns Hopkins University Press.

LADWP (Los Angeles Department of Water and Power). 2017. Water and Power General Property Use Guidelines for LA River Revitalization Projects as of October 2017. 12 pp.

LADWP. 2014. Department of Water and Power, Standard Conditions for Construction.

LAEDC (Los Angeles Economic Development Commission). 2016. Los Angeles County 2016-2020 Strategic Plan for Economic Development. Available at: https://laedc.org/wp-content/uploads/2016/01/LA-County-Strategic-Plan-Economic-Development-1.5.15.pdf.

Lamar, D.L. 1970. Geology of Elysian Park, Repetto Hills Area, Los Angeles County, California, California Division of Mines and Geology, Special Report 101, San Francisco, CA.

LASAN (Bureau of Sanitation, City of Los Angeles). 2007. Draft Concept Report Taylor Yard G-2 Parcel. December 24, 2007.

LA THRIVES and LAROSAH (Los Angeles Regional Open Space and Affordable Housing). 2017. Pathway to Parks & Affordable Housing Joint Development. Available at: https://d3n8a8pro7vhmx.cloudfront.net/lathrives/pages/172/attachments/original/1541797472/Pathway_to_Parks_and_Affordable_Housing.pdf?1541797472.

Los Angeles Times. 2019. Mapping LA. Available at: http://maps.latimes.com/neighborhoods/. Accessed: February 15, 2019.

McCormack, Baron, Salazar. n.d. Taylor Yard Transit Village. Available at: http://www.mccormackbaron.com/community-profiles/taylor-yard. Accessed June 2019.

Metro. 2019. Chapter 2, page 2.29. Los Angeles-Glendale-Burbank Corridor Feasibility Study. Final Report. October 2019. Available at: http://media.metro.net/projects_studies/regionalrail/LA-G-B_Final_Report_2019-1021_ES.pdf.

Metro. 2009. 2009 Long Range Transportation Plan. Available at: http://media.metro.net/projects_studies/images/final-2009-LRTP.pdf. 58 pp.

Metrolink. 2017. Central Maintenance Facility (CMF) Track Reconfiguration Study. Submitted by: RSE, Inc. March 2, 2017.

NRPA (National Recreation and Park Association). n.d. "Creating Safe Park Environments to Enhance Community Wellness" Available at: https://www.nrpa.org/contentassets/f768428a39aa4035ae55b2aaff372617/park-safety.pdf. Accessed February 7, 2019.

Oskin M., Sieh, K., Rockwell, T., Miller, G., Guptill, P., Curit, M., McArdle, S., and Elliot, P. 2000. Active Parasitic Folds on the Elysian Park Anticline: Implications for Seismic Hazard in Central Los Angeles, California. GSA Bulletin, v. 112. May.

SCST. 2019. 2019 Annual Monitoring Report, Taylor Yard Parcel G2 Groundwater Monitoring. Prepared for City of Los Angeles on behalf of WSP USA Inc.

State Parks (California Department of Parks and Recreation). 2004. Taylor Yard Park Development Mitigated Negative Declaration. Available at: https://www.parks.ca.gov/pages/21299/files/tayloryardnoticeofavailability.pdf. February 27, 2004.

Tetra Tech. 2014. Letter Report Documenting the Data Gap Investigation of the Taylor Yard Parcel G-2, Los Angeles, California, during April 2014. Available at: https://www.envirostor.dtsc.ca.gov/public/deliverable_documents/2363741815/2017-04-06-TaylorYardG2-DataGapInvestigationReport-2014-05-27.pdf. 604 pp.

The River Project. 2002. Taylor Yard and Los Angeles River Preliminary Groundwater and Surface Water Study: Los Angeles River at Taylor Yard Los Angeles, California. A Report to the California Coastal Conservancy and the Los Angeles and San Gabriel Rivers Watershed Council. Miller Brooks Environmental, Inc. in association with California State University, Fullerton. Available at: https://static1.squarespace.com/static/5a21b552bce176df59bb9c8e/t/5a8f155cec212d345ab381a5/1519326559401/TY-LAR_PreliminaryGroundwater%26SurfaceWaterStudy_2002.pdf.

TNC (The Nature Conservancy). 2016. Water Supply and Habitat Resiliency for a Water Supply and Habitat Resiliency for a Future Los Angeles River: Site-Specific Natural Enhancement Opportunities Informed by River Flow and Watershed- Wide Action. Los Feliz to Taylor Yard. Funded by a Grant from the Santa Monica Mountains Conservancy. Available at: https://www.scienceforconservation.org/assets/downloads/TNC-LARiver-Study-2016.pdf. December.

TPL (Trust for Public Land). 2017. The Economic Benefits of the Public Park and Recreation System in the City of Los Angeles, California. Available at: https://www.tpl.org/econbenefits-losangeles. May 2017.

Urban Displacement Project. 2018. The State of Anti-displacement Policies in LA County. Available at: https://knowledge.luskin.ucla.edu/wp-content/uploads/2018/07/The-State-of-Antidisplacement-Polices-in-LA-County_071118.pdf. July 2018.

USACE (U.S. Army Corps of Engineers). 2016a. "Los Angeles River Ecosystem Restoration Feasibility Study." Area with Restoration Benefits and Opportunities for Revitalization (ARBOR) Study. Available at: https://www.spl.usace.army.mil/Portals/17/docs/publicnotices/DraftIntegratedReport.pdf. June 29, 2016.

USACE. 2016b. Floodplain Analysis, Los Angeles River: Barham Boulevard to First Street for the Los Angeles River Flood Plain Management Services Special Study. Available at: http://eng2.lacity.org/projects/LARIVER_Glendale_Narrows/docs/LAR_FPMS_Hydraulic_Report_FINAL_October2016_Text.pdf. October 2016.

USACE. 2015. Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Volumes 1-4. Available at: https://www.spl.usace.army.mil/Missions/Civil-Works/Projects-Studies/Los-Angeles-River-Ecosystem-Restoration/. September 2015.

USACE. 2013. Los Angeles River Ecosystem Restoration Feasibility Study Draft – Appendix G, Habitat Evaluation (CHAP). Available at: http://eng2.lacity.org/techdocs/emg/docs/lariver/Appendix%20G%20Habitat%20Evaluation.pdf. September 2013.

USEPA (United States Environmental Protection Agency). 1990. The Feasibility Study: Detailed Analysis of Remedial Action Alternatives Office of Solid Waste and Emergency Response. March 1990.

USGS (United States Geological Survey). 2004. Geological, Hydrological, and Biological Issues Related to the Proposed Development of a Park at the Confluence of the Los Angeles River and the Arroyo Seco, Los Angeles County, California. Scientific Investigations Report 2004-5296.

WSP (WSP USA Inc.). 2019. Taylor Yard G2 Parcel, Report of Findings. June 2019.

WSP. 2018a. Annual Monitoring Report. November 2018.

WSP. 2018b. Taylor Yard G2 River Park Project, Area A2 Site-Specific Sampling and Analysis Plan. January 2018.

17 UPDATED COST ESTIMATES

17.1 Updated Class C Cost Estimate to 2022 Dollars

The Class C cost estimate presented in this section is the result of revisiting the Class C cost estimate created in December 2019 as presented in Section 12.4 for the Island site planning option. This new estimate updates subtotal costs and escalation calculations to reflect the changed economic situation between December 2019 and March 2022. As Table 17-1 shows, the estimated cost for planning and design for the base cost associated with the Island option was $437,101,000 in December 2019 and $579,148,513 in March 2022. The remediation cost of approximately $200 million in December 2019 has been updated to $231,931,228 in March 2022. The other scope items cost $361,185,000 in December 2019 and $479,904,338 in March 2022.

The estimated Project grand total was $798,286,000 in December 2019 and is $1,059,052,851 in March 2022.

Table 17-1. Class C Estimate comparing December 2019 cost to March 2022 cost

Island Site Planning Option Estimated Project Costs[A] Summary	*December 2019 cost*	*March 2022 cost*
Project Component	**Amount**	**Amount**
Base Island Site Planning Option		
Subtotal Site Remediation	$199,180,000	$231,931,228
Subtotal Park Improvements and Facilities	$141,000,000	$164,184,673
Base Island Site Planning Option Sub-Total	**$340,180,000**	**$396,115,901**
Base Island Site Planning Option Escalation - 5% per year	$62,975,000	$143,421,022
Base Island Site Planning Option Project Contingency - 10%	$33,946,000	$39,611,590
Base Island Site Planning Option Total	**$437,101,000**	**$579,148,513**
Other Scope Items		
Subtotal LADWP Power Line Relocation	$22,393,000	$26,075,088
Subtotal New Pedestrian and Bicycle Bridge to Elysian Valley	$36,800,000	$42,851,035
Youth Enrichment Center	$11,135,000	$12,965,931
Public Facility	$44,539,000	$51,862,561
Research Building	$55,673,000	$64,827,328
Museum/Cultural Center	$111,346,000	$129,654,657
Other Scope Items Sub-Total	**$281,886,000**	**$328,236,601**
Other Scope Items Escalation - 5% per year	$51,525,000	$118,844,077
Other Scope Items Project Contingency - 10%	$27,774,000	$32,823,660
Other Scope Items Total	**$361,185,000**	**$479,904,338**
Total Estimated Costs for Island Site Planning Option	**$798,286,000**	**$1,059,052,851**

[A] includes both soft and hard costs

17.2 Optimized Updated Class C Cost Estimate

The Class C cost estimate presented in this section is the result of refinement of the March 2022 Class C cost estimate presented in Section 17.1. The optimized estimate includes all March 2022 base costs and refines the other scope items to one building. The project team is currently exploring alternative delivery methods for all other scope items presented in Table 17-1.

As Table 17-2 shows, the optimized Project grand total is $608,389,880.

Table 17-2. Optimized Class C Estimate

Island Site Planning Option Estimated Project Costs[A] Summary - Optimized *(as of March 2022)*	
Project Component	**Amount**
Base Island Site Planning Option	
Subtotal Site Remediation	$231,931,228
Subtotal Park Improvements and Facilities	$164,184,673
Base Island Site Planning Option Sub-Total	**$396,115,901**
Base Island Site Planning Option Escalation - 5% per year	$143,421,022
Base Island Site Planning Option Project Contingency - 10%	$39,611,590
Base Island Site Planning Option Total	**$579,148,513**
Other Scope Items	
One Building	$20,000,000
Other Scope Items Sub-Total	**$20,000,000**
Other Scope Items Escalation - 5% per year	$7,241,367
Other Scope Items Project Contingency - 10%	$2,000,000
Other Scope Items Total	**$29,241,367**
Total Estimated Costs for Island Site Planning Option	**$608,389,880**

[A] *includes both soft and hard costs*

Appendix A Report of Findings

G2 TAYLOR YARD RIVER PARK PROJECT

TAYLOR YARD G2 PARCEL

REPORT OF FINDINGS

CITY OF LOS ANGELES

PROJECT NO.: 28111B
DATE: JULY 2020

WSP
SUITE 800
444 SOUTH FLOWER STREET
LOS ANGELES, CA 90071

TEL.: +1 213 362-9470
FAX: +1 213 362-9480
WSP.COM

SIGNATURES

Rick Freudenberger
Executive Vice President

Elise Post, PG
Senior Geologist

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

All Appendices can be found at the following page:
https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19470006&doc_id=60402786

ACRONYMS

µg/kg	microgram per kilogram
µg/m^3	microgram per cubic meter
AIS	American Integrated Services Inc.
AOPCs	areas of potential concern
AST	aboveground storage tank
Cascade	Cascade Drilling and Technical Services
cis-1,2-DCE	cis-1,2-dichloroethene
CLRRA	California Land Reuse and Revitalization Act
COC	constituent of concern
COPC	constituent of potential concern
DTSC	Department of Toxic Substances Control
EDB	1,2-dibromoethane
EM/Mag	electromagnetic/ magnetometer
EPA	United States Environmental Protection Agency
ESL	Environmental Screening Level
EST	Environmental Support Technologies Inc.
FACS	Forensic Analytical Consulting Services Inc
ft bgs	feet below ground surface
GEOVision	GEOVision Geophysical Services, Inc
GPR	ground penetrating radar
HASP	Health and Safety Plan
HERO	Human and Ecological Risk Office
HHRA	Human Health Risk Assessment
MDL	method detection limit
mg/kg	milligram per kilogram
mg/L	milligram per liter
MRCA	Mountains Recreation and Conservation Authority
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PID	photoionization detector
PPE	personal protective equipment
ppm	parts per million

PRG	preliminary remediation goal
QAPP	Quality Assurance Project Mapl
RAP	remedial action plan
RCRA	Resource Conservation and Recovery Act
RSL	regional screening level
SAP	sampling and analysis plan
SCAQMD	South Coast Air Quality Management District
SCRRA	Southern California Regional Rail Authority
STLC	soluble threshold limit concentration
SVOC	semi-volatile organic compound
TCE	trichloroethene
TCLP	toxicity characteristic leaching procedure
TPH (gro, dro, mo)	total petroleum hydrocarbons as gasoline range organics, diesel range organics and motor-oil range organics
UPRR	Union Pacific Railroad
UST	underground storage tanks
VC	vinyl chloride
VOC	volatile organic compound
WET	Waste Extraction Test

EXECUTIVE SUMMARY

On behalf of the City of Los Angeles Bureau of Engineering, WSP USA Inc. (WSP) performed a site-wide geophysical, soil and soil gas investigation, and a targeted asbestos survey at the Taylor Yard G2 Parcel located in Los Angeles, California ("Taylor Yard G2 Parcel" or the "Site"). The Site is a 42-acre parcel of land located on the east side of the Los Angeles River near the intersection of Golden State Freeway (Interstate 5) and Glendale Freeway (State Route 2). Historically, the Site was operated by the Union Pacific Railroad (UPRR) as a rail yard for rail car maintenance and storage from 1911 until the property was acquired by the City of Los Angeles in 2017.

In January 2018 following their purchase of the Site, the City of Los Angeles entered into a regulatory oversight agreement with the Department of Toxic Substances Control (DTSC) under the California Land Reuse and Revitalization Act (CLRRA). The CLRRA Agreement outlines environmental requirements for the Site related to the protection of human health and the environment. The first of those requirements is a comprehensive site assessment. Under the CLRRA program, site assessment reports are referred to as a "Report of Findings". WSP has prepared this Report of Findings for the Taylor Yard G2 Parcel in accordance with the requirements of the CLRRA Agreement.

The City of Los Angeles plans to redevelop the former rail maintenance facility as a public river park. The investigation provided additional characterization of environmental impacts associated with historical Site use. The findings of the WSP investigation, combined with previous investigation results, will be used to prepare a Response Plan and a Risk Evaluation using a multi-stage approach to Site remediation to enable the development of a public river park. This document and its findings provide a guide for remedial planning in support of near term and future park development projects.

WSP completed the investigation in September 2018, in general accordance with the Stage A and Stage B Remedial Investigation Work Plans and the Sampling and Analysis Plan for Areas A and A2, which were approved by DTSC and United States Environmental Protection Agency (EPA) between March and June 2018. The scope of the investigation included:

- Geophysical survey to evaluate the presence of potential underground features (e.g., buried utilities, buried debris, underground storage tanks) and subsequent excavation of 14 test pits to evaluate potential anomalies;
- Performance of an asbestos survey, including analysis of 53 samples of suspect materials;
- Installation and sampling of 226 soil gas wells with 451 sample probes; and
- Advancement of 65 soil borings and collection of soil samples for analysis.

The results of the remedial investigation revealed buried structures and identified several compounds of potential concern (COPC) in soil and soil gas that exceed applicable DTSC and EPA residential and commercial/industrial screening levels.

GEOPHYSICAL SURVEY AND TEST PIT EXCAVATIONS

The geophysical survey consisted of a non-intrusive evaluation the Site subsurface and identified 13 areas on the Site with potential subsurface anomalies. The anomalies subsequently were evaluated using intrusive methods by excavating test pits to visually identify the anomaly sources. The test pit excavations uncovered a variety of debris, including concrete, metal fragments, and concrete pipes. More substantial structures including concrete vaults and inverts with interconnected piping were also observed. Soil samples and one aqueous sample were collected from select test pits and analyzed for Title 22 metals; volatile organic compounds (VOCs); total petroleum hydrocarbons as gasoline range orangics (TPH-gro), diesel range organics (TPH-dro), and motor oil ranges (TPH-mo); organochlorine pesticides; polychlorinated biphenyls (PCBs); and semi-volatile organic compounds (SVOCs) or polycyclic aromatic hydrocarbons (PAHs). In soil, the Title 22 metals antimony, arsenic, cobalt, lead, and thallium and the TPH compounds TPH-dro and TPH-mo exceeded their respective residential screening levels. Lead and TPH-dro were the only compounds that exceeded their respective commercial/industrial screening levels. Pesticides and PCBs were not detected above method detection limits (MDLs). Select VOCs and SVOCs were detected above MDLs, but did not exceed their residential or commercial/industrial screening levels.

ASBESTOS SAMPLING

A targeted asbestos survey was performed that focused on concrete slabs scheduled for demolition during excavation of the test pits. No asbestos was identified in the concrete materials; however, Class I nonfriable asbestos was detected in sub-grade piping, and tar and felt sheeting. In addition, material resembling asbestos mastic pipe wrapping was sampled and found to contain 20% chrysotile asbestos. The asbestos survey was not comprehensive and sample results represent specific targeted materials that were sampled.

SOIL GAS SAMPLING

Soil gas probes were installed at two depth intervals in the temporary borings: 0 to 10 feet below ground surface (ft bgs) and 10 to 20 ft bgs. Soil gas samples were collected and analyzed in an on-site mobile laboratory for VOCs via EPA Method 8260B. In general, the two primary categories of VOCs reported in soil gas were chlorinated solvents and fuel-related VOCs with a number of compounds exceeding residential and/or commercial/industrial screening levels.

VOCs detected at concentrations above laboratory reporting limits and exceeding the attenuation factor-adjusted residential and commercial/industrial screening levels included: 1,1,2-trichloroethane, 1,1-dichloroethane, 1,2-dichloroethane, benzene, 1,2-dibromoethane, chloroform, cis-1,2-dichloroethene, ethylbenzene, naphthalene, tetrachloroethene (PCE), trichloroethene and vinyl chloride (VC). Compounds with the widest distribution included benzene, PCE, and VC.

SOIL SAMPLING

Select soil samples were submitted for laboratory analysis for VOCs, Title 22 metals; select metals by toxicity characteristic leaching procedure and California soluble threshold limit concentration; SVOCs or PAHs; chlorinated herbicides; organochlorine pesticides; TPH-gro, TPH-dro, and TPH-mo; and PCBs.

Laboratory analysis of soil samples identified a number of compounds that exceed applicable DTSC and EPA residential and commercial/industrial screening levels for metals, TPH, VOCs, and PAHs. Compounds exceeding applicable screening levels are listed below.

Metals	TPH	VOCs	PAHs
Lead	TPH-dro	Naphthalene	1-Methylnaphthalene
Thallium	TPH-gro	Tetrachloroethene	Benzo(a)anthracene
Arsenic	TPH-mo		Benzo(a)pyrene
Antimony			Naphthalene
Cobalt			
Mercury			
Vanadium			

The most prevalent compounds exceeding applicable screening levels in soil consisted of lead and TPH-dro.

Lead was generally detected in shallow soils (0 to 10 ft bgs) across the Site, with the highest concentrations associated with above and below-ground storage tanks to the north and east of the service track, within a shallow metallic soil debris field around the foundation of former building to the south of the service track, and within the former diesel shop area. Arsenic was found generally co-located with lead in these areas.

TPH-dro is also pervasive across the Site, concentrated in the northern and southern portions of the property around the former service track, turn-table, diesel shop and down-gradient of the diesel shop area. At depths greater than 5 feet, the extent of TPH-dro impacted soils decreases and is generally limited to areas surrounding the former service track and the former diesel shop area. In the area of the former diesel shop, the TPH-dro impacted soil extends to depths greater than 20 feet.

Only two VOCs, naphthalene and PCE were detected at concentrations exceeding the residential and/or commercial/industrial screening levels. Naphthalene only exceeded the residential screening level in three soil samples, while an elevated concentration of PCE exceeded both residential and industrial commercial screening levels in one soil sample.

Although identified in a few sampling locations, concentrations of pesticides, herbicides, and PCBs were below applicable DTSC and EPA residential and commercial/industrial screening levels.

1 INTRODUCTION

1.1 OBJECTIVE

In accordance with the Department of Toxic Substances Control (DTSC) approved Stage A and Stage B Remedial Investigation Work Plans and Sampling and Analysis Plan for Areas A and A2 prepared by WSP USA Inc. (WSP) on behalf of the City of Los Angeles (WSP, 2018a, 2018b, 2018c), WSP completed a site-wide geophysical, soil and soil gas investigation and a targeted asbestos survey at the Taylor Yard G2 Parcel (Site) in Los Angeles, California. Data collected from the field investigation is summarized herein, including a description of field sampling methodologies, and summary tables of analytical results. Isoconcentration maps have been prepared for prevalent compounds of concern to demonstrate the lateral extent and depth across the Site. These data will be used in the preparation of a Response Plan and a Risk Evaluation for the transition of the Site from an abandoned former rail maintenance yard to a public park. The City of Los Angeles, the Site owner, is pursuing a multi-stage approach to Site remediation, including an interim project to provide early activation of the Site. Subsequent remedial work will be performed for the remaining Taylor Yard G2 River Park Project design. This report can be used as a guidance and planning document for near-term and full park decision making regarding remedial action. A detailed phased approach to address identified contaminants on the Site to enable interim projects and the full Taylor Yard G2 River Park uses of the Site will be submitted later as details are developed.

1.2 ROLES AND RESPONSIBILITIES

1.2.1 CITY OF LOS ANGELES

The City of Los Angeles (the City) purchased the Taylor Yard G2 Parcel in March 2017. The City prepared a Task Order Solicitation for the design and implementation of a Response Plan and a conceptual design for the future Site use as a public park.

1.2.2 WSP

WSP was selected by the City to perform the remedial investigation of the Taylor Yard G2 parcel. WSP prepared the Work Plans and Sampling and Analysis Plan (SAP), which form the basis of the scope of field activities and sampling design. WSP implemented the Work Plans and prepared this Report.

1.2.3 DTSC

DTSC is the lead regulatory oversight agency for the Taylor Yard Project Site. DTSC reviewed and approved the remedial investigation Work Plans and SAP and provided community notification prior to beginning sampling work.

1.2.4 UNION PACIFIC RAILROAD

Union Pacific Railroad (UPRR) sold the property to the City of Los Angeles. UPRR, formerly Southern Pacific Railroad, owned the property from 1911 to 2017. During that time, the Site was used as a railcar maintenance and storage facility. Specific references to former Site use areas and previous environmental reports refers to work conducted under their ownership of the Site.

1.2.5 GEOVISION GEOPHYSICAL SERVICES, INC.

GEOVision Geophysical Services, Inc (GEOVision) of Corona, California was subcontracted by WSP to perform subsurface utility clearance for all boreholes and sample locations at the Site, and to complete a selective subsurface electromagnetic/magnetometer survey of areas of the Site potentially containing anomalies with potential to be tank-like objects.

1.2.6 CASCADE DRILLING AND TECHNICAL SERVICES

Cascade Drilling and Technical Services (Cascade) of Upland, California was subcontracted by WSP to perform borehole drilling services for soil sampling at the Site.

1.2.7 ENVIRONMENTAL SUPPORT TECHNOLOGIES INC.

Environmental Support Technologies Inc. (EST) of Irvine, California was selected by WSP to perform drilling and soil gas well installation services at the Site. EST was also selected to complete soil gas sampling of each well at the Site using their certified mobile laboratory.

1.2.8 AMERICAN INTEGRATED SERVICES INC.

American Integrated Services Inc. (AIS) of Wilmington, California was subcontracted by WSP to perform re-grading services to improve access for drill rigs to certain areas of the Site. AIS was also selected to perform test pit excavation services.

1.2.9 ENTHALPY ANALYTICAL

Enthalpy Analytical laboratory of Orange, California was selected as the National Environmental Laboratory Accreditation Program certified laboratory to perform analytical testing of environmental samples collected at the Site. Unless otherwise specified, all laboratory samples were analyzed by Enthalpy.

1.2.10 FORENSIC ANALYTICAL CONSULTING SERVICES INC.

Forensic Analytical Consulting Services Inc (FACS) of Hayward, California was selected to perform the asbestos survey of targeted areas of the Site.

1.2.11 CLEAN HARBORS

Clean Harbors provided the waste material hauling and disposal services for drummed soil cuttings.

1.3 REPORT LAYOUT

This report provides a summary of the Site-wide remedial investigation completed April through September of 2018 and presents observations and analytical results from soil, soil gas and asbestos sampling. Methodology and work plan deviations are presented for each of the separate scopes of work, and a brief description of the results are provided in the text of this report. Summary tables are included as well, along with Site isoconcentration maps depicting primary compounds of concern observed for each sample media.

2 BACKGROUND

The following background and historic information were contained in the Final Remedial Action Plan (RAP) for the Site prepared by CDM Smith (formerly known as CDM) for UPRR, dated February 3, 2014. Additional information concerning the Site and the investigations to determine the extent of contamination are contained in the Taylor Yard Remedial Investigation Data Summary Report, dated December 28, 2004, and the Data Gaps Investigation Work Plan dated September 15, 2014, prepared by CDM Smith. The reader is directed to these documents for further details concerning the history of the Site and characterization of contaminants of concern at the Site.

2.1 SITE DESCRIPTION

The Site is a 42-acre parcel of the former UPRR Taylor Yard rail yard (Figure 1). It sits on the east side of the Los Angeles River, and is bounded to the north by the Taylor Yard G1 Parcel (the Bowtie Parcel) currently owned by California State Parks, by the Sonia Sotomayor Academy of Arts and Sciences and a FedEx facility to the northeast, the Rio de Los Angeles State Park to the east, the Taylor Yard Transit Village to the southeast, and the Metrolink central maintenance facility to the south.

UPRR and its predecessors were the property owners of the Site from approximately 1911 until the Site was purchased by the City of Los Angeles in March 2017. Railyard operations, including maintenance and fueling, began in the 1930s and continued through 2006, when the yard was permanently closed. Former facilities at the Site included a diesel shop, a machine shop, a roundhouse, a turntable, underground and aboveground storage tanks (USTs and ASTs), a service track area, and miscellaneous buildings. A storm water and pollution control system and associated industrial wastewater treatment plant were in operation at the Site until decommissioning in 2011. Materials previously used or stored at the Site included diesel fuel, Bunker C fuel oil, journal box lubrication oil, gasoline, other types of oils, greases, acids, alkaline cleaning soaps, water treatment chemicals, paints and thinners, pesticides and herbicides, compressed gases, lead, cleaning solvents, and chlorinated solvents. A figure from the CDM 2011 Feasibility Study has been included in Appendix A for quick reference to historical site features and locations.

2.2 HISTORICAL ENVIRONMENTAL REPORTS

Since 1985, a multitude of soil, soil gas and groundwater investigations have been conducted at the Site. Results of the several progressive phases of remedial investigation have identified constituents of potential concern (COPCs) in the Site soil to be lead, arsenic, total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). VOCs were historically also present in groundwater beneath the Site; however, recent trends in the annual groundwater monitoring program indicate VOCs are reduced to below laboratory detection levels in all but one monitoring well. Historical VOC groundwater impacts are generally attributed to the regional VOC groundwater plume and VOC sources located upgradient of the Site. VOCs have also been detected in shallow soil gas in discrete areas of the Site.

In 2004, CDM implemented a Focused Remedial Investigation based on the idea that the Site was to be redeveloped as zoned for industrial use. The report for their investigation delineated the lateral and vertical extent of COPCs in Site soil. These data were used in preparation of a Human Health Risk Assessment (HHRA). The HHRA evaluated the COPCs and determined a subset to be constituents of concern (COCs) for the Site. COCs for soil included TPH total (C12 to C35+), antimony, arsenic, lead, benzo(a)pyrene equivalents, and tetrachloroethene (PCE). COCs for soil gas included benzene, 1,2-dichloroethane, cis-1,2-dichlorothene (cis 1,2-DCE), ethylbenzene, naphthalene, PCE, trichloroethene (TCE), and vinyl chloride (VC). The HHRA determined that the COCs at the Site posed an unacceptable risk to human health under appropriate exposure scenarios and pathways and concluded that a feasibility study was warranted to address these risks. Data gaps were also identified as a result of the HHRA evaluation, which helped to delineate Areas of Potential Concern (AOPCs) at the Site requiring further investigation. AOPCs were defined by CDM Smith in 2014 by comparing COC concentrations to site-specific preliminary remediation goals (PRGs) for industrial use and delineating areas of the Site where concentrations exceed these PRGs. In CDM Smith's feasibility study and RAP evaluations, AOPCs encompass Site areas where, if COCs could be removed or treated sufficiently, the resulting Site-wide upper confidence limit concentrations (also known as UCL95) of the COCs would be reduced to below their industrial PRG.

2.3 RECENT ENVIRONMENTAL INVESTIGATIONS

In February of 2018, E2ManageTech prepared a Phase I report for the Site in advance of the City of Los Angeles purchase of the property (E2ManageTech, 2018). Following their purchase of the property, the City divided the Site into four distinct areas: Stage A, Stage B, Area A and Area A2 (Figure 2). The purpose of these divisions was to facilitate a planned phased approach to remedial development, and to assign Brownfields Program grants from different agencies. DTSC provided a Brownfields Program grant for the funding of the Area A investigation, and the United States Environmental Protection Agency (EPA) provided a Brownfields Program grant for the Area A2 investigation on the G2 Parcel. Prior to mobilization for this investigation, it was determined that a Site-wide approach to sampling and analysis would be more effective at documenting the presence of contamination in Site media. Therefore, the Site will be discussed in this report as a whole rather than in distinct stages or areas (Figure 3).

A Phase II Investigation of Area A was completed by Amec Foster Wheeler Environment & Infrastructure Inc. and documented in their Site Characterization Report dated February 13, 2018 (Appendix B). Results from that report were reviewed by WSP. Additional investigation and sampling of Area A and Area A2 were proposed by WSP in a SAP that was approved by EPA on March 14, 2018. Data from that investigation are also referenced herein.

3 REGIONAL ENVIRONMENTAL SETTING

3.1 SITE LOCATION

The Site is located in northeast Los Angeles, California, near the intersection of the Golden State Freeway (Interstate 5) and Glendale Freeway (State Route 2) and encompasses approximately 42 acres (Figure 1). The Los Angeles River (River) bounds the Site on the west.

Land use in the vicinity of the Site is highly urbanized. Current land use in the area is dominated by residential housing, light and heavy industrial use, manufacturing, and public lands. Approximately 730 acres of park lands and open spaces exist within a two-mile radius of the Site, including the Rio de Los Angeles State Park, which abuts the Site to the east. The 600-acre Elysian Park, the second largest park in Los Angeles County, is located across the River southwest of the Site. Also, the Sonia Sotomayor Academy of Arts and Sciences is located on Parcel F (a Sale Parcel) east of the Site.

3.2 CLIMATE

Los Angeles has a Mediterranean climate, meaning the majority of precipitation occurs during the mild late-fall through early-spring seasons, roughly from November through March, while the remaining months tend to be warm and dry. It receives approximately 18 inches of precipitation annually (U.S. Climate Data 2018). The elevation at the Site is approximately 350 feet above mean sea level with generally flat topography. The Site ground surface consists of sandy soil, gravel, concrete and asphalt.

3.3 REGIONAL GEOLOGY

The Site is located at the northern edge of the Los Angeles coastal plain. The Site is underlain by up to 160 feet of unconsolidated alluvial sediments (DWR, 1961). These sediments include fluvial deposits associated with the Los Angeles River and stream terrace and alluvial fan deposits associated with smaller tributary drainage originating in the hills bordering the Glendale Narrows, as well as colluvium (USGS, 2004). The alluvium associated with the Los Angeles River generally comprises sand and gravel dominated deposits, while the alluvium and colluvium derived from the surrounding hills often comprises silt and clay dominated deposits (USGS, 2004). Older (Pleistocene) poorly consolidated alluvium dominated by silt and clay are present in nearby outcrops to the northeast of the Site. The Miocene Puente Formation is the bedrock unit that underlies the alluvial sediments in the area. This formation consists predominantly of sandstones and mudstones (Lamar, 1970).

The Elysian Park Anticline is the major structural feature near the Site. This anticline trends northwest-southeast and the anticlinal axis is located to the south of the Site. Folding and uplift associated with the Elysian Park Anticline occurred contemporaneously with deposition of sediments in the Glendale Narrows and the structure is currently active (Oskin and others, 2000).

The Upper Elysian Park Thrust is a blind thrust fault that underlies the Elysian Park Anticline and runs on a subparallel axis. Oskin and others (2000) estimate a slip rate along the Upper Elysian Park Thrust of 0.8 to 2.2 millimeters/year, based on estimated contraction rates at the Elysian Park Anticline. The fault can generate a nominal Mw 6.2 to 6.7 earthquake every 500 to 1,300 years, based on the estimated slip rate (Oskin and others, 2000). The Elysian Park Hills lie to the west of the Site (Lamar, 1970). The presence of several small northwest trending faults is inferred to the east of the Site, proximal to the Mount Washington area (USGS, 2004).

3.4 HYDROGEOLOGY

The Site lies within the Los Angeles Forebay Sub-Basin of the Central Groundwater Water Basin (DWR, 1961). More specifically, the Site is located within the Narrows portion of the Forebay. The Narrows is a region where the Los Angeles River dissects the surrounding low-lying hills. Fluvial deposits associated with the Los Angeles River, stream terrace and alluvial fan deposits, associated drainages originating in the hills bordering the Narrows, and colluvium are present within the Narrows from ground surface to depths of up to 160 feet. These soils comprise the aquifer within the Narrows.

Groundwater occurs under unconfined conditions within the Narrows. The water table occurs at an approximate depth of 30 feet below ground surface (ft bgs) at the Site and the aquifer reaches a maximum depth of approximately 160 ft bgs, at the bedrock contact (Puente Formation). Bedrock also bounds the aquifer laterally at the steep valley walls of the Narrows. Groundwater flows unobstructed through the aquifer in the Narrows, linking the aquifers at the higher elevation San Fernando Basin with the aquifer in the lower coastal groundwater basin. The unlined stretches of the Los Angeles River, such as the section of the River adjacent to the Site, have at times been groundwater discharge areas (USGS, 2004); however, more recently these areas have consistently been a groundwater recharge area. Preliminary groundwater/surface water studies undertaken by the River Project conclude that in close proximity to the Los Angeles River, groundwater in the uppermost part of the aquifer discharges to the river, while deeper groundwater flows through the aquifer independent of the river following topography (MBE, 2002 and Laton, 2002).

4 PROJECT AREA PHYSICAL CHARACTERISTICS

4.1 SITE GEOLOGY

Currently, most of the Site is covered by soil with some areas covered with asphalt, concrete (the diesel shop, service track area, former building foundations), and railroad ballast. The Site is underlain by the following soils, as encountered in order of increasing depth: fill, coarse-grained predominantly fluvial sediments, and fine-grained alluvium (beneath the northern part of the Site). The fill is primarily composed of fine-grained silty sand with some gravel and debris and extends from ground surface to as deep as 15 ft bgs. The fill is generally dark colored, ranging from dark gray to dark olive brown and typically contains structural debris (concrete, brick fragments, etc.).

The coarse-grained alluvial unit consists of poorly graded sand with little to no fines. This soil unit was encountered as shallow as 5 ft bgs and extends to depths greater than 100 ft bgs (maximum depth explored at the Site). The sand is typically fine to medium-grained and the color ranges from grayish brown to light yellowish brown. It is interpreted as channel or point bar deposits associated with the Los Angeles River.

The occurrence of the fine-grained alluvial unit is limited to the northern area of the Site (north of the former diesel shop) and is believed to be associated with stream terrace deposits originating from drainages in the hills northeast of the Site and over-bank deposits associated with the Los Angeles River. The unit is comprised of silt and silty sand. The silt is typically firm with low plasticity and ranges in color from olive brown to dark-greenish gray. The silty sand fractions are generally grayish brown. Discontinuous silt layers, assigned to the lower fine-grained alluvium unit, are interbedded with the upper coarse-grained unit between depths of 15 and 30 ft bgs.

Observations made by WSP while conducting the soil and soil gas investigation at the Site largely agree with the Site geology description as summarized in the Feasibility Study prepared by CDM in 2011 (CDM, 2011).

4.2 SITE HYDROGEOLOGY

Based on groundwater monitoring conducted at Taylor Yard from 1994 to 2010, groundwater beneath the Site flows towards the southeast, parallel to the trend of the Glendale Narrows. The horizontal hydraulic gradient across the Site is approximately 0.003 feet per foot (CDM, 2010). Based on the groundwater level measurements conducted at onsite multiport monitoring wells between 2003 and 2009, the vertical hydraulic gradient at the Site is generally upwardly directed at the time of groundwater elevation measurements, with occasional downward gradients (CDM, 2010).

Over the past 20 years, the depth to groundwater at the Site has generally ranged between 30 to 40 ft bgs. The depth to groundwater at the Site is seasonally influenced, but is most heavily influenced by pumping operations at the Pollock Well Field, located approximately half a mile northwest of the Site. Groundwater levels tend to rise during the winter and spring and decline throughout the rest of the year. Estimations of aquifer hydraulic parameters for the unconfined aquifer underlying Taylor Yard reportedly were documented by ERT, Inc. in 1987. Transmissivity was estimated to range from 50 to 350 gallons per day/foot. Aquifer storativity was estimated to range from 0.12 to 0.16. Groundwater seepage velocity was estimated at 480 feet/year.

SCST conducted annual groundwater monitoring at the Site in April 2019. The annual report was submitted to DTSC on September 27, 2019 (SCST, 2019).

4.3 CURRENT SITE DISTINCTIVE FEATURES

The current Site surface and landscape is characterized by remaining building and service area concrete slabs, asphalt pads associated with former roadways and parking areas, graded topography associated with former retention ponds or containment areas, and semi-demolished or partially deconstructed work areas.

The remaining concrete Site foundations include building pads from former offices, locker rooms, administration and store house buildings. These are generally slightly elevated above the surrounding grade and consist of reinforced concrete. Any subsurface piping that daylights within the slabs have been sheared off to level; however, few have been filled or sealed.

Other concrete-covered areas include former train car and equipment service areas (e.g., service track area, turn-table and radial tracks, machine shop, and diesel shop). Within these service areas, characteristic topographic features are present, including the circular turntable which is recessed approximately 10 feet lower than the surrounding grade and the former wheel drop areas which include pits for hydraulic lifts.

There is evidence of numerous subsurface utilities that may be present beneath concrete and asphalt areas, including a large number of metal and plastic inverts and open vaults at grade. There are locations where former storm drain manholes have been backfilled with concrete or soil, and others that remain open.

5 REMEDIAL INVESTIGATION STUDY GOALS

5.1 STUDY GOALS/QUESTIONS

The Site is under the regulatory authority of DTSC and a Brownfields Grant by EPA. Comprehensive site assessment was needed to inform remediation strategies for interim projects and the long-term redevelopment of the Site. WSP, on behalf of the City, conducted the Site investigations in accordance with the Stage A Work Plan (WSP, 2018a) and Stage B Work Plan (WSP, 2018b), and a Sampling and Analysis Plan for Areas A and A2 (WSP, 2018c). The Stage A Work Plan was conditionally approved by DTSC on March 14, 2018 and the Stage B Work Plan was conditionally approved by DTSC on June 1, 2018. EPA approved the SAP for Areas A and A2 on March 14, 2018. This report documents the data collected during the implementation of the approved Work Plans and SAP.

This remedial investigation was conducted with the following questions in mind:

1. Do the highest concentrations of COPCs in soil or soil gas exceed DTSC-modified residential/industrial screening levels or in the case that such screening levels do not exist for COPCs, EPA residential/worker regional screening levels (RSLs)?
2. Do the concentrations of COPCs in soil or soil gas pose a risk to human and ecological receptors under current conditions or for the proposed redevelopment that warrant a response action?
3. Is there a potential for COPCs to migrate to groundwater?

In this Report, WSP addresses the first question in this list. Questions 2 and 3 will be addressed in a subsequent Response Plan and Risk Evaluation prepared explicitly for the purpose of implementation of the first planned portion of redevelopment of the Site. Subsequent Site redevelopment remedial activity and Site use will be addressed under additional reporting for the final selected Taylor Yard G2 River Park Project concept. Such response plans and risk evaluations will be prepared under review and approval by DTSC.

5.2 TAYLOR YARD G2 RIVER PARK

Full Site use of the G2 Parcel will include redevelopment of the entire property as a public park. Several concepts include stormwater and habitat restoration goals associated with the City's Los Angeles River Revitalization Master Plan, and the U.S. Army Corps of Engineers' Los Angeles River Ecosystem Restoration Feasibility Study (also known as Alternative with Restoration Benefits and Opportunities for Revitalization). An additional portion of the Site shall be redeveloped along with the Mountains Recreation and Conservation Authority (MRCA), who have secured an easement in the northern portion of the Site near the former service track area (Figure 3).

Together with the stakeholders listed above and local community members, the City is working to provide a final Site design that will link the Rio de Los Angeles State Park, the Taylor Yard G1 Bowtie Parcel, and the Los Angeles River into one large green space.

In coordination with DTSC, the remediation of the project will be advanced in phases. An additional phase will include the remediation of the MRCA easement portion of the property, which shall be completed prior to, or in conjunction with, the larger River Park Project Site redevelopment. A Response Plan and Risk Evaluation will be completed, with DTSC's approval, for all phases of redevelopment.

6 REMEDIAL INVESTIGATION

6.1 PRE-FIELD ACTIVITIES

Conditional approval of the final Work Plan submittal, for Stage A and Areas A and A2, was provided by DTSC on March 14, 2018. WSP subsequently retained subcontractors to perform the site boring clearances and subsurface geophysical survey. Prior to mobilizing, the City of Los Angeles notified DTSC via e-mail March 29, 2018 of the planned first day of Site survey work, beginning April 2, 2018. April field work consisted of a Site-wide Geophysical survey and investigation.

DTSC provided conditional approval for the Stage B Work Plan on June 1, 2018. WSP mobilized for drilling efforts and DTSC visited the Site on June 5, 2018. At that time, work notices were posted around the property perimeter, both in English and Spanish.

6.2 HEALTH AND SAFETY PROCEDURES

While in the field, WSP maintained a physical copy of the site-specific Health and Safety Plan (HASP). All on-site personnel from both WSP and any subcontractors were required to undergo a safety briefing each morning, and after the first review of the HASP procedures, sign and date the plan. The HASP was treated as a living document throughout the project and was updated if previously unaccounted-for hazards were encountered on the Site.

To prepare the HASP and set action levels for volatile compounds, WSP completed a review of the historical data reported by CDM/CDM Smith and others for the Site. WSP anticipated that of the known constituents present in soils beneath the Site (VC, benzene and PCE) would be the compounds with the lowest permissible exposure levels. An action level was set for field monitoring of 0.5 parts per million (ppm) VOCs using an 11.7-volt photoionization detector (PID). This value would represent all VOCs in the breathing zone. If this action level was exceeded for more than five minutes, the following measures were taken:

1. Stop work, measure vapors with a compound-specific colorimetric tube (draeger tubes). The compound-specific threshold for vinyl chloride is 0.5 ppm. If this threshold is not exceeded, and the PID continues to read above 0.5 ppm, a compound-specific Draeger tube would be used to test for benzene (threshold 0.5 ppm). If neither compound is exceeded, work may continue with a new action level threshold of 5 ppm (for PCE).
2. At no time throughout logging for soil gas or soil sampling were PID detections above 0.5 ppm for more than five minutes, with the sole exception of June 15, 2018 when soil gas boring cuttings were being logged within the former service track area. While soil from soil gas location SG-E6-1 was being logged, a Draeger tube was utilized to measure vinyl chloride. No detection above 0.5 ppm was noted for vinyl chloride. At this time, WSP decided to maintain workers seated in an up-wind location while logging soils in this area. While overall PID detections remained below action levels, the soil had a distinct odor of solvents and petroleum in this area. Due to the temporary nature of the elevated PID detections and the limited area of potential exposure, WSP only notified internal Health and Safety team members of the observations in the area. During soil logging and sampling in the same area on July 18, 2018, no health and safety observations were noted.

The HASP preparation included a review of soil lead levels. The maximum detected lead level in previous investigations on-site was noted as 5,380 milligrams per kilogram (mg/kg) at a depth of 5 ft bgs. Using this concentration, and assuming it was entrained in dust particles, the action level for dust generation was established as observation of visible dust. The action level for lead-containing soil was set as visible dust on-site. WSP began soil gas and soil drilling operations on-site without a dust monitor, prepared to secure one if it was needed. Generation of dust was not determined to be an issue during drilling and a dust monitor was not obtained for monitoring purposes. During the excavation of test pits, in accordance with the South Coast Air Quality Management District (SCAQMD) Rule 1466, which requires the control of particulate emissions from soils with toxic air contaminants, a water trailer and water hose were used extensively to wet down the concrete and soil prior to and during removal. This prevented the generation and migration of fugitive emissions beyond the work area.

In addition to standard steel toed boots, high-visibility vests, and sun-protective gear, during soil logging for the installation of soil gas wells and soil sampling, employees wore nitrile glove at all times. During soil drilling, employees wore hard hats. During soil gas drilling, acetate sleeves of soil (4-feet long) were cut open by drillers and placed on plastic sheeting on a pop-up field table. A seated geologist or environmental scientist then removed the cut portion of the sleeve and logged the soils. A hand-held 11.7-volt PID was calibrated each morning and was both utilized to screen the soil to seek zones of VOC detections in the soil profile, to better select the depths of soil gas probes in the well, and to also monitor the breathing zone of the worker handling the soil. During soil sampling, a similar approach was followed; however, soil was collected in steel split spoon barrels 5 feet long and were placed on the ground over plastic sheeting. WSP personnel logged and sampled the soil while seated next to the sample barrels. PID readings for soil were noted on field logs for both soil gas wells and soil borings. As noted above, WSP rarely noted breathing zone PID readings in the field notebook as such readings rarely exceeded the 0.0 ppm mark.

During the geophysical survey, a leaking gas utility line (above ground surface), was observed by GEOVision surveyors. Upon encountering this hazard, WSP required all personnel remain several hundred feet away and upwind from the area, and subsequently notified the Site health and safety officer, who then notified the local Fire Department. Once the area had been cleared by both the Fire Department and the Gas Company confirmed that the source area had been shut off, WSP resumed work in this area. The HASP was updated to reflect emergency procedures if similar emergency response measures were required in the future.

Prior to completing the test pit excavation phase of work, an asbestos survey was completed of concrete and surficial debris at the Site. Results indicated that asbestos was present in specific areas of the Site (Appendix C). The HASP was again updated to include a summary of the specific hazards and response measures.

The updated final HASP has been included as Appendix D.

6.3 UTILITY CLEARANCE AND GEOPHYSICAL SURVEY

WSP contracted GEOVision Geophysical Services of Corona, California to conduct a geophysical survey prior to subsurface sampling activities. Between April 4 and April 19, 2018, a borehole clearance was first completed of all planned drilling locations (soil and soil gas) using: ground penetrating radar (GPR) with a GSSI SIR3000, electromagnetic utility locator with a Metrotech 810 and a Radio Detection RD-8000 with sewer sounders, and a pipe locator/metal detector with a Fisher TW-6. This equipment was used to image the subsurface physical properties of the Site, with the goal of locating any remaining USTs, partial building foundations or slabs, abandoned drums, pipelines, rail lines, trenches, any voids or potential environmental spills/cesspools or seeps. Surveyors again visited the Site June 27, 2018 to complete a survey of adjusted or relocated borings.

Subsequent to the borehole clearance, WSP selected 13 areas of the Site with potential large subsurface anomalies either identified by the borehole survey or pulled from previous environmental reports summarizing historical presence of USTs. These areas were surveyed between April 18 and April 26, 2018 using electromagnetic/ magnetometer (EM/Mag) methods, using a Geonics EM-61 Mk2A digital metal detector, a Geonics EM-31 terrain conductivity meter, and a Geometrics G858 magnetometer. These instruments provided shallow mapping of subsurface metallic objects. The data provided by these instruments were summarized and interpreted by a GEOVision professional geophysicist and presented in their June 2018 report (GEOVision, 2018).

WSP reviewed this report to determine if additional intrusive investigation may be required. GEOVision recommended follow-up excavations in 13 locations in their report. WSP proposed and/or modified locations for test pits, trenches, soil borings, soil gas samples and additional groundwater monitoring wells after this geophysical investigation and coordinated these changes with the City.

6.3.1 DEVIATIONS FROM THE WORK PLAN

This geophysical survey was not a Site-wide survey as described in the Work Plans and SAP. Rather it involved a targeted drilling location utility clearance, and subsequent specific EM/Mag survey of those areas noted as larger anomalies, and a specific review of areas likely to contain USTs based on historical reporting of Site activities.

6.4 SOIL GAS SAMPLING

WSP completed a grid-based soil gas survey of the investigation area. Soil gas wells were drilled and installed across the Site between June 5 and August 10, 2018. Wells were sampled between June 12 and August 15, 2018. In general, the order of sampling followed the order in which the wells were installed. Soil gas samples were collected to determine the presence and concentration of VOC vapors within the vadose zone. Samples were spaced on approximately 100-foot intervals, using a grid superimposed on the Site (Figure 4). A minimum of one soil gas well with two sample depths per grid square was installed and sampled across the Site. Previous soil gas investigations at the Site identified several AOPC for VOC vapors, detailed by CDM Smith as Areas 1 through 3 (CDM Smith, 2014a). Area 1 includes the former service track area where historical solvent use for overhaul of locomotives was likely the source of contamination. Area 2 includes the south turntable area where chlorinated solvents were used for cleaning. Area 3 includes the former diesel shop area where chlorinated solvents were used extensively. Based on these areas, and based on a review of the 2004 remedial investigation report data summary (CDM, 2004), WSP selected grid cells to increase the density of sampling efforts, adding additional soil gas wells per cell in those AOPCs where historical data indicated soil gas was an issue in previous sampling efforts.

Sample locations within each 100-foot-square were selected randomly. At the completion of drilling and sampling efforts, EST and WSP had installed 226 soil gas wells with 451 sample probes.

6.4.1 BORING INSTALLATION

Soil gas probes were installed at approximately two depths within temporary borings, at 5 feet and 15 ft bgs. Borings were advanced using a truck-mounted direct-push GeoProbe® rig equipped with Macro Core® continuous core samplers. The recovered cores were visually logged by a WSP geologist, and any notable characteristics that could impact sample collection (vapor flow through fine soil matrix or presence of significant soil moisture) were recorded on field logs entered by hand in the field notebook for the project. The target depths and sampling intervals were adjusted in the field based on encountering refusal, the depth to the groundwater table, or the presence of fine-textured soils (fine silts, clays).

Each temporary soil gas monitoring well was constructed using ¼-inch diameter Nylaflow™ sample tubing with a 1-inch long polyethylene filter screen inserted at the bottom. The tubing was fed into the open boring through a narrow diameter polyvinyl chloride pipe that was removed from the hole to the target depth. Approximately 12-inches of clean, graded silica sand was poured around the screened tip to allow for diffusion of vapors (six inches above and below the probe). Dry bentonite chips were placed in a six-inch lift above the sand pack, above which hydrated bentonite chips were used to backfill the borehole until approximately 18-inches below grade (variable based on probe depth). At grade, a bentonite cement slurry with #60 fine sand added was used to backfill to grade. The slurry was hydrated at the surface to a consistency similar to a wet pancake batter. This slurry was tremied into place. At the well head, a silicone cap was placed on the exposed tubing to prevent vapor migration while not sampling. Boring locations were labeled with a wooden stake and flagging tape.

6.4.2 SOIL GAS SAMPLING

All samples were collected and analyzed in the field using a mobile laboratory and trained technician at least 48 hours after boring installation to allow the wells to equilibrate. Prior to sampling each day, the laboratory technician completed a 12-hour tuning analysis, a method 8260B standard analysis, a laboratory control sample, a method blank sample, an equipment blank sample, and a material blank. The first sample collected each day was also duplicated.

At the soil gas well head, 2-propanol was used to soak a portion of a paper towel, which was then secured next to the sampling equipment during purging and sample collection. A shut-in test was performed to determine whether any leaks were present in the sample manifold prior to sampling. At least three system volumes were purged at a low flow rate (100-200 milliliters per minute), calculated based on the probe depth, tubing diameter and well casing diameter. After purging, a sample was withdrawn from the moving sample stream using a clean glass syringe equipped with a gas-tight valve. Samples were then loaded into the purge-and-trap system for analysis for VOCs and oxygenates by EPA Method 8260B, modified for soil gas at low reporting limits. Reporting limits, without dilution, were below target DTSC modified residential screening levels for air to evaluate potential health risks. Additional details regarding the mobile lab sampling standard operating procedures are included in Appendix E.

6.4.3 DEVIATIONS FROM THE WORK PLAN

In accordance with suggestions from DTSC in their contingent approval letters for the Stage A, Stage B and Areas A and A2 Work Plans dated March 14, 2018, April 4, 2018, and June 1, 2018, respectively, soil gas wells were installed with sample probes at two depths instead of the originally scoped three. As much as possible, soil probe depths were installed at approximately 5 feet and 15 feet ft bgs. These depths varied as a result of observed soil texture (presence of silts or clays versus sands), moisture content (saturated soils were avoided), and volatile organic compounds (measured in the field using a PID). The mean, median and mode of shallow sample probe depths is 5 ft bgs. The median and mode of deep sample probe depths is 15 ft bgs, while the mean is 14.75 ft bgs.

Sample probe tips used in the field were polyethylene vapor implant tips rather than stainless steel. Soil gas wells were sealed at ground level with a thin pancake batter-like mixture of bentonite slurry and sand.

During implementation of the sampling activities, WSP and the City reviewed the location of railroad easements that remain present on the property. As the result of a 25-foot Southern California Regional Rail Authority (SCRRA) right-of-way within the Area A2 portion of the property next to tail tracks (or pocket tracks), a number of soil gas sample locations were relocated or removed from this sampling area altogether to avoid an expensive and lengthy review process with SCRRA.

Several soil gas wells were modified from the original design of two sample probes due to borehole collapse during drilling, or because of saturated conditions in the subsurface. Soil gas sample locations SG-C13-1, SG-E16-2, SG-H12-1, SG-H22-2 and SG-I22-1 each contain a single sample probe instead of two.

Soil gas sample point SG-G19-1 was removed due to drill access issues including broken concrete, multiple layers of concrete at depth and collapsing railroad ballast.

6.5 SOIL SAMPLING

Between June 18 and August 24, 2018, WSP advanced a series of soil borings across the Site using the same grid-based approach to characterize and sample subsurface soil at multiple depths. Soil boring locations were chosen to evaluate the extent of contamination related to historical Site uses, including subsurface tank or drum storage, leaking utilities, waste spills or dump sites, or industrial/commercial operations. In addition to previous Site investigation data, the geophysical survey provided additional guidance for the placement of the soil borings. Boring locations were selected to avoid duplicating data points generated during the previous investigations. WSP prepared a figure depicting the boring locations (Figure 4).

Approximately 65 soil borings were advanced on Site. Of these, 51 borings were drilled to the groundwater table (roughly 30 ft bgs) and 14 borings were drilled to a depth of 80 ft bgs (or until bedrock was encountered). Borings were drilled using an 8-inch outside-diameter hollow-stem auger. Samples were collected in a 5-foot long continuous core barrel. Samples were collected continuously over 2.5-foot runs above the groundwater table (with a few exceptions) and continuously over 5-foot runs below the groundwater table.

6.5.1 BORING LOGS

Cores were collected and logged by trained WSP personnel under the supervision of a California Professional Geologist, and detailed observations were collected in accordance with United Soil Classification System field standards, including soil color (Munsell color), moisture, particle size, dilatancy, plasticity, and other appropriate visual or physical descriptors. Geologic contacts and lithology were also noted. The boring cores were inspected for measurable VOCs with an 11.7-volt PID and for methane, oxygen and hydrogen sulfide within the borehole and at each sampling interval. DTSC geologists notified WSP that a grey silt layer may be present at the Site at a depth of approximately 30 ft bgs. In surrounding investigation areas, this grey silt has acted as a zone of TPH accumulation. WSP noted any observations of this silt in boring logs. Scanned copies of the soil boring logs are included as Appendix F.

Daily field and boring logs were prepared for City review, including annotated descriptions of visual, physical and chemical observations. These logs were submitted each morning to the City for review.

6.5.2 SAMPLE COLLECTION

Soil samples were collected at 0-3 inches, 0.5 to 1 ft bgs, 2.5 ft bgs, 5 ft bgs and then every 5 feet thereafter until the total boring depth was reached. Approximately 51 borings were terminated upon encountering the groundwater table (approximately 30 ft bgs). The remaining 14 borings were advanced to a total depth of 80 ft bgs. No bedrock was encountered. No significant confining clay zones were noted in any boring; however, occasional thin zones of petroleum product were perched on silt zones (noted southwest of the former diesel shop area).

A field PID was used to inspect the sample core for detections of VOCs. One sample was collected for laboratory analysis at each boring at the location of peak organic vapor detection for VOCs using the Terra Core™ sampler. If no significant peaks were observed using the field meters, the VOC sample was collected in any areas where staining or anomalous material is present. The boring logs were annotated with observations collected using the PID meter.

In addition to seeking peak organic vapor detections for a VOC sample, one duplicate sample was collected immediately above each undisturbed sample at its target depth. This duplicate was placed into a zip-lock bag and warmed in the sun for approximately 10 minutes to collect a headspace sample for methane, oxygen and hydrogen sulfide. In addition to headspace sampling, air within the borehole was collected using plastic tubing, and after purging the tubing, methane, oxygen and hydrogen sulfide readings were noted on the boring logs.

In total, 277 soil samples were collected directly into laboratory-supplied containers. Samples were then placed on ice in coolers and transferred under chain-of-custody protocol to Enthalpy Analytical of Orange, California, a Certified Environmental Analytical Laboratory. In addition to the VOC sample described above, each interval soil sample was analyzed for total petroleum hydrocarbons as gasoline (TPH-gro – carbon chains C8 to C10), diesel (TPH-dro – carbon chains C10 to C28) and motor-oil (TPH-mo – carbon chains C28 to C40) by EPA Method 8015M without silica gel cleanup. Soil samples at depths from 0 to 5 ft bgs were analyzed for Title 22 metals by EPA Methods 6010B and EPA 7471A, and an additional sample was collected at the 10 ft bgs depth and placed on hold pending receipt of analytical results in shallower zone samples. If soil metals results exceeded 20 times the Resource Conservation and Recovery Act (RCRA) thresholds for any of the eight RCRA listed metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver), those samples were analyzed using the toxicity characteristic leaching procedure (TCLP). If soil metals results exceeded 10 times the California Code of Regulations Title 22, Chapter 11, Article 3, Section 66261.24 metals soluble threshold limit concentration (STLC), the Waste Extraction Test (WET) test was run as well. If the results of the TCLP analyses exceeded RCRA threshold values, soil in that area was classified as Federal Hazardous Waste. If the STLC result exceeded its compound specific standard using the WET method, soil in that area was classified as California (non-RCRA) Hazardous Waste.

Upon completion of drilling and sampling activities, each boring was backfilled with soil from the boring. Prior to drilling each borehole, WSP reviewed previous environmental reports for indication as to whether soils may be classified as hazardous. If hazardous soils were suspected, soil above the 20-foot depth were placed in 55-gallon steel drums and labelled with the boring ID and sample date. Each boring location was noted using a portable GPS device to an accuracy of +/- 1 meter, which will allow analytical data to be mapped in relation to detections noted during the geophysical survey.

6.5.3 DEVIATIONS FROM THE WORK PLAN

In accordance with DTSC suggestions, the soil sample collection frequency for metals by EPA Methods 6010B and 7470A included all sample depths from ground surface to 5 ft bgs (0 to 3 inches, 0.5 ft bgs, 2.5 ft bgs, and 5 ft bgs). Additional samples were collected at the 10-foot interval and placed on hold with the laboratory. The 10-foot sample was analyzed if the sample at the 5-foot interval was reported with metals exceeding their regulatory thresholds for total threshold limit concentration, STLC or TCLP. In two locations, SB-E4-1 and SB-D4-1, samples below the 10-foot depth were also analyzed for soil metals as a result of elevated detections in the 10-foot results. No samples were analyzed for metals below 15 ft bgs.

During implementation of the sampling activities, WSP and the City reviewed the location of railroad easements that remain present on the property. As the result of a 25-foot SCRRA right-of-way within the Area A2 portion of the property next to tail tracks (or pocket tracks), a number of soil sample locations were relocated or removed from this sampling area altogether to avoid an expensive and lengthy review process with SCRRA.

Additionally, the high-voltage power lines located along the western perimeter of property, bordering the Los Angeles River, presented a potential electrical risk to the drill rig operators during soil drilling. As a result, any soil boring within an approximately 50-foot radius of those lines was relocated elsewhere on-site or removed from the sampling plan.

6.6 ASBESTOS SAMPLING

The Work Plans stated that 10 asbestos samples would be collected site-wide from concrete materials at ground surface. A Certified Asbestos Consultant (#00-2736) and a Certified Site Surveillance Technician (#97-2313) from FACS visited the Site and performed visual inspection, bulk sample collection, and survey documentation. The survey was completed August 27, 2018.

The areas of the asbestos survey were limited to those concrete slabs that were slated for partial demolition during test pit excavation. A total of 53 samples were collected by FACS, including concrete slabs, concrete rubble, concrete beneath asphalt slabs, sub-grade asbestos-cement pipe, and tar and felt sheeting. Samples were analyzed by Forensic Analytical Laboratories by EPA Method 40CFR, Part 763, Appendix E to Subpart E and EPA Method 600/R-93-116, Visual Area Estimation. No asbestos was detected in any concrete material samples. Asbestos containing materials were identified in three samples (Figure 6). Two of the samples were collected from a sub-grade pipe and some surficial debris (tar and felt sheeting) in the south-central portion of the Site, along with mastic wrapped piping further to the north. The sub-grade pipe contained 15% Class 1 nonfriable asbestos. The tar and felt sheeting contained 85% Class 1 nonfriable asbestos and 3% tar.

A sub-grade pipe was visible protruding from a concrete-lined vault in Site grid cell F21, near soil gas well SG-F21-1. Approximately 10 square feet of piping is exposed, and additional amounts of piping may be present underground.

One additional asbestos sample was collected by WSP during the excavation test pit work. The material appeared to be an asbestos mastic pipe wrapping. The sample was collected into a Ziploc bag and submitted to Enthalpy Analytical Laboratory and subcontracted to American Environmental Testing Laboratory Inc. and analyzed for asbestos by EPA Method 600/R-93/116. The sample contained 20% chrysotile asbestos.

The test pit asbestos sample was collected in grid cell D5 near SB-D5-1 at an approximate depth of 2 to 3 ft bgs. The mastic was visibly present around three metal pipes which appeared to continue north from the former Service Track Area of the Site, and east/west from the test pit sample area.

A figure displaying the positive asbestos sample results is included as Figure 6. Appendix C contains the FACS asbestos sampling report. The test pit sample data for asbestos (collected September 21, 2018) is presented in Appendix G.

6.7 TEST PIT EXCAVATIONS AND SAMPLING

Test pit locations were selected in consultation with the City of Los Angeles based upon review of observed anomalous GPR imagery, magnetic/electromagnetic detections and/or surface staining. After reviewing the Geophysical Survey Report prepared by GEOVision (GEOVision, 2018), WSP selected 12 locations identified as anomalies with the potential to be USTs. These locations were largely in areas formerly containing storage tank units based on historical records (Feasibility Study - CDM, 2011). WSP also selected an additional 10 locations where surface staining or visible petroleum product was emanating from broken piping or invisible sources. Eight of these 10 locations were located within the former Diesel Shop Area between Site grid cells 21-23 and G-H.

Based on the results of the asbestos survey completed by FACS, the eight stained areas considered for test pitting within the former Diesel Shop Area were removed from the list of excavations. The presence of Class 1 asbestos both as sub-grade piping and extensive surficial debris in the form of tar and felt sheeting (appearance of roofing material) precluded this area from demolition and the excavation of test pits.

Test pit excavations of the remaining 14 locations were completed September 5, 6 and 21, 2018 by AIS under the supervision of WSP. Of the 14 locations investigated, only eight required soil removal and excavation. The six remaining locations consisted of metal plates or access panels to vertical inlets or inverts for subsurface utilities. The buried metal in these areas appeared to be storage tanks from the perspective of geophysical survey instruments. However, the eight excavations did not uncover tank-like anomalies.

Soil excavations involved breaking the surface material if concrete or asphalt was present. Concrete was broken using a hydraulic jack, and asphalt and soil cover were removed using the bucket of a mini-excavator. The excavator was then used to remove soil in layers down to a depth of approximately 3 ft bgs, or until an anomaly was noted. In three instances, the excavation was advanced deeper than 3 feet as no source of an anomalous geophysical reading was explicitly uncovered. The extent of each excavation depended on conditions in the area, such as staining was visible or a pipe was being followed.

Once the excavation was complete, WSP collected two samples from the bottom sidewalls of the excavation (except for test pit TP-07 and TP-08 as noted in the table below). In test pit TP-08, water was encountered in a concrete lined vault in one portion of the exaction and an aqueous sample was collected (TP-08-3).

Following sampling, AIS used the staged excavation soils to backfill the excavation and tamp the soil down using an excavator bucket.

As discussed in Section 6.2 of this report, in accordance with SCAQMD Rule 1466 for the excavation and movement of less than 500 cubic yards of material, AIS provided a water truck and hose to continuously wet down the work area and address any visible dust during excavation. Small amounts of visible dust were observed during concrete breaking activities, especially for test pits TP-08 and TP-09 which required concrete demolition; however, the visible dust was addressed quickly by AIS. WSP monitored the breathing zone of workers continuously using a calibrated 11.7 volt PID and periodically using a multi-gas meter (oxygen, hydrogen sulfide and methane). No VOC readings were observed above 0.0 ppm and no gas readings were noted outside of background levels.

Nine of the 14 locations were sampled, and the table below summarizes field observations accompanying those samples.

All soil samples were collected using clean trowels and placed directly into laboratory-supplied containers, including pre-preserved TerraCore kits for VOCs. Samples were labelled and placed immediately onto ice. All soil samples were analyzed for TPH-gro, TPH-dro, and TPH-mo by EPA Method 8015B. All samples were also analyzed for Title 22 metals by EPA Methods 6010B and 7470A. One sample per test pit was analyzed for VOCs by EPA Method 8260B. Additional samples were collected for SVOCs and polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C and 8270SIM, polychlorinated biphenyls (PCBs) by EPA Method 8082, and organochlorine pesticides by EPA Method 8081A. Summary tables for test pit sample data are included as Appendix G.

A figure presenting the locations of the test pits is presented as Figure 5.

Test Pit Number	Grid Cell Location	Dimensions	Observations
TP-01	D6	3 feet W x 6.5 feet L x 5.8 feet D	Black staining began at 4 ft bgs. Petroleum odor at 4 ft bgs. No tank-like anomaly noted. Three metal pipes observed at 2 ft bgs running NW/SE and NE/SW.
TP-02	C6	10 feet W x 12 feet L x 4 feet D	10-inch diameter metal pipe at 4 ft bgs, connected to a 24-inch invert. Pipe and invert backfilled with poorly graded sand. Vent pipe (metal) nearby. No odor, large amount of weathered metal fragments, staining yellow, green, orange, black, red.
TP-03	D7	TP-03 A - 4 feet W x 8 feet L x 2.5 feet D TP-03 B – 4 feet W x 6 feet L x 2.5 feet D	Two pits dug. Concrete pad encountered at 2.5 ft bgs. One-inch diameter rebar and ½-inch rebar encountered. No visible staining or odor.
TP-04	D8	5 feet W x 11 feet L x 1.6 feet D	Clean sand backfill until concrete slab encountered at 20-inch depth. No odor or staining noted.
TP-05	I19	3.5 feet W x 6 feet L x 7 feet D	Excavated between two surficial concrete pads which both appeared to be the source of the identified anomalies (reinforcement). Dug between two pads to see if soil contamination was visible in the subsurface. No staining or odor encountered. Appeared to be native sand.

Test Pit Number	Grid Cell Location	Dimensions	Observations
TP-06	E13	12 feet W x 12 feet L x 2.5 feet D	Uncovered a ¾-inch steel plate measuring 4.7 feet x 4.3 feet at 2.5 ft bgs. Removal of the plate uncovered a 3-foot diameter metal invert with four pipeline inlet/outlets. Soil samples collected north and south of top of invert. No staining or odor observed.
TP-07	C20	No excavation	Rectangular vault located at ground surface. 2-foot square steel plate removed, covering a 20-inch deep invert with outlet pipe. Sample collected from accumulated sediment. No odor or staining noted.
TP-08	C23	TP-08 A – 3 feet W x 8 feet L x 3 feet D TP-08 B – 3 feet W x 6 feet L x 3 feet D TP-08 C – 3 feet W x 8 feet L x 2 feet D TP-08 D – 60-foot linear trench	Excavated three "bays" beneath concrete following a metal pipe leaking petroleum at the surface. Each bay was sampled, the final bay consisted of a concrete-lined vault with accumulated water (sample ID TP-08-3 is aqueous). No tank uncovered. Traced pipe in other direction for approximately 60 feet (0.5 ft bgs). No tank uncovered. Periodic staining and petroleum odor noted.
TP-09	D5	3.7 feet W x 12 feet L x 3 feet D	Two surficial sheared metal pipes leaking petroleum fluid. Both terminated at the north end of the service track, and ran north seemingly toward the former Diesel AST area. Both pipes were wrapped in asbestos mastic. Strong petroleum odor in soil around pipes. Two other pipes noted in surrounding area, one also wrapped in mastic (running E/W).

6.7.1 DEVIATIONS FROM THE WORK PLAN

Test pits were not explicitly divided into soil test pits and trenches; rather, the excavations were advanced to answer one of two questions:

1. Does the location of a tank-like anomaly, as identified by GEOVision, contain a buried subsurface tank or other source of additional contamination to the environment?
2. Does the presence of visible petroleum product at ground surface indicate a tank or similar anomaly present in the subsurface?

WSP eventually selected 14 final locations to investigate and sampled nine. The remaining five investigation locations did not warrant soil sampling.

6.8 EQUIPMENT DECONTAMINATION AND INVESTIGATION DERIVED WASTES

The hand auger, drill bit and drill stem were pressure washed between borings to prevent any cross-contamination. The rinsate from the cleaning process was collected into storage vessels on the Cascade drill rig. Rinsate was emptied daily into a lined, bermed pond for water evaporation. Soil cores from soil gas borings were collected and placed into 55-gallon drums and properly labeled for characterization and disposal. Drums were characterized for appropriate disposal by Clean Harbors. All drums were stored on-site in an out-of-the-way area to avoid traffic and prevent damage.

WSP personnel donned the appropriate personal protective equipment (PPE) when sampling. Disposal of spent PPE was placed into the same drums used for drill spoils.

7 RESULTS AND DATA EVALUATION

The City anticipates redevelopment of the Site as a public park (rather than as an industrial property). The results of the investigation were evaluated using both residential and commercial/industrial screening levels. During the most recent revision to the Report of Findings, all screening levels for soil and soil gas were updated to current values and are derived from DTSC Human and Ecological Risk Office Human Health Risk Assessment Note 3 (HERO Note 3; April 2019 update, June 2020 revision) and the EPA RSLs (May 2020).

In previous versions of the report, alternative screening levels were used if a compound-specific screening level was not available. That practice was discontinued in the July 2020 update to the Report of Findings, except for alternative screening levels specifically addressed during previous responses to comments.

In addition to the results summarized below, and the attached tables and figures, WSP directs the reader to the Amec Foster Wheeler 2018 Phase II investigation report for Area A (Amec, 2018), which should be considered along with the results of the investigation conducted by WSP. The report is provided as Appendix B. Due to the presence of TPH in Amec's boring SB-1, WSP included SB-C29-1, SB-D29-1 and SB-D29-2 within Area A in this soil investigation. WSP also included SG-C29-1 and SG-D29-1 within Area A to supplement Amec's soil gas investigation in Area A.

7.1 GEOPHYSICAL SURVEY RESULTS

GEOVision performed the borehole utility clearance at a total of 240 locations, including all soil and soil gas boring locations and several re-located sample locations. Most clearances identified linear anomalies within a 10-foot radius of the boring locations; only a few of these anomalies were identified by GEOVision as utilities; most were identified as "linear feature" or "trench" as descriptors. GEOVision documented observed features on field forms, which were submitted to WSP.

WSP ensured that borehole placement was a minimum of 3 feet away from any observed anomaly. As a result, during drilling for sample collection, WSP encountered few subsurface obstructions. Given the apparent frequency of subsurface anomalies, the ease with which drilling was completed was due to the effectiveness of the borehole clearance.

A total of 13 separate areas were gridded, surveyed and results reviewed by a professional Geophysicist. GEOVision summarized their findings in their June 22, 2018 Geophysical Investigation report (GEOVision, 2018). The professional opinion of the geophysical survey results is that it was appropriately designed and implemented to locate large and/or continuous objects less than about 8 feet deep; except in portions of the survey area where data was affected by subsurface utilities, reinforced concrete, or surface structures, such as metallic debris and other large surface metallic objects (rail lines, I-beams, manholes). The results of this report corroborated observations during the borehole clearance, notably the prevalence of subsurface linear and trench-like features Site-wide. Superficial and near-surface metallic debris was also prevalent in certain areas of the Site.

GEOVision delineated 13 separate underground anomalies with tank-like characteristics in five of the 13 surveyed areas. WSP used these 13 anomalies to drive the selection of test pit excavation locations across the Site. The anomaly locations are noted in bright green on the test pit figure (Figure 5).

7.2 SOIL GAS SAMPLE RESULTS

WSP and EST completed the soil gas well drilling and probe installation between June 6 and August 10, 2018. A one-month hiatus in drilling occurred between July 4 and August 1, 2018 during which time WSP arranged for access into topographic depressions on-site, previously inaccessible by the drill rigs. In total, 228 locations were drilled, and 451 sample probes were installed.

The EST on-site mobile laboratory technician sampled the soil gas probes in roughly the order they were installed beginning June 12 and completing the work on August 15, 2018.

Sample results are summarized in Table 1 of this report. Soil gas lab reports are included as Appendix H. Due to the large number of individual VOCs reported by the mobile laboratory, the summary table presents:

- the compounds that were detected in at least one sample at a concentration above the method detection limit (MDL), regardless of whether the compound has a screening level, and
- compounds with MDL values that are greater than the applicable residential or commercial/industrial screening levels.

Compounds that were not detected above the MDL and for which the MDL is less than the RSL are not displayed in Table 1.

Screening levels were sourced from the DTSC HERO Note 3 for residential and commercial ambient air screening levels (April 2019 update, revised June 2020). If a compound screening level was not provided in the DTSC tables, EPA RSLs were used for residential and composite worker air (THQ=1.0, May 2020). A default attenuation factor of 0.001 was applied to the DTSC and RSL ambient air screening levels.

Soil gas sampling results identified a number of VOCs associated with petroleum products and chlorinated solvents that exceeded the applicable screening levels. Petroleum-related VOCs that exceeded screening levels included benzene, ethyl benzene, naphthalene, and 1,2-Dibromoethane (EDB). The exceedances for these compounds are primarily noted in the former service track area within grid cells E7, F6, F7. Additional exceedances were noted near the former diesel above-ground storage tank area in cell C3, and near the former diesel shop area in cell H23. Naphthalene occurrences also commonly co-occurred with these compounds. The exceedance for EDB was limited to a single sample.

Chlorinated solvents observed throughout the project sample area at levels exceeding applicable residential and/or commercial/industrial screening levels included 1,1,2-trichloroethane, 1,1-dichloroethane, 1,2-dichloroethane, chloroform, PCE, TCE, cis-1,2-dichloroethene (cis-1,2-DCE), and VC. The majority of the screening level exceedances were noted in areas south of the turntable, beneath and down-gradient of the former machine shop and diesel shop area. Notable VC exceedances are present in areas where benzene is also detected above its screening level, beneath the former service track, and southwest of the former diesel shop area.

In addition to the compounds listed above, two compounds (i.e., 1,2,3-trichloropropane and 1,2-dibromo-3-chloropropane) were not reported above MDLs, but the MDLs exceeded their respective residential and commercial/industrial screening levels.

7.2.1 SUMMARY STATISTICS AND PREVALENT SOIL GAS CHEMICALS

WSP has selected PCE, VC and benzene as three VOCs of prevalence onsite. WSP has used these three compounds for mapping the lateral extent of soil gas contamination in the vadose zone. Soil gas results are presented for depths sampled above 10 ft bgs, and depths sampled below 10 feet. Figures 7 through 12 of this report present these results. Notably, there is little difference between the extent of these contaminants with depth. PCE was observed to be the most prevalent and was distributed throughout the southern half of the Site in both depth zones (Figure 7 and Figure 8). VC was observed in two separate areas in the southwestern and northern portions of the Site (Figure 9 and Figure 10). Benzene was present in similar areas as VC (Figure 11 and Figure 12).

Table 11 of this report presents summary statistics for soil gas sample results, divided into the 0 to 10-foot sample range and the 10 to 20-foot sample range. For each analyte and depth interval, statistics presented include the following:

- Number of observations for each analyte at that interval;
- Number of laboratory detections above the MDL;
- Detection frequency (number of detections divided by the number of samples in that grouping);
- Number of observations that were detected above the MDL whose result exceeded the residential screening level;
- Number of observations that were not detected but whose MDL exceeded the residential screening level;
- Minimum concentration of all detected values (omitting non-detects for that grouping);
- Maximum concentration of all detected values (omitting non-detects for that grouping);
- Median concentration (including non-detects) calculated using the EPA *Statistical Software ProUCL 5.1.00 for Environmental Applications for Data Sets with and without Non-detect Observations.*

7.3 SOIL SAMPLE RESULTS

WSP, along with Cascade Drilling, drilled and sampled soils at the Site from June 18 through August 24, 2018. A month-long hiatus was taken between July 19 and August 21, 2018 while access to the final sample locations was provided by re-grading of slopes. Slope re-grading was necessary to allow drilling access into two low-lying areas of the site, including the former diesel tank storage area in the far northern corner and the former stormwater retention area near the northwestern edge of the Site. Following re-grading, soil and soil gas sample collection was conducted outside the disturbed areas to avoid potential cross-contamination from relocated surface soils.

Sample results are summarized in Tables 2 through 8 of this report. Results are presented by method, including:

- EPA Method 6010B and EPA Method 7471A for Title 22 metals (Table 2);
- STLC and TCLP results (Table 3);
- EPA Method 8015M for TPH-gro, TPH-dro, TPH-mo (Table 4);
- EPA Method 8260B for VOCs (Table 5);
- EPA Method 8270C/8270SIM[1] for SVOCs and PAHs (Table 6);
- EPA Method 8151A for herbicides (Table 7);
- EPA Method 8081A for organochlorine pesticides (Table 8);
- EPA Method 8082 for PCBs (Table 9).

Results are presented in the summary tables along with each compound's DTSC or EPA screening level for both residential and commercial/composite worker exposure scenarios. Soil sample laboratory reports are included as Appendix I.

7.3.1 METALS

Table 2 summarizes results for soil samples submitted for laboratory analysis for Title 22 metals. Metals detected at concentrations exceeding the residential or commercial screening level are listed below. Note that only a residential screening level is provided for arsenic. This screening level is sourced from the 2009 DTSC report on determining arsenic cleanup goals (DTSC, 2009).

- Lead was the most prevalent metal detected above applicable screening levels at the site, with concentrations in 120 samples exceeding the residential screening level and in 54 samples exceeding the commercial/industrial screening level.
- Thallium was identified in 82 samples at concentrations exceeding only the residential screening level.
- Arsenic exceeded the DTSC cleanup goal (12 mg/kg) in 25 soil samples. In most instances, the arsenic exceedances were co-located with the elevated concentrations of lead that exceed residential and/or commercial/industrial screening levels.
- Antimony was detected in 12 soil samples at concentrations that exceeded the residential screening level and in 3 samples at levels exceeding the commercial/industrial screening level. The presence of antimony generally coincided with elevated levels of lead that exceed residential and/or commercial/industrial screening levels.
- Concentrations of cobalt, mercury, and vanadium were each detected at concentrations exceeding the residential screening levels in three soil samples or less at isolated locations on the site.

Figure 13 and Figure 14 illustrate the spatial distribution of lead across the Site. These figures include the maximum soil lead results observed in the top 0 to 5 feet (Figure 13), and at the 10-foot to 20-foot interval (Figure 14). In the shallow zone (0 feet to 5 ft bgs), lead is widely distributed throughout the Site with the highest concentrations occurring in the northern third

---

[1] 18 compounds were analyzed by EPA Method 8270CM (selective ion method) in addition to EPA Method 8270C. The 18 compounds consist of: 1-methylnaphthalene; 2-methylnaphthalene; acenaphthene; acenaphthylene; anthracene; benz(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(g,h,i)perylene; benzo(k)fluoranthene; chrysene; dibenz(a,h)anthracene; fluoranthene; fluorene; indeno(1,2,3-cd)pyrene; naphthalene; phenanthrene; pyrene.

of the Site (Figure 13). Lead was found to be present in the deeper zone (10 feet to 20 ft bgs) at isolated areas along the northern and southern Site boundaries (Figure 14). The presence of lead at depths greater than 10 ft bgs is believed to be associated with areas where soil was disturbed at depth. These areas include:

— The former pollution control system near grid cells H24, G27 and F28
— The excavation and backfill of the former wastewater treatment plant holding ponds near grid cell G4
— Former USTs and underground piping systems near grid cells D4, D5 and D6.

Additional figures depicting soil lead results in the surface (0 to 3 inch interval) and one-half foot sample depths are included in Appendix J. These figures may assist in determining potential impacts of shallow soil disturbance, including pedestrian and vehicle traffic over the Site.

Generally, arsenic detections exceeding the DTSC cleanup level were co-located with elevated concentrations of lead. Figure 15 presents the maximum soil arsenic result observed in sample intervals in the top 0 to 5 feet and indicates four areas of elevated arsenic in the northern half of the Site. Only four detections of arsenic above the background cleanup level were observed in soil samples collected from depths greater than 5 feet (DB-G25-1-10, SB-E4-1-7.5, SB-E4-1-15, and SB-D4-1-7.5).

The metals results were also compared to 20 times the TCLP values for various metals to screen for soil that may be classified as hazardous. If a compound result exceeded 20 times the TCLP value, the TCLP analysis was performed. Similarly, if a metal result exceeded 10 times the STLC value for various metals, the soil may be classified as non-RCRA hazardous in the State of California, and the WET analysis was performed. STLC and TCLP results are summarized in Table 3 of this report. TCLP extractions were performed for chromium and lead, and STLC extractions were performed for antimony, cadmium, chromium, copper, lead, nickel, selenium, vanadium and zinc.

Ninety-six samples were analyzed for lead by the TCLP extraction process, and 14 of those locations exceeded the threshold. Soils present in these areas, if excavated, would be federally classified as RCRA Hazardous Waste. These locations are largely in the northern end of the Site (Figure 14), proximal to former ASTs and USTs, and in the north-central area of the Site, downgradient of the former service track area, and adjacent to a soil removal and cleanup completed in 1985 (CDM, 2011). An additional 77 STLC WET extraction results exceeded the California non-RCRA hazardous waste standard for lead.

The findings of the remaining TCLP and STLC testing are listed below:

— Thirteen samples were tested by TCLP extraction for chromium and none of the detected concentrations exceeded the applicable TCLP threshold (5.0 milligrams per liter [mg/L]). Similarly, 36 samples were analyzed by WET extraction and none of the detected concentrations exceeded the STLC threshold (5.0 mg/L).
— One (SB-F11-5) of the four samples tested by WET extraction for cadmium exceeded the STLC threshold (1.0 mg/L).
— Four samples tested by WET extraction for copper exceeded the STLC threshold (25 mg/L).
— One of the samples tested by WET extraction for selenium (DB-F26-1-0) exceeded the STLC threshold (1.0 mg/L).
— Three samples tested by WET extraction for zinc exceeded the STLC threshold (250 mg/L).
— None of the samples tested by WET extraction for antimony, nickel, and vanadium exceeded the applicable STLC thresholds.

7.3.2 TPH

TPH results for the 634 soil samples submitted for laboratory analysis are summarized in Table 4. TPH was analyzed in soil as three separate hydrocarbon ranges, including the following carbon chain lengths:

— C8-C10, representing the gasoline range (TPH-gro)
— C10-C28 representing the diesel range (TPH-dro)
— C28-C40 representing the motor-oil range (TPH-mo).

Screening levels for TPH compounds were selected from EPA RSLs and from the DTSC HERO Note 3. The lower value of aromatic or aliphatic TPH compounds was selected as the screening level, aromatic/aliphatic low for TPH-gro, medium for TPH-dro, and high for TPH-mo.

TPH-dro was the most prevalent range to be detected above the residential and/or commercial/industrial screening levels, while TPH-mo exceeded screening levels in fewer soil samples. TPH-dro concentrations exceeded the residential screening level in 166 soil samples, and the commercial/industrial screening level at 111 locations. Concentrations of TPH-gro exceeded both the residential and commercial/industrial screening level in one sample. Concentrations of TPH-mo exceeded only the residential screening level in 11 soil samples. In most instances, the TPH-gro and TPH-mo exceedances were co-located with the TPH-dro exceedances.

For this reason, WSP has summarized the diesel-range results (TPH-dro) on Figures 16 through 20. Each figure presents the maximum TPH-dro result for the depth interval shown. In the interval from 0 to 5 feet TPH-dro is distributed throughout the Site with the highest concentrations located in the northern and southern portions of the Site (Figure 16). In the 10- to 20-foot interval, the distribution of soil impacts decreases to four isolated areas with higher concentrations in the northern portion of the Site (Figure 18). Below 20 ft bgs, the extent of TPH-dro increases relative to the 10- to 20-foot interval, particularly in the northern portion of the Site (Figures 19 and 20).

7.3.3 VOCS

VOC results for the 63 soil samples submitted for laboratory analysis are summarized in Table 5. VOC samples were collected from a single depth interval in each soil boring. The sample depth selected was always above the groundwater table, and wherever possible was the sample interval where field PID readings peaked in the boring. If no PID observations were noted above 0.0 ppm, the sample interval was randomly selected.

Due to the large number of individual VOCs reported in the laboratory report, Table 5 includes the following: (i) compounds that have been detected in at least one sample at concentrations above the MDL, regardless of whether the compound has a screening level, and (ii) compounds with MDL values that are greater than the applicable residential or commercial/industrial screening levels. Compounds that have not been detected above the MDL and with MDLs less than the residential and commercial/industrial screening levels have not been included in Table 5.

Only two VOCs (naphthalene and PCE) were detected at concentrations exceeding the residential and/or commercial/industrial screening levels. Naphthalene was detected above the MDL in 12 soil samples and only three results exceeded the residential screening level. PCE was detected above the MDL in 16 soil samples and exceeded both the residential and commercial/industrial screening levels in one soil sample.

Five compounds were not detected above the MDL, but the MDL exceeded the residential or commercial/industrial screening level, consisting of trans-1,4-dichloro-2-butene; cis-1,4-dichloro-2-butene; 1,2-dibromo-3-chloropropane; 1,2,3-trichloropropane; and VC. These five compounds are included in Table 5.

Please refer to Table 5 for VOC compounds with results reported above MDLs, but below both residential and commercial/industrial screening levels.

7.3.4 SVOCS AND PAHS

Soil SVOC and PAH results are summarized in Table 6. SVOC and PAH samples were collected from 20 boring locations, and often at multiple depths in each boring. Samples were selected in consultation with the City, and typically coincided with strong visible soil staining or presence of visible petroleum product. As with soil VOC results, the summary table includes: (i) compounds that have been detected in at least one sample at concentrations above the MDL, regardless of whether the compound has a screening level, and (ii) compounds with MDL values that are greater than the applicable residential or commercial/industrial screening levels. Compounds that have not been detected above the MDL and with MDLs less than the residential and commercial/industrial screening levels have not been included in Table 6. The following compounds were reported above MDLs and above their applicable residential screening level in at least one sample:

- 1-Methylnaphthalene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Dibenz(a,h)anthracene
- Naphthalene

The naphthalene result in one sample exceeded the commercial/industrial screening level. No other detected compounds exceeded their compound-specific commercial/industrial screening level.

Please refer to Table 6 for compounds with results reported above MDLs, but below both residential and commercial/industrial screening levels.

The following compounds, as a result of dilutions, were reported as non-detect results (below laboratory MDLs) that exceeded either the residential or commercial/industrial screening level in at least one sample:

- 1,2,4-trichlorobenzene
- 1,4-dichlorobenzene
- 2,4,6-trichlorophenol
- 2,4-dinitrotrotoluene
- 2,6-dinitrotoluene
- 2-methyl-4,6-dinitrophenol
- 3,3'-dichlorobenzidine
- 4-chloroaniline
- 4-nitroaniline
- Azobenzene
- Benzidine
- Hexachlorobenzene
- Hexachlorobutadiene
- Hexachlorocyclopentadiene
- Hexachloroethane
- N-nitrosodimthylamine (NDMA)
- N-nitrosodi-n-propylamine (NDPA)
- Nitrobenzene
- Pentachlorophenol

None of these compounds were reported above MDLs in historical environmental reports (including data compiled in the 2004 Remedial Investigation Data Summary Report [CDM, 2004] and the Data Gap Investigation Work Plan [CDM Smith, 2014b]). One compound from this list was, however, detected as part of the 2018 Area A Site Characterization (Amec, 2018). This compound, pentachlorophenol, was detected at 0.0286 mg/kg, below screening levels, at 0.5 ft bgs in one sample.

WSP notes that several additional SVOC compounds were detected at low concentrations and below screening levels during the 2018 Area A Site Characterization, consisting of: 2-methylnaphthalene, anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene (includes estimated J-flagged compounds).

7.3.5 HERBICIDES, PESTICIDES, PCBS

All laboratory-reported compounds for herbicides, pesticides and PCBs are reported in Tables 7, 8, and 9, respectively. No detections above laboratory MDLs were reported for herbicide or pesticide compounds at the Site, with the exception of the herbicide chloramben, which was reported at 11.6 micrograms per kilogram (µg/kg) at SB-F10-1-2.5. This detection did not exceed its residential or commercial/industrial screening level. Due to laboratory dilutions, the MDL for one herbicide compound (2-methyl-4-chlorophenoxyacetic acid) exceeded the residential screening level (Table 7).

PCB samples were collected from ten locations across the Site where the historical use of different types of oil was suspected, and beneath a suspected former pole-mounted transformer. No samples were collected beneath the suspected hydraulic lifts near the radial tracks south of the turntable. PCB Aroclor-1260 was detected above MDLs in two samples from sample locations SB-D12-1 (surface 0 to 3 inches) and SB-H8-1 (0.5 ft bgs). Sample location SB-H8-1 is associated with a former oil-water separator next to the industrial wastewater treatment plant. The potential historical source of PCBs at sample location SB-D12-1 is unknown.

PCB results were below laboratory MDLs in samples collected near the oil water separator in cell I19 and beneath the suspected pole-mounted transformer.

7.3.6 TEST PIT RESULTS

Test pit sample results for Title 22 metals, TPH, VOCs, SVOCs, pesticides, and PCBs are presented in Appendix G and summarized below. Eighteen soil samples and one aqueous sample were collected. The soil results were compared to DTSC HERO Note 3 or EPA RSLs. The aqueous result was compared to the San Francisco Regional Water Quality Control Board Tier I Environmental Screening Level (ESL) for groundwater.

- Title 22 metals: soil results for antimony, arsenic, cobalt, lead, and thallium exceeded their respective residential screening levels. Six samples also exceeded the commercial/industrial screening level for lead. The arsenic and lead exceedances were co-located. In the aqueous sample, the results for antimony, arsenic, barium, chromium, cobalt, copper, lead, mercury, nickel, thallium, vanadium, and zinc exceeded the Tier I ESL.
- TPH: Results for TPH-dro exceeded the residential screening level in seven samples, with concentrations in five of those samples also exceeding the commercial/industrial screening level. Results for TPH-mo exceeded the residential screening level in five samples. TPH-gro was not detected above MDLs, although the MDL for five samples exceeded the residential or commercial screening level. In the aqueous sample, TPH-gro and TPH-dro were detected above the MDL and the results exceeded the Tier I ESL. TPH-mo was not detected above the MDL; however, the MDL exceeded the Tier I ESL.
- VOCs: select VOCs were detected above MDLs; however, none of the results exceeded their respective residential or commercial/industrial screening levels. Although not detected, the MDLs of select VOCs did exceed the residential or commercial/industrial screening level.
- Pesticides, SVOCs, PCBs: Pesticides and PCBs were not detected above MDLs. Select SVOCs were detected above MDLs, but none of the detections exceeded their respective residential or commercial/industrial screening levels. Although not detected, the MDLs of select SVOCs did exceed the residential or commercial/industrial screening level.

7.3.7 SUMMARY STATISTICS

Table 10 of this report presents summary statistics for soil sample results, divided into the following depth groupings:

- 0 feet to 0.5 foot sample range ($0 < x \leq 0.5$);
- greater than 0.5 feet to 5 feet ($0.5 < x \leq 5$);
- greater than 5 feet to 30 feet ($5 < x \leq 30$); and
- greater than 30 feet and below ($x > 30$).

Test pit soil sample data was also included in the summary statistics tables, following the same grouping-by-depth approach.

All analyzed compounds are displayed in Table 10. Select compounds are analyzed by multiple methods. These compounds are only displayed under only one analytical method in Table 10 and consist of the following:

- Compounds analyzed by EPA Methods 8270C and 8270CM and displayed under 8270CM only: 1-methylnaphthalene; 2-methylnaphthalene; acenaphthene; acenaphthylene; anthracene; benz(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(g,h,i)perylene; benzo(k)fluoranthene; chrysene; dibenz(a,h)anthracene; fluoranthene; fluorene; indeno(1,2,3-cd)pyrene; naphthalene; phenanthrene; pyrene.
- Compounds analyzed by EPA Methods 8260B and 8270C and displayed under 8270C only: 1,2,4-trichlorobenzene; 1,2-dichlorobenzene; 1,3-dichlorobenzene; 1,4-dichlorobenzene; hexachlorobutadiene; naphthalene; and
- Compounds analyzed by EPA Methods 8151A and 8270C and displayed under 8270C only: 4-nitrophenol and pentachlorophenol.

Statistics presented include the following:

- Number of observations for each analyte at that interval;
- Number of laboratory detections above the MDL;
- Detection frequency (number of detections divided by the number of samples in that grouping);
- Number of observations that were detected above the MDL whose results exceeded the residential screening level;
- Number of observations that were not detected but whose MDL exceeded the residential screening level;
- Minimum concentration of all detected values (omitting non-detects for that grouping);
- Maximum concentration of all detected values (omitting non-detects for that grouping);
- Median concentration (including non-detects) calculated using the EPA *Statistical Software ProUCL 5.1.00 for Environmental Applications for Data Sets with and without Nondetect Observations.*

8 DATA QUALITY OBJECTIVES

The site-wide remedial investigation was implemented to evaluate the potential presence of chemical constituents in soil and soil gas at the G2 Parcel. The sampling program consisted of collecting soil gas samples at a minimum frequency of one sampling location per 100-foot square grid cell and collecting multi-depth soil samples at approximately even intervals site-wide. Samples were collected to assess environmental conditions in general and in suspect areas of the Site. EPA methods described in the Areas A and A2 SAP Appendix A Quality Assurance Project Plan (QAPP) were used for all analyses.

Data quality indicators, measurements quality objectives, data review and validation, data management, and assessment oversight processes/activities applicable to this project were implemented as described in the QAPP submitted with the Areas A and A2 SAP (WSP, 2018a, 2018b, 2018c).

8.1 DATA REVIEW

8.1.1 SOIL GAS RESULTS LABORATORY QC SUMMARY

Prior to running samples each morning, the soil gas mobile laboratory technician ran a 12-hour tuning test, an EPA Method 8260 standard, a laboratory control sample, a method blank, an equipment blank and a material blank. The first sample collected each day was also duplicated.

One sample analyte was outside of surrogate control standards, namely 4-bromofluorobenzene on June 12, 2018. The laboratory control was accepted as no other analytes were outside of standards. Field sample results were not adjusted based on this result.

Seven total analytes, from six duplicate samples, were reported outside of relative percent difference ranges. Of these results, the duplicate sample was reported at a concentration significantly lower than the actual sample in five of these results. Of the remaining two analytes, the results were not a cause to adjust data in the summary Table 1. In SG-H19-2-5, 1,1,1-trichloroethane was reported as 38 micrograms per cubic meter ($\mu g/m^3$) in the duplicate and at 21 $\mu g/m^3$ in the sample. In SG-E26-1-5, 1,1,1-trichloroethane was reported at 88.4 $\mu g/m^3$ in the duplicate and 52 $\mu g/m^3$ in the sample.

8.1.2 SOIL GAS VOCS REVIEW OF REPORTING LIMITS AND SCREENING LEVELS

MDLs for VOC compounds in soil gas were below the applicable residential and commercial/industrial screening levels, except for 1,2,3-trichloropropane and 1,2-dibromo-3-chloropropane. Concentrations for these two compounds were not detected above the MDL (Table 1).

8.1.3 SOIL RESULTS LABORATORY QC SUMMARY

One soil sample analytical result was reported by Enthalpy Analytical with a laboratory flag “B”, denoting that the sample result was also reported in the associated method blank. The sample result was for soil lead STLC at depth 0.5 feet. The result was 10.2 mg/L which is above the California hazardous waste threshold of 5 mg/L. The associated blank result for this data point was 0.204 mg/L. The reported sample result was 50 times greater than the method blank result, and therefore the sample data point was retained.

Enthalpy Analytical reported 121 soil sample analytical results collected from 40 locations with a laboratory “B1” flag, denoting that the associated method blank result was reported with a J-flag detection (meaning above the MDL, but below the reporting limit and therefore is an estimated value). These results included EPA Method 6010B results for: antimony, arsenic, cadmium, lead, mercury, molybdenum, selenium, silver and thallium. They also included results for EPA Method 8270C for: benz(a)anthracene, benzyl alcohol, fluoranthene, and pyrene. Each of these sample results were also reported as J-flag. None of the J-flag sample results were above their respective residential screening level and therefore are not of concern for impacts to the remedial implementation. These results have been retained, however a "B1, J" flag notation has been maintained in the data summary tables.

Sixty soil sample analyte results collected from six locations also were reported with a "D2", denoting that the sample reporting limit was elevated due to the sample matrix, and the target analyte was not detected above the elevated reporting limit. These results included EPA Method 8260B and EPA Method 8270C results. Of these 60 sample results, none exceeded their respective analyte screening level for residential site use. Sample results were retained, however a "D2" flag was noted next to the result in the data summary tables.

Twelve soil sample analyte results, collected from six locations were reported with a "L" by the laboratory, denoting that the laboratory control sample or laboratory control duplicate was out of control limits. The sample results were reported for selenium by EPA Method 6010B and 2-methylnaphthalene, indeno(1,2,3-cd)pyrene and benzo(a)pyrene by EPA Method 8270C. None of the reported results were above their respective residential screening levels and therefore the data were retained, denoted with an "L" flag in the data summary tables.

Seventeen soil sample analyte results, collected from three locations were reported with a "P" by the laboratory, denoting the sample was received without proper preservation in accordance with the EPA guidelines. These samples were all collected for VOCs by EPA Method 8260B. All but four of these analytes were reported as J-flag results by the laboratory, and none exceeded their compound specific residential screening level. WSP noted the preservation issues were likely due to storage of methanol-preserved vials that were apparently leaking prior to sample collection. The resolution was to ensure bottle inspection prior to sample collection, storage in an area where temperatures were stable, and maintain all bottle sets upright. All results were retained for the purpose of documenting the results that were reported, however a P-flag was added to the data summary tables.

8.1.4 SOIL VOCS REVIEW OF DETECTION LIMITS AND SCREENING LEVELS

Five VOCs were not detected in soil above the MDL, but the MDL exceeded the residential or commercial/industrial screening level. These five compounds included: trans-1,4-dichloro-2-butene; cis-1,4-dichloro-2-butene; 1,2-dibromo-3-chloropropane; 1,2,3-trichloropropane; and VC (Table 5).

8.1.5 SOIL SVOCS AND PAHS REVIEW OF DETECTION LIMITS AND SCREENING LEVELS

As noted in Section 7.3.4 of this report, several compounds reported under EPA Method 8270C and 8270CM were not detected above laboratory MDLs in any sample from this investigation, nor were they reported above reporting limits as summarized in previous environmental investigation reports. These compounds were, however, diluted prior to analysis by the laboratory to the point where their reportable limits were above residential or commercial/industrial screening levels. In reviewing the list of such compounds, WSP proposes to eliminate certain compounds from this list to narrow down on the specific SVOC and PAH compounds applicable for remedial consideration at the Taylor Yard G2 Parcel. These compounds are proposed for removal from consideration as they are SVOCs that are not commonly associated with railway transport sites as determined by Wilkomirski et al. (2011).

— 1,4-dichlorobezene
— 2,4,6-trichlorophenol
— 2,4-dinotrotoluene
— 2-methyl-4,6-dinitrophenol
— 3,3'-dichlorobenzidene
— 4-chloroaniline
— 4-nitroaniline
— Azobenzene
— Benzidine
— Bis(2-ethylhexyl)phthalate
— Hexachlorobenzene
— Hexachlorobutadiene
— Hexachlorocyclopentadiene
— Hexachloroethane
— Nitrobenzene
— N-nitrosodimthylamine (NDMA)
— N-nitrosodipropylamine (NDPA)
— Pyridine

9 SUMMARY AND CONCLUSIONS

At the completion of this remedial investigation, soil and soil gas data indicate that several COPCs exceed applicable DTSC and EPA residential and commercial/industrial screening levels at the Site. Additionally, asbestos was detected in three types of material on-site, during a targeted survey that focused on concrete slabs scheduled for demolition during excavation of the test pits.

The most prevalent and notable COPCs exceeding screening levels are lead and TPH-dro in soils, and VC and PCE in soil gas. Several other COPCs are co-located with these compounds.

9.1 SOIL LEAD AND OTHER METALS

Lead is present in shallow surface soils across the Site, generally found at its highest concentrations from the surface to 5 ft bgs, with impact extending to depths of 10 feet to 20 ft bgs in isolated areas. The highest concentrations are associated spatially with: the former service track area and associated above and below-ground storage tanks to the north and east of the service track; a shallow metallic soil debris field around the foundation of former building to the south of the service track; and the former diesel shop area. The presence of lead below 10 ft bgs is believed to be associated with areas where soil was disturbed at depth. Co-located with lead around the service track area and to the south is arsenic. Historic environmental investigations also identified arsenic above its screening level near the former diesel shop area, but those results were not replicated in this investigation. Appendix J presents the lead and arsenic distribution compared to those areas historically identified with those elevated soil metals.

Thallium is present across the Site in shallow surface soils (above 5 feet) at levels that exceed its residential screening level. Its presence is largely distributed across the middle of the G2 Parcel, extending from the southern end of the former service track area to the northern end of the diesel shop. No shallow soil results exceeded the commercial/industrial screening level.

As noted in Section 7.3.1, other metals with detections above their screening levels include antimony (co-located with lead detections above screening levels), vanadium (one detection above residential screening levels), mercury (three detections above residential screening level), and cobalt (two detections above residential screening levels).

With respect to TCLP and STLC analysis, lead was the only metal that exceeded its TCLP value. The locations of the TCLP exceedances are largely in the northern end of the Site (Figure 14), proximal to former above and below-ground storage tanks, and in the north-central area of the Site, downgradient of the former service track area, and adjacent to a soil removal and cleanup completed in 1985. Several other metals exceeded their STLC value in one or more samples, consisting of lead, cadmium, copper, selenium, and zinc.

9.2 SOIL TPH

Soil petroleum results are largely non-detect for the reported gasoline range (C8-C10) and motor-oil range (C28-C40). The TPH detections are driven by diesel-range compounds (C10 to C28). For shallow soils (above 5 ft bgs), TPH-dro is present extensively across the Site, concentrated around the former service track, turn-table, diesel shop and down-gradient of the diesel shop area. With increasing depth, the extent of TPH-dro-impacted soils decreases between 10 feet and 20 ft bgs and is concentrated around the former service track with its fuel storage tanks, and the former diesel shop area. Below 20 ft bgs, the impacts from the diesel shop become less apparent, whereas the extent of impacts around the service track in the northern portion of the Site expands.

9.3 SOIL VOCS, PAHS, AND SVOCS

Soil VOC results identify only two compounds (naphthalene and PCE) with detectable concentrations that exceed applicable screening levels at the Site. Soil-matrix VOC sample data appear to have limited utility in identifying any vadose zone sources of VOCs observed in soil gas. Available soil sampling data identify elevated PCE concentrations in shallow soil that appear to decrease with depth. However, the soil sampling network appears to be insufficient to delineate the lateral extent in shallow soil.

Of the detectable PAHs and SVOCs in soil sampled as part of this investigation, benzo(a)pyrene was observed most frequently. Its presence is strongly correlated with the presence of TPH-dro in soils down to 15 ft bgs. The one notable exception is within the former unlined ponds north of the stormwater retention pond, where diesel is not present above screening levels (SB-G4-1), but benzo(a)pyrene is present at 960 µg/kg (SB-G4-1-5). Historical results for SVOC and PAH sampling generally did not report many laboratory detections; however, elevated reporting limits were common. In particular, the former conveyance pathway for industrial wastewater (primarily in grid cells G9 and H9 through G14 and H14) was an area where elevated detection limits were reported in prior reports. These areas were not resampled as part of this investigation.

9.4 SOIL GAS VOCS

The soil gas VOCs detected above laboratory reporting limits and attenuation factor-adjusted screening levels in the shallow 0 to 10-foot sampling range (0 to 10 ft bgs) or the 10 to 20-foot sampling range (10 to 20 ft bgs) included: 1,1,2-trichloroethane, 1,1-dichloroethane, 1,2-dichloroethane, benzene, EDB, chloroform, cis-1,2-dichloroethene, ethylbenzene, naphthalene, PCE, TCE and VC. Of these compounds, benzene, PCE and VC were selected as the compounds exhibiting the greatest prevalence onsite.

9.5 SUPPLEMENTAL INVESTIGATIONS

A number of samples collected in locations around the perimeter of the investigated area were reported as exceeding screening levels of soil metals, TPH-dro and soil gas VOCs. No further samples were collected beyond these data points, and therefore, delineating the outer perimeter of affected media was not possible in this report. Limited investigations in the following areas may be desirable to further define:

- the lateral boundaries of the lead and TPH-dro soil contamination to the north and east within the Site; and
- the lateral boundaries of the VC, PCE and other VOCs in soil gas above risk-based screening levels to the east and southeast within the Site.

WSP believes that with the limited investigation of the areas noted above, the Site will be sufficiently characterized for future remedial action, enabling subsequent preparation of a Response Plan and Risk Evaluation for the interim projects and the final Taylor Yard G2 River Park Project use scenarios for the Site.

REFERENCES

- Amec Foster Wheeler, 2018. Site Characterization Report, Taylor Yard Parcel G-2, Area A, 2850 Kerr Street, Los Angeles, California. February 13.
- California Department of Water Resources (DWR), 1961. Bulletin 104, Planned Utilization of Ground Water Basin of the Coastal Plan of the Los Angeles County.
- CDM, 2004. Taylor Yard Remedial Investigation Data Summary Report. Union Pacific Railroad Company. December 28.
- CDM, 2010. Union Pacific Railroad Company 2009 Annual Groundwater Monitoring Report, Taylor Yard, Los Angeles, California. June.
- CDM, 2011. Feasibility Study. Taylor Yard Parcel G-2 Los Angeles, California. September 21.
- CDM Smith, 2014a. Final Remedial Action Plan, Taylor Yard Parcel G-2, Los Angeles, California. February 3.
- CDM Smith, 2014b. Data Gaps Investigation Work Plan. Taylor Yard Parcel C-2, Los Angeles, California. September 15.
- DTSC, 2009. Arsenic Strategies, Determination of Arsenic Remediation, Development of Arsenic Cleanup Goals. January 16.
- DTSC, 2019a. Investigation Report for Former Taylor Yard Parcel G2 Site, 2850 Kerr Street, Los Angeles, Site Cod #301792. February 21.
- DTSC, 2019b. Report of Findings – Former Taylor Yard Parcel G2 Site, 2850 Kerr Street, Los Angeles. November 7.
- DTSC, 2020. Report of Findings – Taylor Yard Parcel G2 Site, 2850 Kerr Street, Los Angeles. June 5.
- DTSC, 2019. California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO), Human Health Risk Assessment (HHRA) Note, HERO HHRA Note Number: 3, DTSC-modified Screening Levels (DTSC-SLs), Release Date: April 2019. (HHRA Note 3 Tables – June 2020).
- E2ManageTech, 2018. Phase I Environmental Assessment, Taylor Yard Parcel G-2, 2850 Kerr Street, Los Angeles, California, 90065. February 27.
- EPA, 2020. Regional Screening Levels (RSLs). May.
- ERM, 1999. Phase 4 Soil and Groundwater Data Gaps Investigation Report, Taylor Yard, Los Angeles, California. July.
- GEOVision Geophysical Services Inc (GEOVision), 2018. Geophysical Investigation. Taylor Yard Parcel G-2 River Park Project, Los Angeles, California. June 22.
- Lamar, D.L. 1970. Geology of the Elysian Park, Repetto Hills Area, Los Angeles County California, California Division of Mine and Geology, Special report 101, San Francisco, California.
- Laton, W.R. 2002. Taylor Yard and Los Angeles River, Preliminary Groundwater and Surface Water Study Groundwater Model of Taylor Yard and Vicinity Los Angeles, California. NGWA National Meeting (abstract/poster).
- Miller Brooks Environmental, Inc. (MBE). 2002. Taylor Yard and the Los Angeles River Preliminary Groundwater and Surface Water Study. A report to the California Coastal Conservancy and the Los Angeles and San Gabriel Rivers Watershed Council. March.
- Oskin, M., Sieh, K., Rockwell, T., Miller, G., Guptill, P., Curtis, M., McArdle, S., and Elliot, P. 2000. Active Parasitic Folds on the Elysian Park Anticline: Implications for Seismic Hazard in Central Los Angeles, California. GSA Bulletin, v. 112. May.
- SCST, 2019. 2019 Annual Monitoring Report, Taylor Yard Parcel G2 Groundwater Monitoring, 2850 Kerr Street, Los Angeles, California. August 30.
- WSP, 2018a. Stage A Remedial Investigation Work Plan, Taylor Yard Parcel G-2. March 2.
- WSP, 2018b. Stage B Remedial Investigation Work Plan, Taylor Yard Parcel G-2. March 2.
- WSP, 2018c. Taylor Yard G-2 River Park Project, Area A and A2, Site-Specific Sampling and Analysis Plan. March.

- US Geological Survey (USGS), 2004. Geological, Hydrological, and Biological Issues Related to the Proposed Development of a Park at the Confluence of the Los Angeles River and the Arroyo Seco, Los Angeles County, California, Scientific Investigations Report, 2004-5296.
- Wilkomirski B., Sudnik-Wojcikowska B., Galera H., Wierzbicka M., and Malawska M. 2011. Railway transportation as a serious source of organic and inorganic pollution. Water, Air, and Soil Pollution. 218(1-4): 333-345. June.

FIGURES

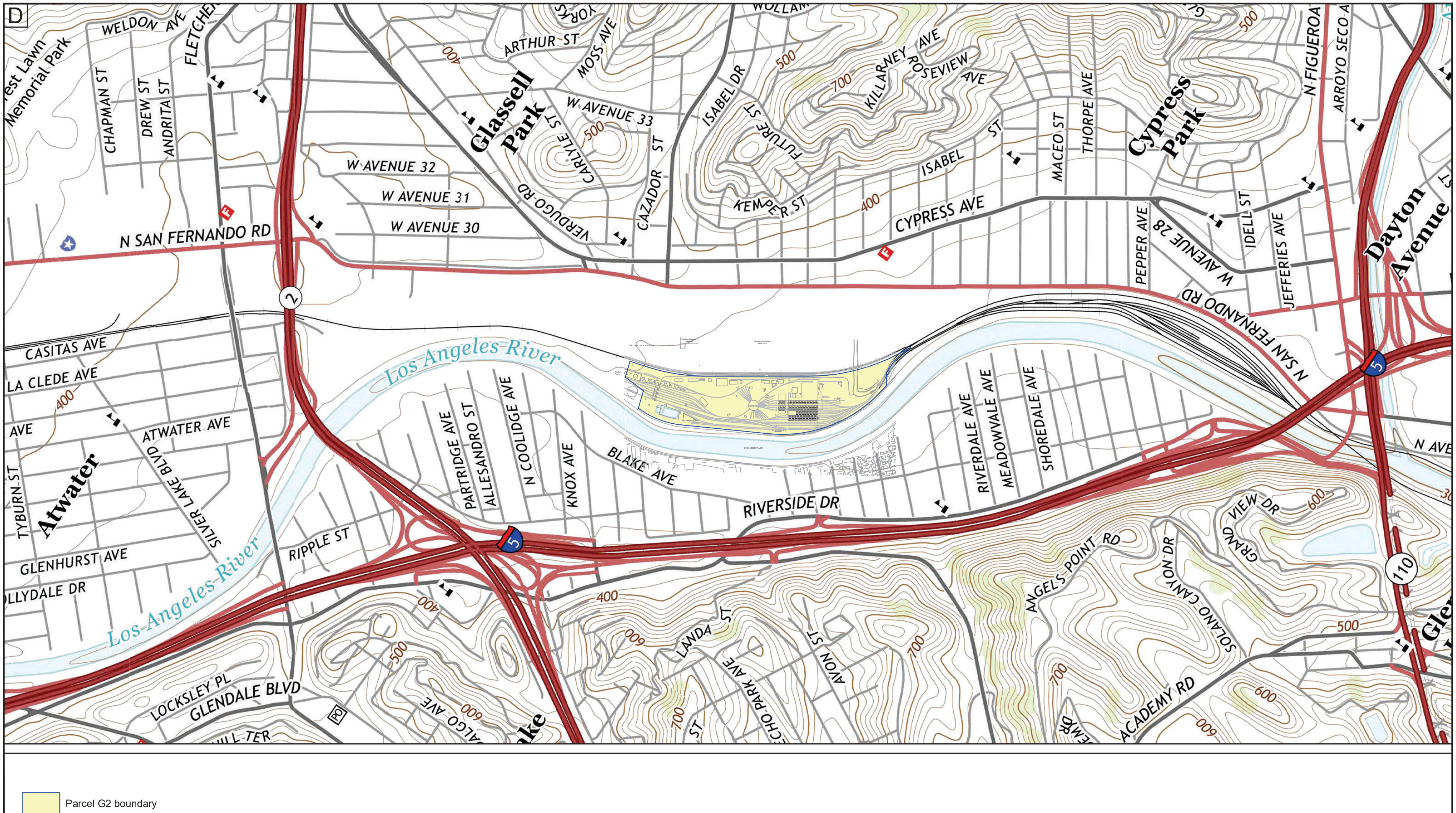


FIGURE 1

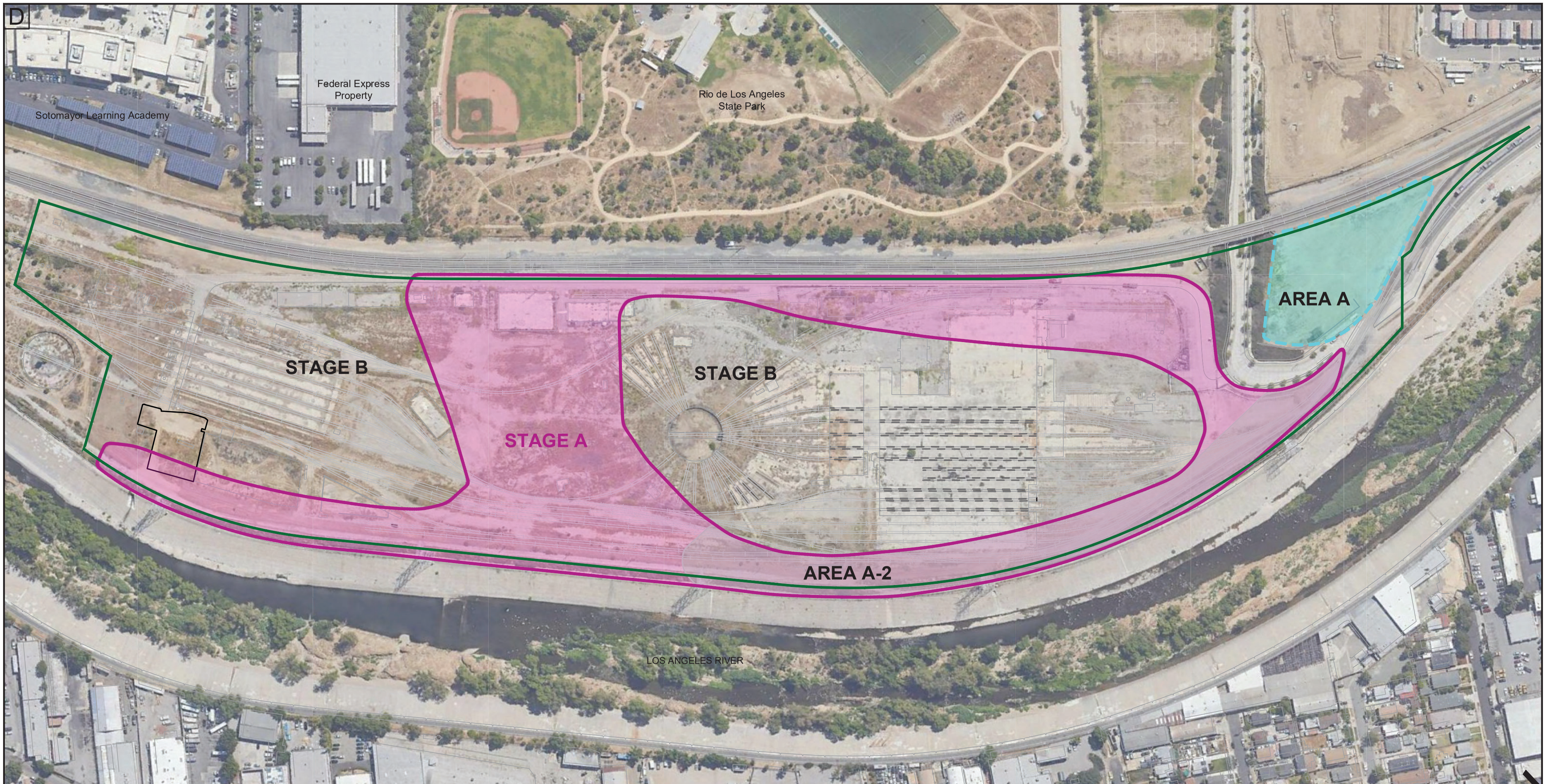
SITE MAP

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: AJC 11/21/18
Checked:
Approved:
DWG Name: SITE MAP

WSP USA Inc.
444 SOUTH FLOWER ST, SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938



Parcel G2 boundary

WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 2

FORMER STAGE A, STAGE B, AREAS A and A2 BOUNDARIES

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By:	AJC 11/21/18
Checked:	
Approved:	
DWG Name:	

0 50 100 200

Parcel G2 boundary

MRCA EASEMENT

WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 3

CURRENT SITE BOUNDARY INCLUDING MRCA EASEMENT

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: AJC 11/21/18
Checked:
Approved:
DWG Name:

0 50 100 200

Parcel G2 boundary
Existing monitor well

Soil gas location
Shallow (20') soil boring location
Deep (80') soil boring location

WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 4

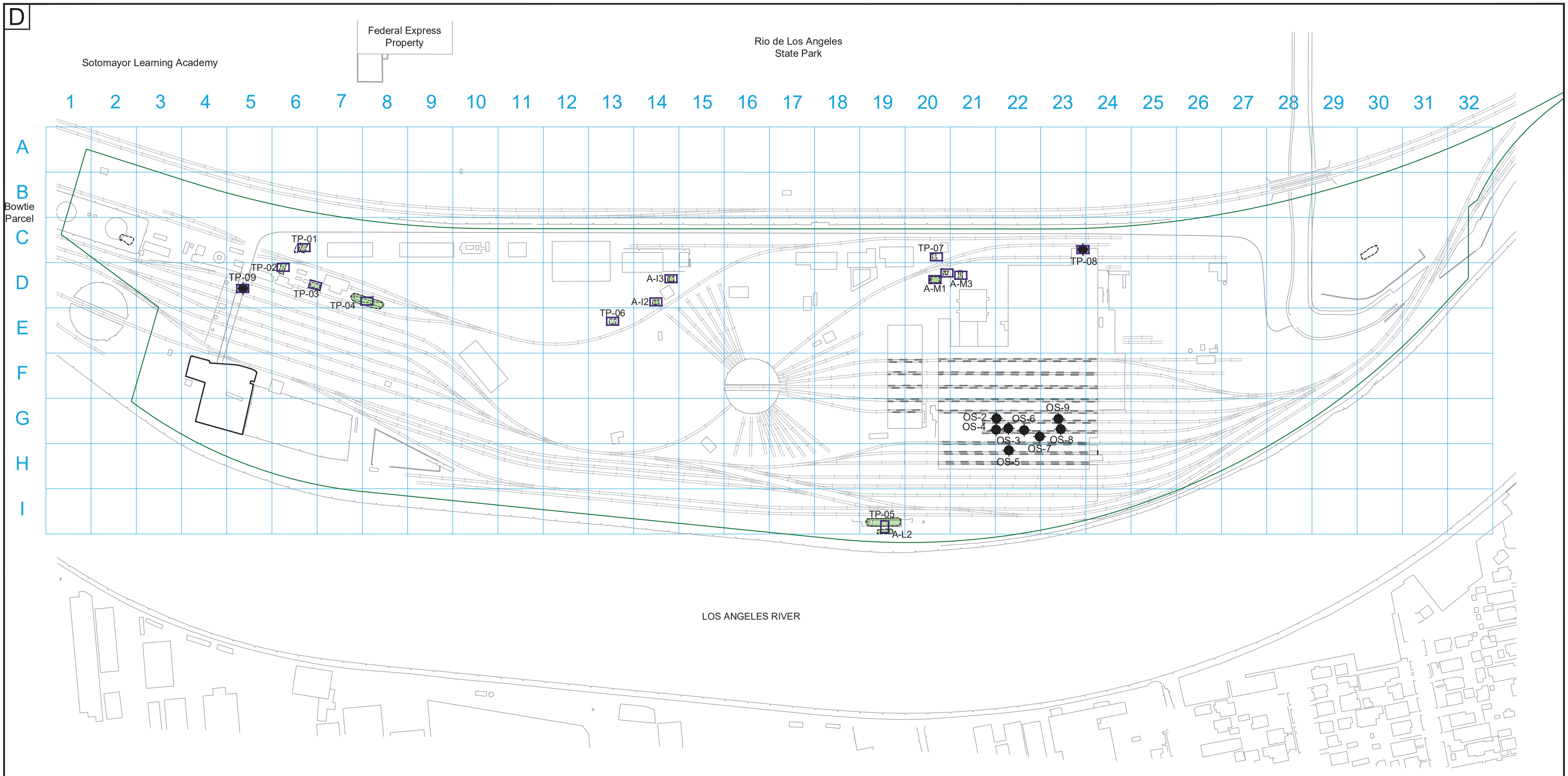
BORING LOCATIONS

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: AJC 11/21/18
Checked:
Approved:
DWG Name:

0 50 100 200



Parcel G2 boundary

OS-1 Oil seep location

A-E1 GEO-Vision anomaly interpreted UST location (to scale based on GEO-Vision report)

Area of subsurface investigation - not to scale. Test pits will be first attempted based on a target size of 3 ft x 3 ft x 3 ft, and were expanded with approval from the city.

TP-01 Test pit sample location

WSP USA Inc. 444 SOUTH FLOWER ST, SUITE 800 LOS ANGELES, CA 90071 (213) 995-3938	FIGURE 5 TEST PIT LOCATIONS	2850 KERR STREET LOS ANGELES, CALIFORNIA 90039 PREPARED FOR CITY OF LOS ANGELES, CALIFORNIA	Drawn By: AJC 11/21/18 Checked: Approved: DWG Name:

Parcel G2 boundary

Existing monitor well

Asbestos Mastic-wrapped steel piping or transite pipe

Soil gas location

Shallow (20') soil boring location

Deep (80') soil boring location

Area of impact from superficial asbestos tar and fabric sheeting

WSP USA Inc.
444 SOUTH FLOWER ST, SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 6

ASBESTOS LOCATIONS

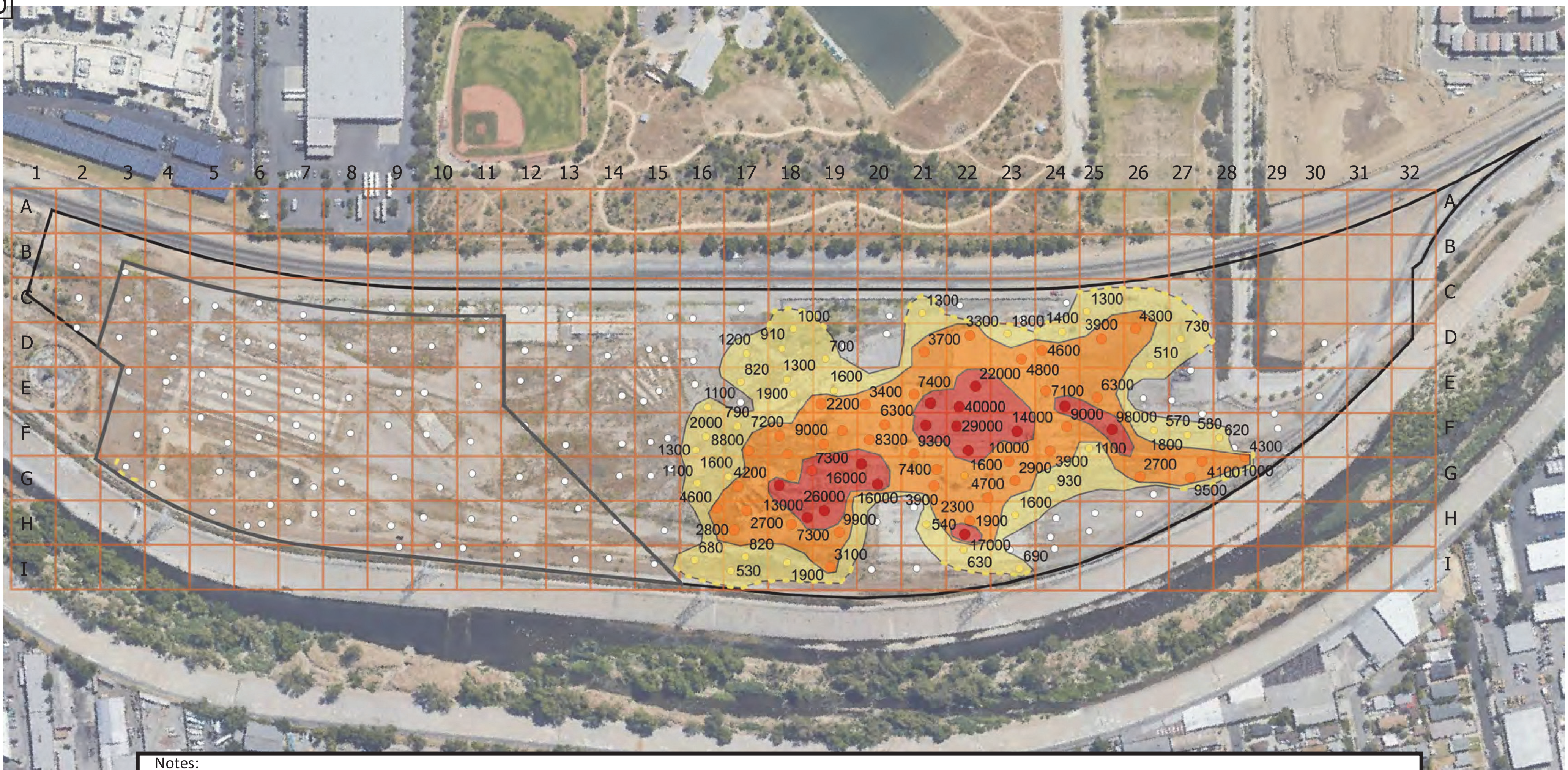
2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: AJC 11/21/18
Checked:
Approved:
DWG Name:

0 50 100 200

D



Notes:

- 2200 (orange dot) =analyte reported value in µg/m^3
- µg/m^3 =micrograms per cubic meter

1) All samples analyzed by EPA Method 8260B modified for soil gas

2) Sample ranges presented are associated with DTSC human and ecological risk office (HERO) Note 3 for residential or commercial air (April 2019 update, June 2020 revision), or EPA regional screening levels established for residential and composite worker air (May 2020). A 0.001 attenuation factor applied.

(yellow dashed line) =Outermost contour lines are estimated based on concentrations. Actual boundary is unknown.
Residential = 460 µg/m3, Commercial = 2,000 µg/m3

TETRACHLOROETHENE (PCE) POLYGON LEGEND

COLOR	MIN (µg/m^3)	MAX (µg/m^3)
Yellow	460	2,000
Orange	2,001	10,000
Red	10,001	150,000

WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 7

Soil Gas Tetrachloroethene (PCE) 0 to 10 ft bgs

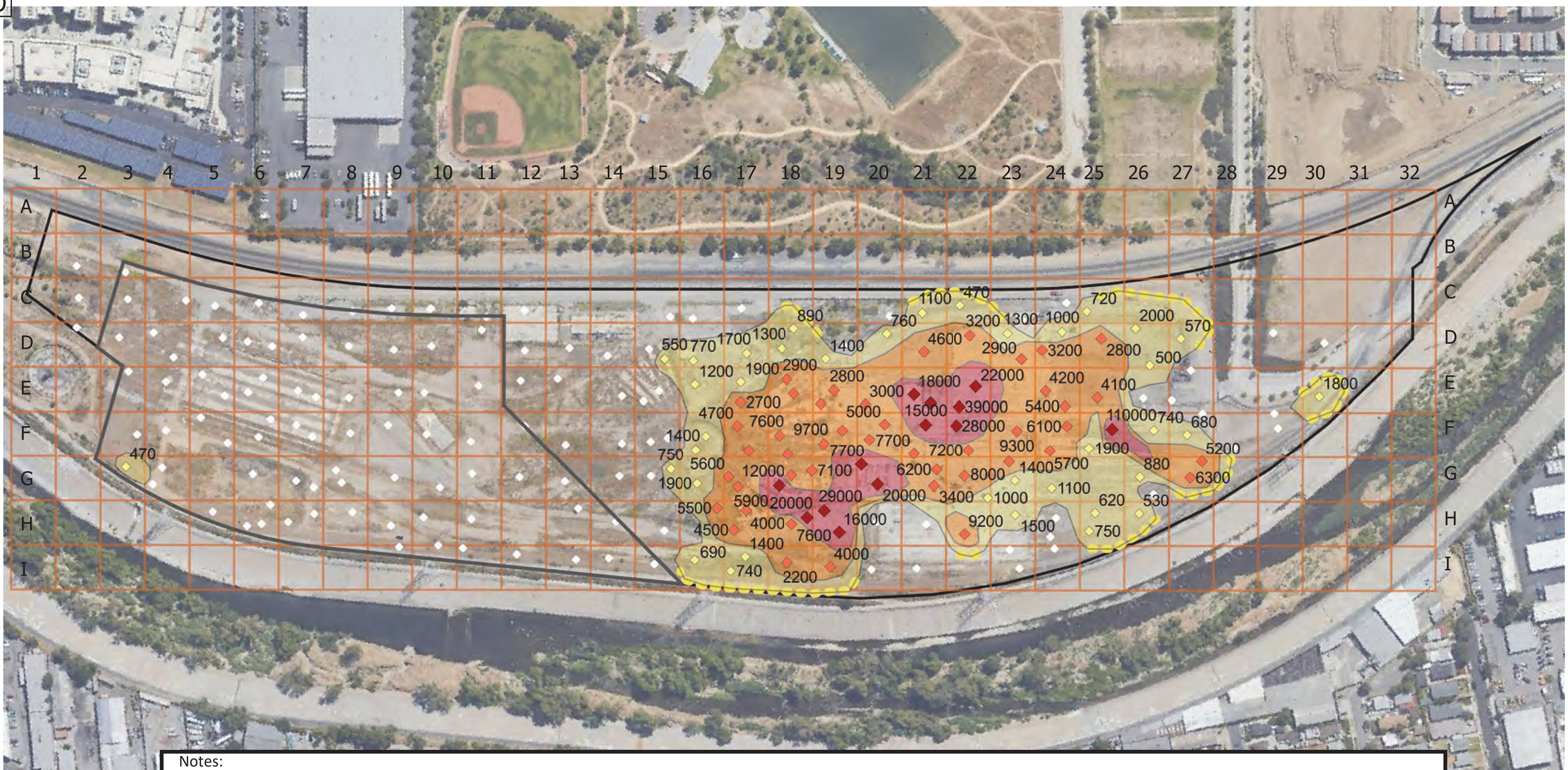
2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft

D



Notes:

2200 =analyte reported value in µg/m³

µg/m³ =micrograms per cubic meter

1) All samples analyzed by EPA Method 8260B modified for soil gas

2) Sample ranges presented are associated with DTSC human and ecological risk office (HERO) Note 3 for residential or commercial air (April 2019 update, June 2020 revision), or EPA regional screening levels established for residential and composite worker air (May 2020). A 0.001 attenuation factor was applied.

= Outermost contour lines are estimated based on concentrations. Actual boundary is unknown.
Residential = 460 µg/m3, Commercial = 2,000 µg/m3

TETRACHLOROETHENE (PCE) POLYGON LEGEND

COLOR	MIN (µg/m³)	MAX (µg/m³)
Yellow	460	2,000
Orange	2,001	10,000
Red	10,001	150,000

WSP USA Inc.
444 SOUTH FLOWER ST, SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 8

Soil Gas Tetrachloroethene (PCE) 10 to 20 ft bgs

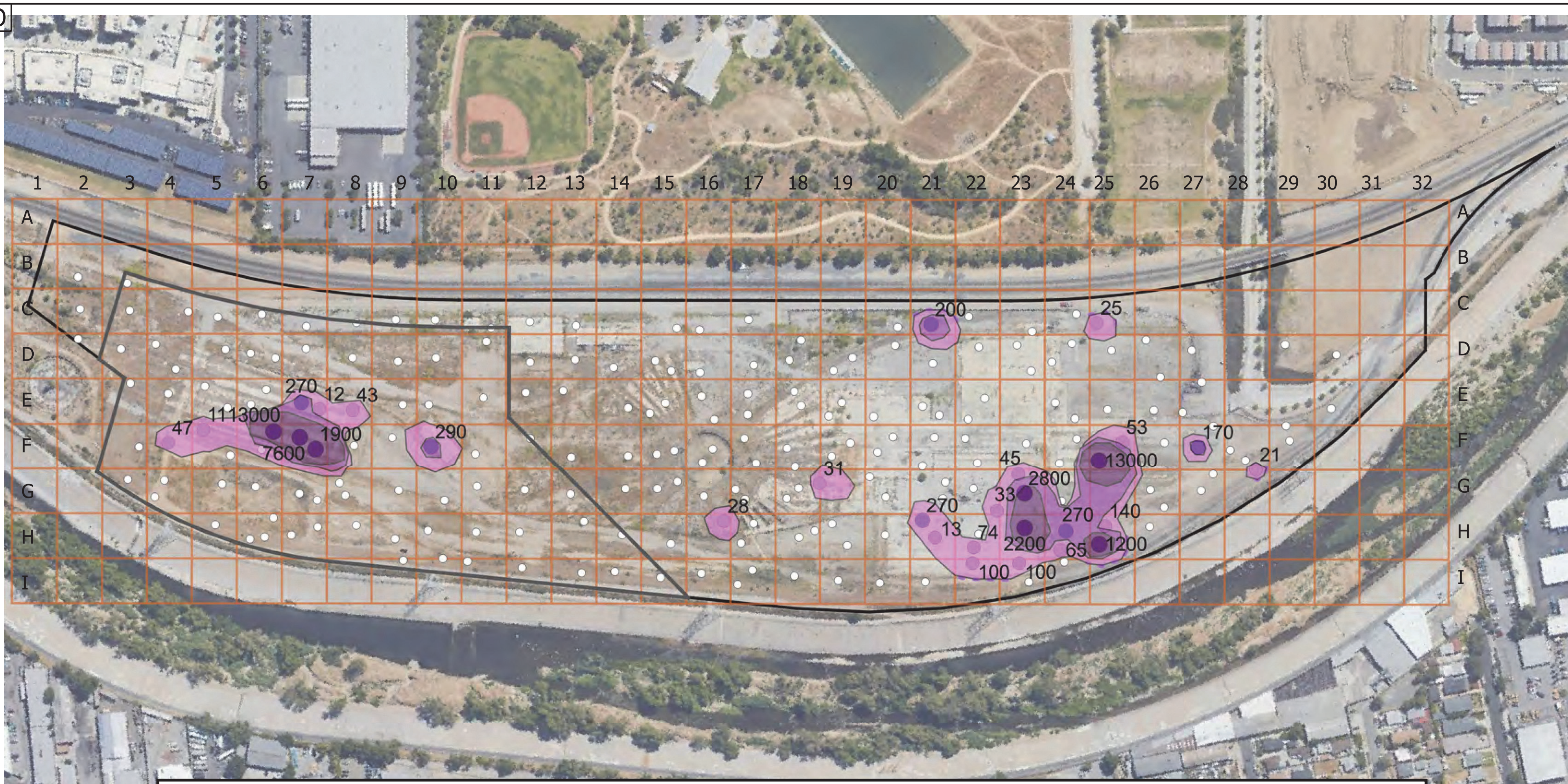
2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft

D



Notes:

● 510 =analyte reported value in µg/m^3

µg/m^3 =micrograms per cubic meter

1) All samples analyzed by EPA Method 8260B modified for soil gas

2) Sample ranges presented are associated with DTSC human and ecological risk office (HERO) Note 3 for residential or commercial air (April 2019 update, June 2020 revision), or EPA regional screening levels established for residential and composite worker air (May 2020). A 0.001 attenuation factor was applied.

▪▪▪▪▪▪▪▪ =Outermost contour lines are estimated based on concentrations. Actual boundary is unknown. Residential = 9.5 µg/m3, Commercial = 160 µg/m3

VINYL CHLORIDE (VC) POLYGON LEGEND

COLOR	MIN (µg/m^3)	MAX (µg/m^3)
(light purple)	9.5	160
(medium purple)	161	1,000
(dark blue)	1,001	15,000

WSP USA Inc.
444 SOUTH FLOWER ST, SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 9

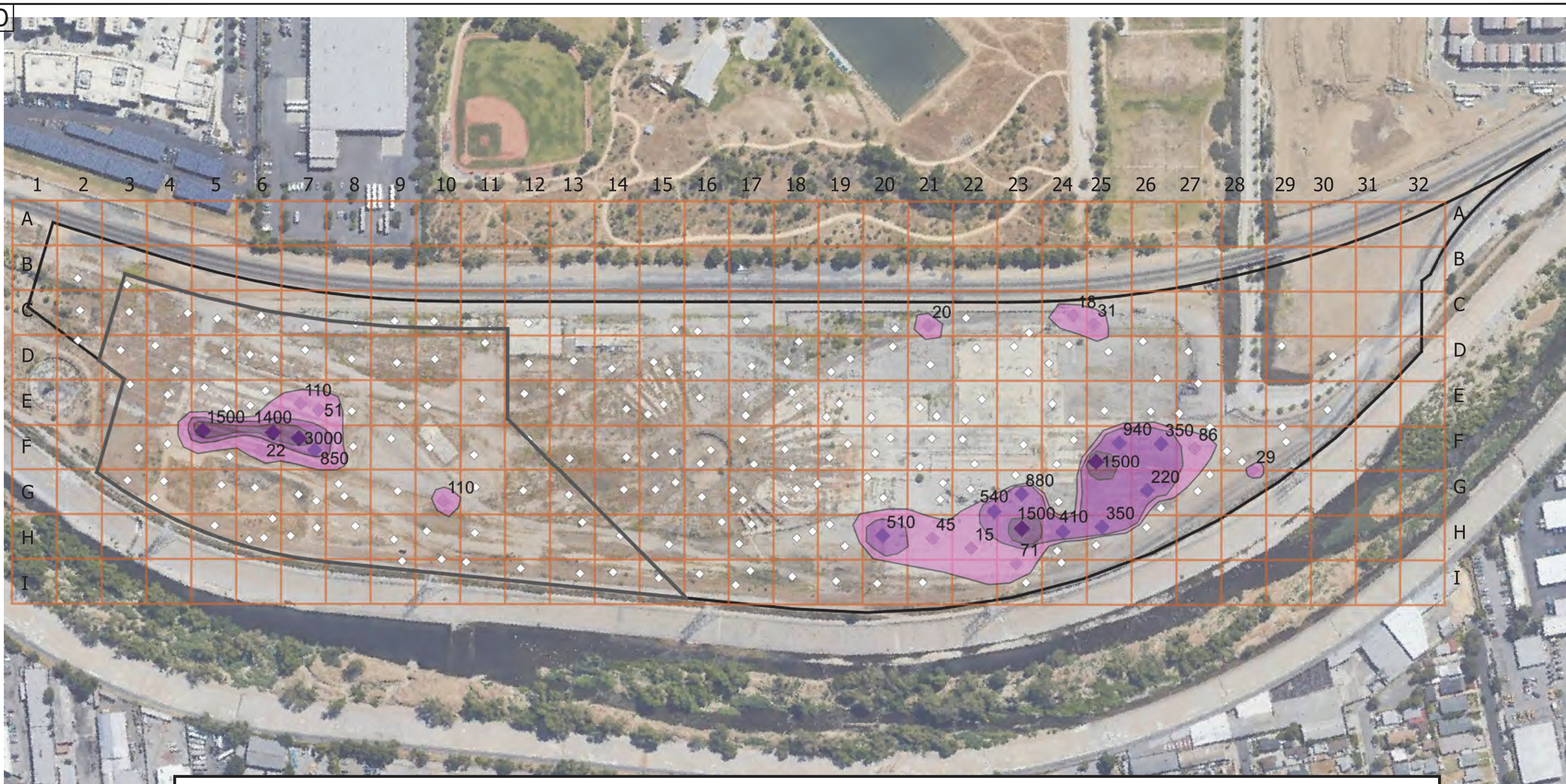
Soil Gas - Vinyl Chloride
0 to 10 ft bgs

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: AJC
Checked:
Approved:
DWG Name:

250 0 250 500 ft



Notes:

510 =analyte reported value in μg/m³

μg/m³ =micrograms per cubic meter

1) All samples analyzed by EPA Method 8260B modified for soil gas

2) Sample ranges presented are associated with DTSC human and ecological risk office (HERO) Note 3 for residential or commercial air (April 2019 update, June 2020 revision), or EPA regional screening levels established for residential and composite worker air (May 2020). A 0.001 attenuation factor was applied.

=Outermost contour lines are estimated based on concentrations. Actual boundary is unknown. Residential = 9.5 μg/m3, Commercial = 160 μg/m3

VINYL CHLORIDE (VC) POLYGON LEGEND

COLOR	MIN (μg/m³)	MAX (μg/m³)
	9.5	160
	161	1,000
	1,001	15,000

WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 10

Soil Gas Vinyl Chloride
10 to 20 ft bgs

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: AJC
Checked:
Approved:
DWG Name:

250 0 250 500 ft

D

Notes:

460	=analyte reported value in µg/m³
µg/m³	=micrograms per cubic meter

1) All samples analyzed by EPA Method 8260B modified for soil gas

2) Sample ranges presented are associated with DTSC human and ecological risk office (HERO) Note 3 for residential or commercial air (April 2019 revision, June 2020 update), or EPA regional screening level established for residential or composite worker air (May 2020). A 0.001 attenuation factor was applied.

= Outermost contour lines are estimated based on concentrations. Actual boundary is unknown.

Residential = 97 µg/m3, Commercial = 420 µg/m3

BENZENE POLYGON LEGEND

COLOR	MIN ($\mu g/m^3$)	MAX ($\mu g/m^3$)
	97	420
	421	1,000
	1,001	5,000

WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 11

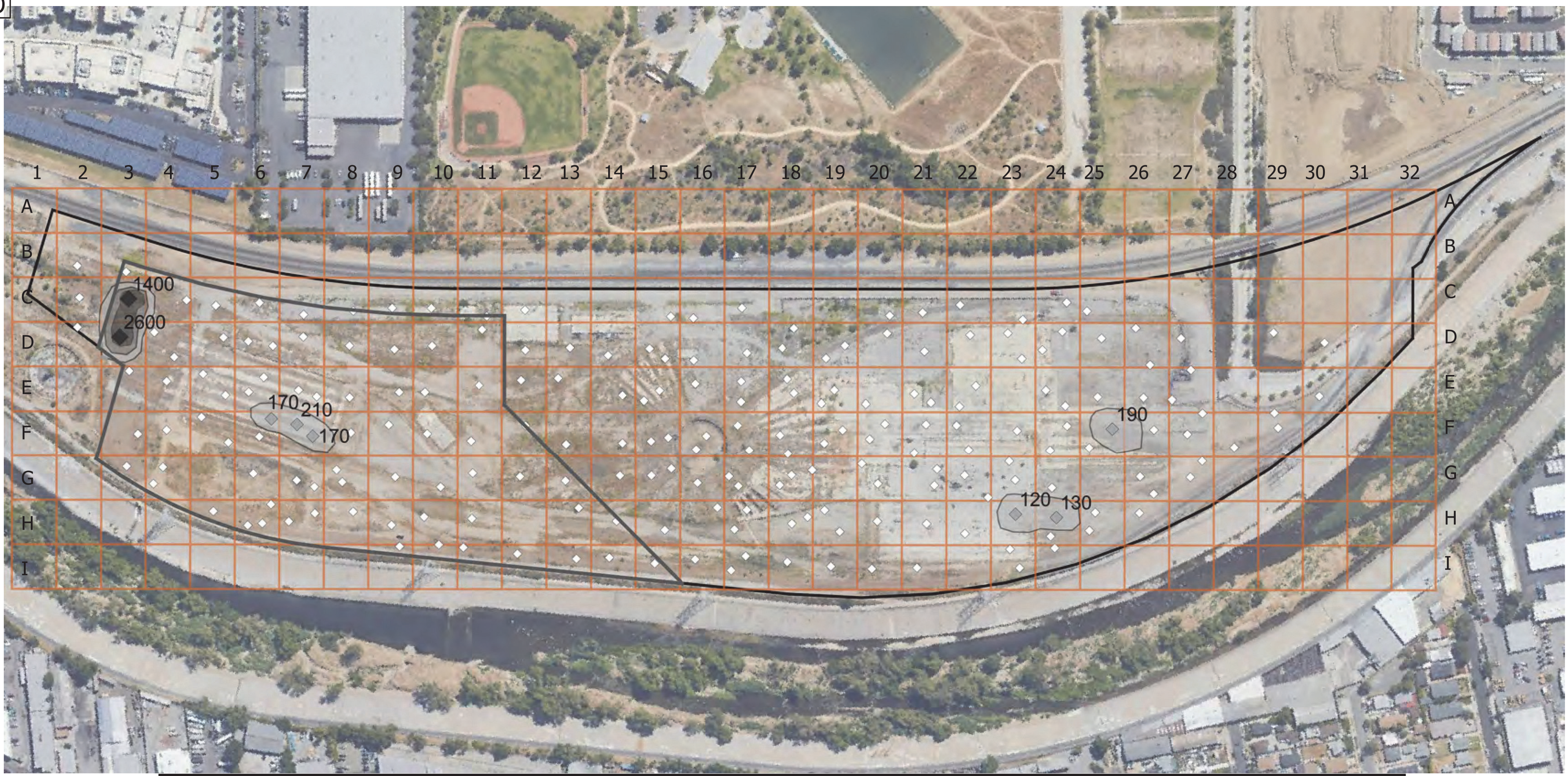
Soil Gas Benzene 0 to 10 ft bgs

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft



Notes:

● 460 =analyte reported value in $\mu g/m^3$

$\mu g/m^3$ =micrograms per cubic meter

1) All samples analyzed by EPA Method 8260B modified for soil gas

2) Sample ranges presented are associated with DTSC human and ecological risk office (HERO) Note 3 for residential or commercial air (April 2019 revision, June 2020 update), or EPA regional screening level established for residential or composite worker air (May 2020). A 0.001 attenuation factor was applied.

▪▪▪▪▪▪▪▪ = Outermost contour lines are estimated based on concentrations. Actual boundary is unknown. Residential = 97 µg/m3, Commercial = 420 µg/m3

BENZENE POLYGON LEGEND

COLOR	MIN ($\mu g/m^3$)	MAX ($\mu g/m^3$)
(light gray)	97	420
(medium gray)	421	1,000
(dark gray)	1,001	5,000

WSP USA Inc.
444 SOUTH FLOWER ST, SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 12

Soil Gas Benzene 10 to 20 ft bgs

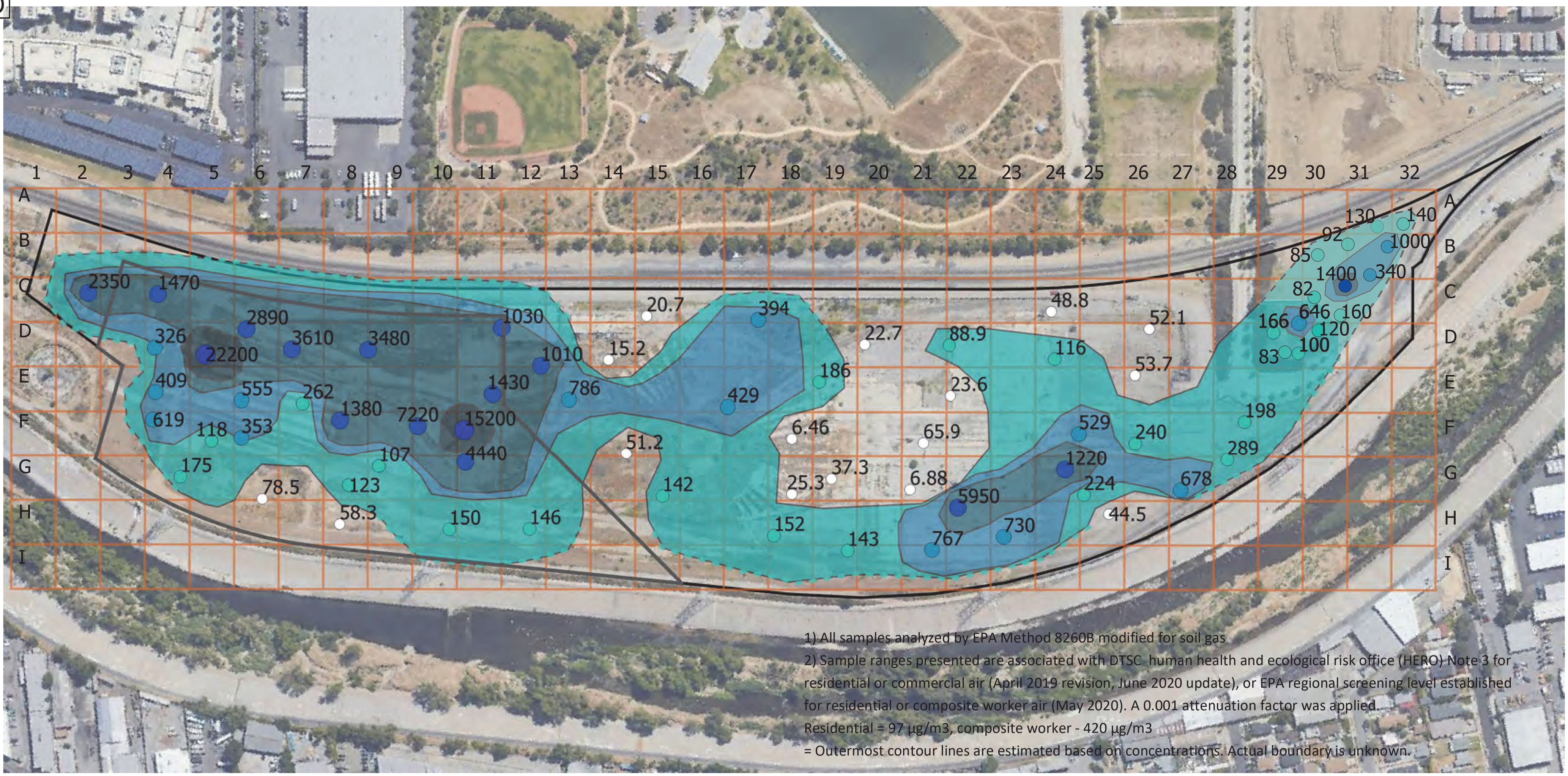
2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft

D



Notes:

● 1430 =analyte reported value in mg/kg

mg/kg =milligrams per kilogram

1) All samples analyzed by EPA Method 6010B

2) Sample ranges presented are associated with DTSC human and ecologic risk office (HERO) Note 3 residential or commercial soil (April 2019 revision, June 2020 update), or EPA Regional Screening Levels established for residential and composite worker soils (May 2020).

▪ ▪ ▪ ▪ ▪ ▪ =Outermost contour lines are estimated based on concentrations. Actual boundary is unknown.

Residential = 80 mg/kg, Commercial = 320 mg/kg

LEAD (Pb) POLYGON LEGEND

COLOR	MIN (mg/kg)	MAX (mg/kg)
	80	320
	321	1,000
	1,001	10,000
	10,001	25,000

WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 13

Taylor Yard G2 Parcel
Soil Lead 0 to 5 ft bgs

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft

Notes:

● 1430 =analyte reported value in mg/kg

mg/kg =milligrams per kilogram

1) All samples analyzed by EPA Method 6010B

2) Sample ranges presented are associated with DTSC human and ecologic risk office (HERO) Note 3 residential or commercial soil (April 2019 revision, June 2020 update), or EPA Regional Screening Levels established for residential and composite worker soils (May 2020).

■ ■ ■ ■ ■ ■ =Outermost contour lines are estimated based on concentrations. Actual boundary is unknown.

Residential = 80 mg/kg, Commercial = 320 mg/kg

LEAD (Pb) POLYGON LEGEND

COLOR	MIN (mg/k	MAX (mg/kg)
	80	320
	321	1,000
	1,001	10,000
	10,001	25,000

wsp WSP USA Inc. 444 SOUTH FLOWER ST, SUITE 800 LOS ANGELES, CA 90071 (213) 995-3938

FIGURE 14

Taylor Yard G2 Parcel
Soil Lead 10 to 20 ft bgs

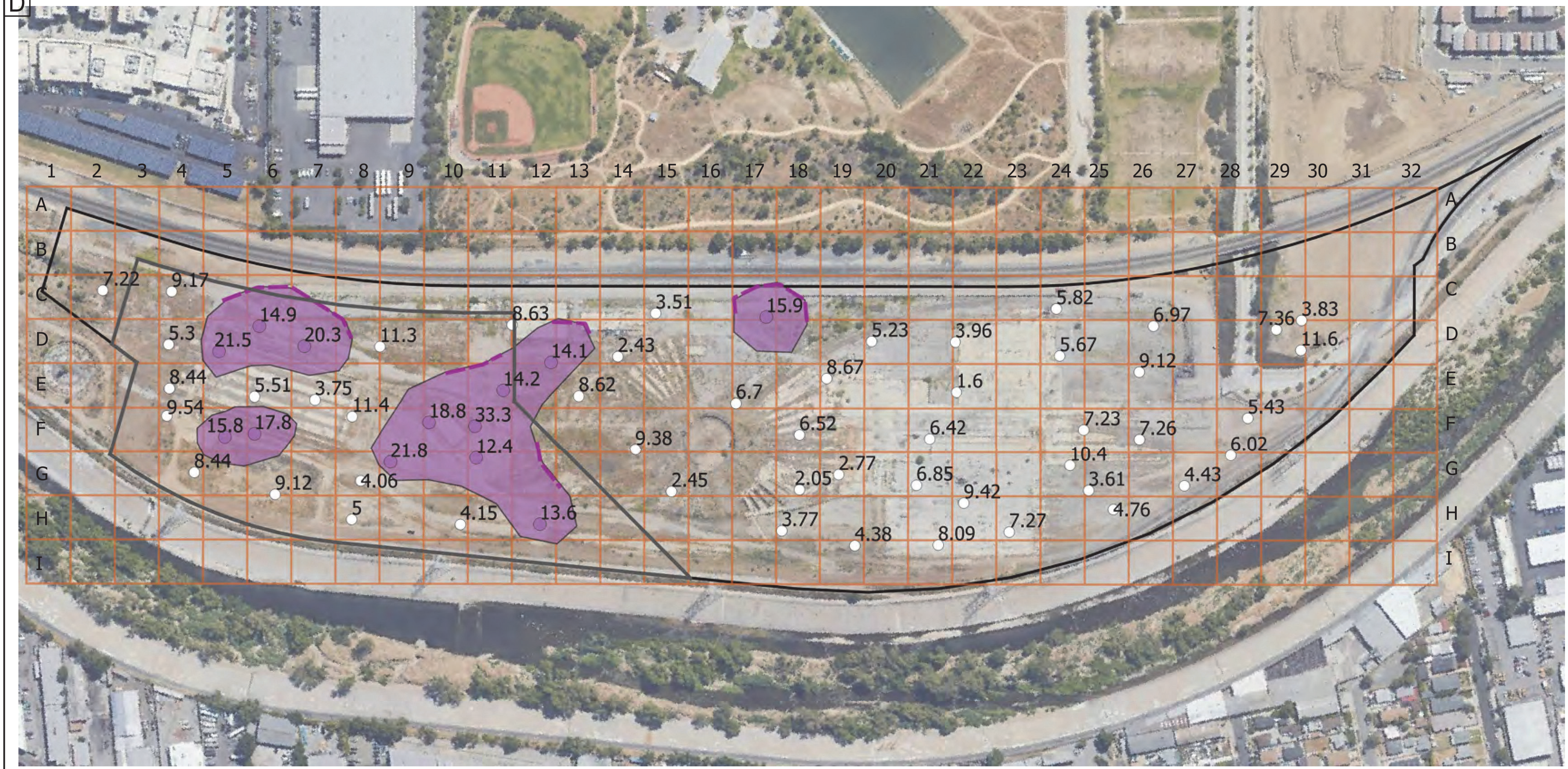
2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft

D



Summary of Soil Arsenic Results (0 - 5 ft)			
COMPOUND	MIN (mg/kg)	MAX (mg/kg)	COLOR
Arsenic	0	<12	
	12	100	(purple)

Notes:

1\ All samples analyzed by EPA Method 6010B

2\ Sample ranges presented are associated with the DTSC 2009 Guidance Document for Determination of Arsenic Cleanup Goals.

3\ Note that plume boundaries at the edges of the sampling area are not well defined.

4\ Samples collected within the first five feet below ground surface.

WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 15

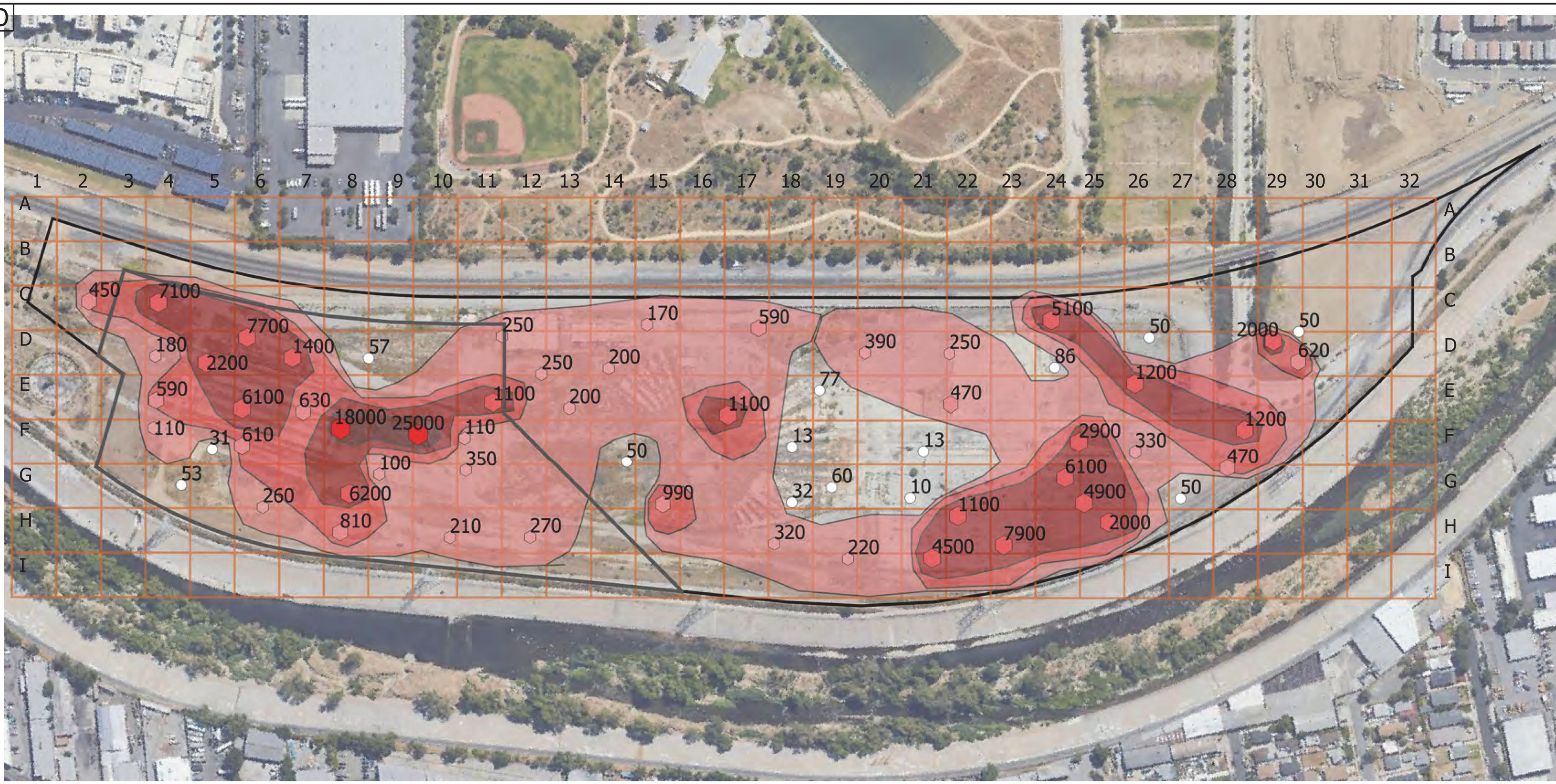
Soil Arsenic 0 to 5 ft bgs

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft



Notes:

C10-C28		=carbon chain range
● 7000		=analyte reported value in mg/kg
mg/kg		=milligrams per kilogram

1) All samples analyzed by EPA Method 8015M

2) Sample ranges presented are associated with EPA Regional Screening Levels established for residential and composite worker soils (May 2020).

Residential = 96 mg/kg, composite worker = 440 mg/kg

▪▪▪▪▪▪ =Outermost contour lines are estimated based on concentrations. Actual boundary is unknown.

TOTAL PETROLEUM HYDROCARBOIDRO DIESEL (TPH-GRO: C10-C28)

COLOR	MIN (mg/k	MAX (mg/kg)
	96	440
	441	1,000
	1,001	10,000
	10,001	40,000

wsp
WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 16

Taylor Yard G2 Parcel
Soil TPH-dro 0 to 5 ft bgs

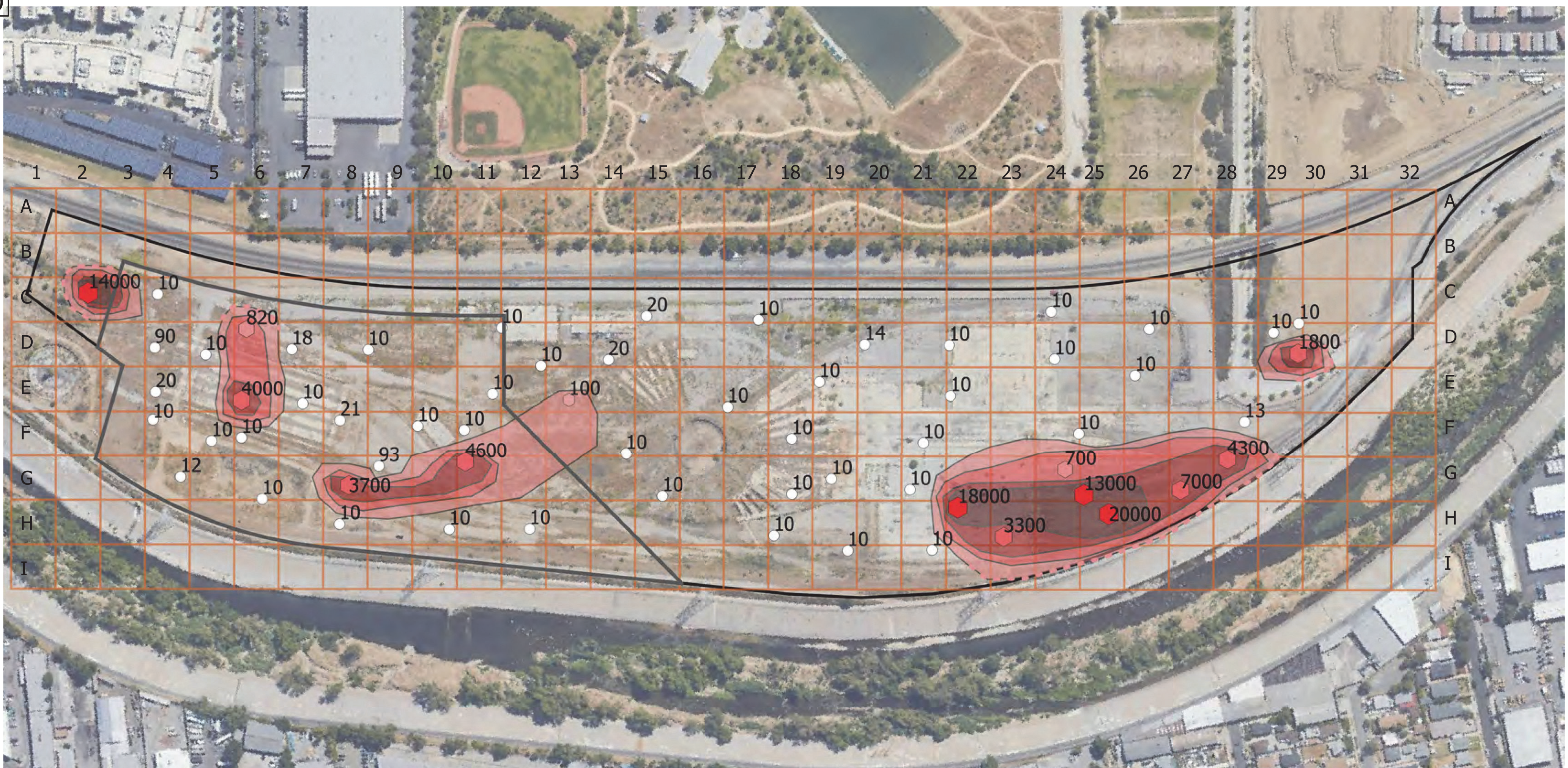
2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft

D



Notes:

C10-C28	=carbon chain range
● 7000	=analyte reported value in mg/kg
mg/kg	=milligrams per kilogram
	1) All samples analyzed by EPA Method 8015M
	2) Sample ranges presented are associated with EPA Regional Screening Levels established for residential and composite worker soils (May 2020).
	Residential = 96 mg/kg, composite worker = 440 mg/kg
■ ■ ■ ■ ■ ■	=Outermost contour lines are estimated based on concentrations. Actual boundary is unknown.

TOTAL PETROLEUM HYDROCARBONS AS DIESEL (TPH-GRO: C10-C28)

COLOR	MIN (mg/k	MAX (mg/kg)
	96	440
	441	1,000
	1,001	10,000
	10,001	40,000

WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 17

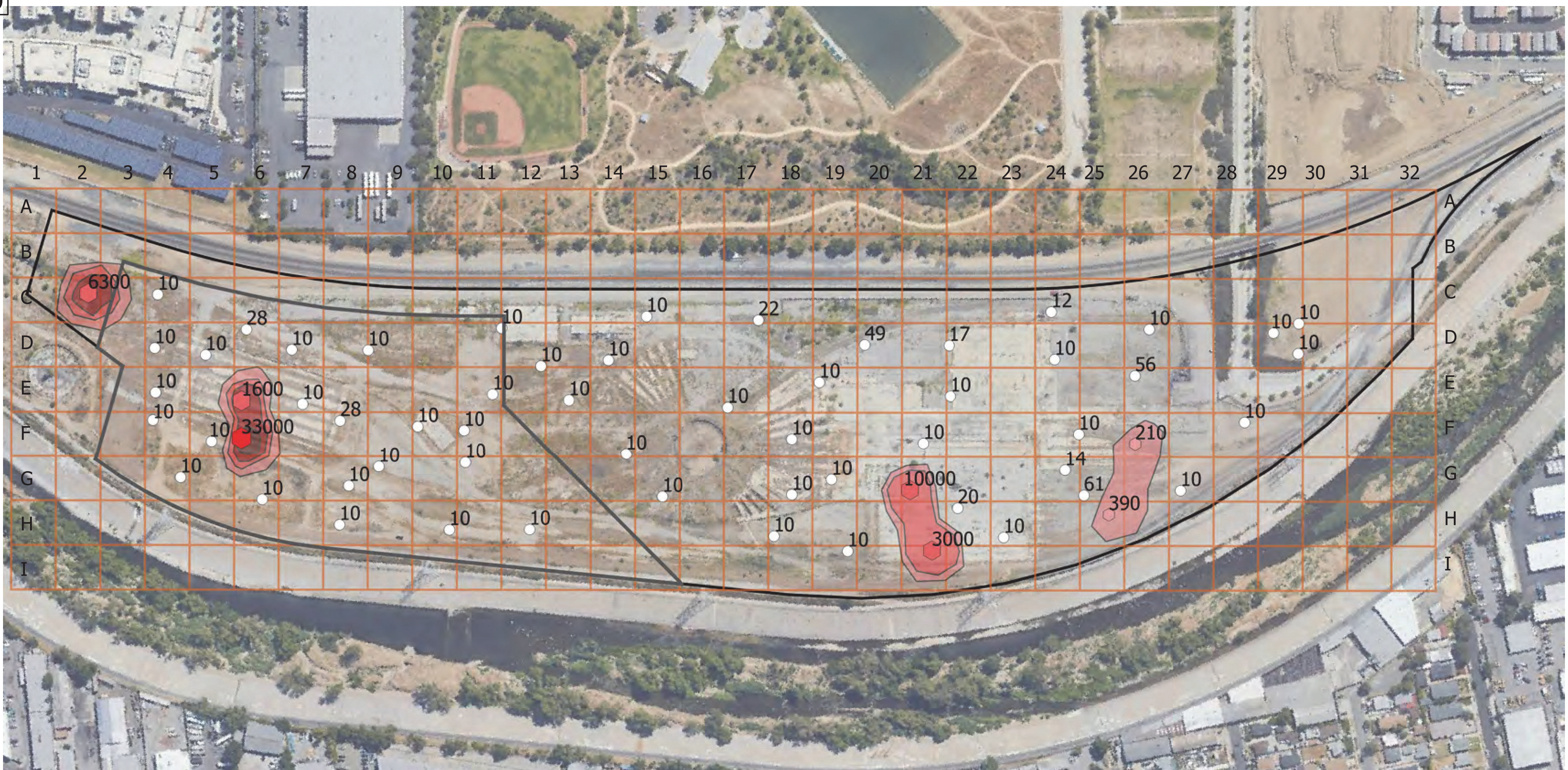
Taylor Yard G2 Parcel
Soil TPH-dro 5 to 10 ft bgs

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039
PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft

D



Notes:

C10-C28	=carbon chain range
● 7000	=analyte reported value in mg/kg
mg/kg	=milligrams per kilogram
	1) All samples analyzed by EPA Method 8015M
	2) Sample ranges presented are associated with EPA Regional Screening Levels established for residential and composite worker soils (May 2020). Residential = 96 mg/kg, composite worker = 440 mg/kg
■ ■ ■ ■ ■ ■	=Outermost contour lines are estimated based on concentrations. Actual boundary is unknown.

TOTAL PETROLEUM HYDROCARBONS AS DIESEL (TPH-GRO: C10-C28)

COLOR	MIN (mg/k	MAX (mg/kg)
	96	440
	441	1,000
	1,001	10,000
	10,001	40,000

WSP USA Inc.
444 SOUTH FLOWER ST, SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 18

Taylor Yard G2 Parcel
Soil TPH-dro 10 to 20 ft bgs

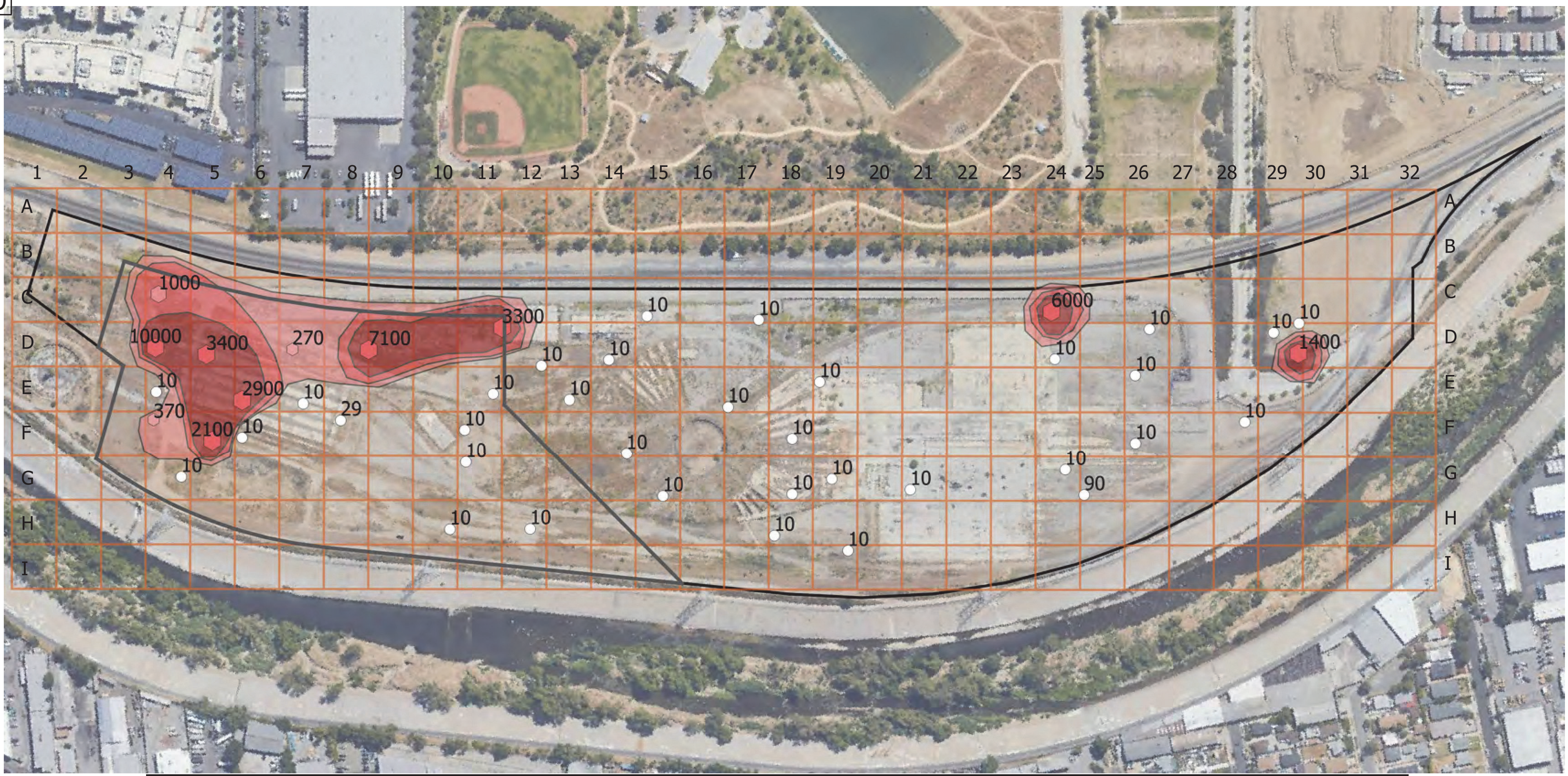
2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft

D



Notes:

C10-C28 =carbon chain range

7000 =analyte reported value in mg/kg

mg/kg =milligrams per kilogram

1) All samples analyzed by EPA Method 8015M

2) Sample ranges presented are associated with EPA Regional Screening Levels established for residential and composite worker soils (May 2020).

Residential = 96 mg/kg, composite worker = 440 mg/kg

=Outermost contour lines are estimated based on concentrations. Actual boundary is unknown.

TOTAL PETROLEUM HYDROCARBONS AS DIESEL (TPH-GRO: C10-C28)

COLOR	MIN (mg/k	MAX (mg/kg)
	96	440
	441	1,000
	1,001	10,000
	10,001	40,000

WSP USA Inc.
444 SOUTH FLOWER ST, SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 19

Taylor Yard G2 Parcel
Soil TPH-dro 20 to 30 ft bgs

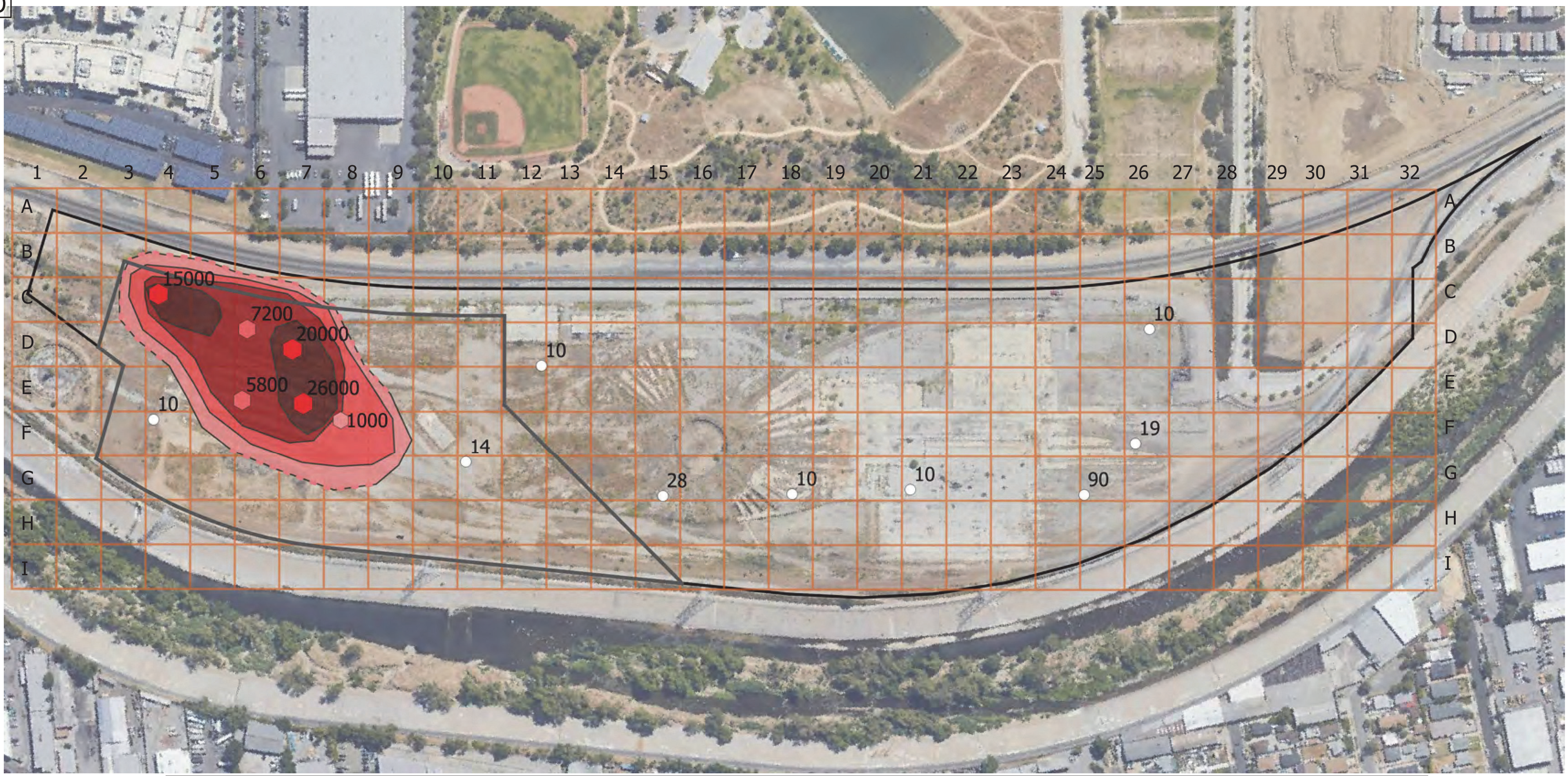
2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft

D



Notes:

C10-C28	=carbon chain range
● 7000	=analyte reported value in mg/kg
mg/kg	=milligrams per kilogram
	1) All samples analyzed by EPA Method 8015M
	2) Sample ranges presented are associated with EPA Regional Screening Levels established for residential and composite worker soils (May 2020).
	Residential = 96 mg/kg, composite worker = 440 mg/kg
▪ ▪ ▪ ▪ ▪ ▪	=Outermost contour lines are estimated based on concentrations. Actual boundary is unknown.

TOTAL PETROLEUM HYDROCARBONS AS DIESEL (TPH-GRO: C10-C28)

COLOR	MIN (mg/k	MAX (mg/kg)
(light pink)	96	440
(red)	441	1,000
(dark red)	1,001	10,000
(dark brown)	10,001	40,000

WSP USA Inc.
444 SOUTH FLOWER ST,
SUITE 800
LOS ANGELES, CA 90071
(213) 995-3938

FIGURE 20

Taylor Yard G2 Parcel
Soil TPH-dro 30 to 40 ft bgs

2850 KERR STREET
LOS ANGELES, CALIFORNIA 90039

PREPARED FOR
CITY OF LOS ANGELES, CALIFORNIA

Drawn By: CDW 5/9/2019
Checked:
Approved:
DWG Name:

250 0 250 500 ft

TABLES

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[(a)] : $\mu g/m^3$	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[(b)] : $\mu g/m^3$	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-B2-1-5	5	SG-B2-1	B2	6/12/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.6	**45** U	2.9 U	3.1 U
SG-B2-1-15.5	15.5	SG-B2-1	B2	6/12/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	7	**45** U	2.9 U	3.1 U
SG-B3-1-5	5	SG-B3-1	B3	6/12/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-B3-1-15	15	SG-B3-1	B3	6/12/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C2-1-5	5	SG-C2-1	C2	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	30	**45** U	2.9 U	3.1 U
SG-C2-1-14	14	SG-C2-1	C2	8/14/2018	2.3 U	4.7 U	0.4 U	14	2.1 U	6.6 U	**3.3** U	4.7 U	21	**45** U	2.9 U	3.1 U
SG-C3-1-4	4	SG-C3-1	C3	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	260	**45** U	2.9 U	3.1 U
SG-C3-1-15	15	SG-C3-1	C3	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	17000	**45** U	2.9 U	3.1 U
SG-C4-1-4.5	4.5	SG-C4-1	C4	6/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5.6	**45** U	2.9 U	3.1 U
SG-C4-1-15	15	SG-C4-1	C4	6/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4.2	**45** U	2.9 U	3.1 U
SG-C5-1-5	5	SG-C5-1	C5	6/19/2018	2.3 U	4.7 U	0.4 U	6.2	2.1 U	6.6 U	**3.3** U	4.7 U	6.8	**45** U	2.9 U	3.1 U
SG-C5-1-16.8	16.8	SG-C5-1	C5	6/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	16	**45** U	2.9 U	3.1 U
SG-C6-1-2.5	2.5	SG-C6-1	C6	7/27/2018	2.3 U	4.7 U	0.4 U	2.7 U	4.2	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C6-1-14.5	14.5	SG-C6-1	C6	7/27/2018	10	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C7-1-5	5	SG-C7-1	C7	7/27/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C7-1-15	15	SG-C7-1	C7	7/27/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C8-1-4.5	4.5	SG-C8-1	C8	7/27/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C8-1-15.5	15.5	SG-C8-1	C8	7/27/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C9-1-5.5	5.5	SG-C9-1	C9	7/27/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C9-1-14	14	SG-C9-1	C9	7/27/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C10-1-4.5	4.5	SG-C10-1	C10	7/30/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C10-1-16.5	16.5	SG-C10-1	C10	7/30/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C11-1-5	5	SG-C11-1	C11	7/30/2018	4.6	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C11-1-16	16	SG-C11-1	C11	7/30/2018	3.6	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C12-1-5	5	SG-C12-1	C12	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	21	**45** U	2.9 U	3.1 U
SG-C12-1-15	15	SG-C12-1	C12	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	14	**45** U	2.9 U	3.1 U
SG-C13-1-2.5	2.5	SG-C13-1	C13	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C15-1-4.5	4.5	SG-C15-1	C15	6/28/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4.8	**45** U	2.9 U	3.1 U
SG-C15-1-15	15	SG-C15-1	C15	6/28/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5.2	**45** U	2.9 U	3.1 U
SG-C16-1-5.5	5.5	SG-C16-1	C16	6/28/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4	**45** U	2.9 U	3.1 U
SG-C16-1-15	15	SG-C16-1	C16	6/28/2018	7.6	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3.2	**45** U	2.9 U	3.1 U
SG-C17-1-8	8	SG-C17-1	C17	7/17/2018	9.4	4.7 U	0.4 U	2.7 U	2.2	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C17-1-15	15	SG-C17-1	C17	7/17/2018	11	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C20-1-6.3	6.3	SG-C20-1	C20	7/30/2018	79	4.7 U	0.4 U	9.6	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : μg/m³	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : μg/m³	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³
SG-B2-1-5	5	SG-B2-1	B2	6/12/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-B2-1-15.5	15.5	SG-B2-1	B2	6/12/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-B3-1-5	5	SG-B3-1	B3	6/12/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-B3-1-15	15	SG-B3-1	B3	6/12/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	7	6.2 U
SG-C2-1-5	5	SG-C2-1	C2	8/14/2018	3.4 U	5.1 U	6.2	3.2 U	4.1 U	6.1 U	5.8	3.6	2.6 U	3.6 U	8	6.2 U
SG-C2-1-14	14	SG-C2-1	C2	8/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	26	6.2 U
SG-C3-1-4	4	SG-C3-1	C3	6/18/2018	3.4 U	5.1 U	110	3.2 U	4.1 U	6.1 U	***170***	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C3-1-15	15	SG-C3-1	C3	6/18/2018	3.4 U	5.1 U	7800	3.2 U	4.1 U	6.1 U	***1400***	1.2 U	2.6 U	3.6 U	4.2 U	170
SG-C4-1-4.5	4.5	SG-C4-1	C4	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C4-1-15	15	SG-C4-1	C4	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C5-1-5	5	SG-C5-1	C5	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	35	6.2 U
SG-C5-1-16.8	16.8	SG-C5-1	C5	6/19/2018	3.4 U	5.1 U	4	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C6-1-2.5	2.5	SG-C6-1	C6	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C6-1-14.5	14.5	SG-C6-1	C6	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C7-1-5	5	SG-C7-1	C7	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C7-1-15	15	SG-C7-1	C7	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C8-1-4.5	4.5	SG-C8-1	C8	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C8-1-15.5	15.5	SG-C8-1	C8	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C9-1-5.5	5.5	SG-C9-1	C9	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C9-1-14	14	SG-C9-1	C9	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C10-1-4.5	4.5	SG-C10-1	C10	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C10-1-16.5	16.5	SG-C10-1	C10	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C11-1-5	5	SG-C11-1	C11	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C11-1-16	16	SG-C11-1	C11	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C12-1-5	5	SG-C12-1	C12	8/14/2018	3.4 U	5.1 U	6.6	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C12-1-15	15	SG-C12-1	C12	8/14/2018	3.4 U	5.1 U	2.8	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C13-1-2.5	2.5	SG-C13-1	C13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C15-1-4.5	4.5	SG-C15-1	C15	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C15-1-15	15	SG-C15-1	C15	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C16-1-5.5	5.5	SG-C16-1	C16	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C16-1-15	15	SG-C16-1	C16	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C17-1-8	8	SG-C17-1	C17	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C17-1-15	15	SG-C17-1	C17	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C20-1-6.3	6.3	SG-C20-1	C20	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : µg/m^3	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : µg/m^3	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-B2-1-5	5	SG-B2-1	B2	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-B2-1-15.5	15.5	SG-B2-1	B2	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	8.4	4.5 U	3.9 U	2.8	5.6 U
SG-B3-1-5	5	SG-B3-1	B3	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-B3-1-15	15	SG-B3-1	B3	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C2-1-5	5	SG-C2-1	C2	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	9.6	4.5 U	22	1.9 U	13
SG-C2-1-14	14	SG-C2-1	C2	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	6	4.5 U	**100**	1.9 U	5.6 U
SG-C3-1-4	4	SG-C3-1	C3	6/18/2018	5.5 U	2.6 U	200	8 U	230	450	4.5 U	3.9 U	200	48
SG-C3-1-15	15	SG-C3-1	C3	6/18/2018	5.5 U	2.6 U	**3600**	8 U	1600	9200	4.5 U	***430***	2000	1100
SG-C4-1-4.5	4.5	SG-C4-1	C4	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C4-1-15	15	SG-C4-1	C4	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C5-1-5	5	SG-C5-1	C5	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C5-1-16.8	16.8	SG-C5-1	C5	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	5.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-C6-1-2.5	2.5	SG-C6-1	C6	7/27/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C6-1-14.5	14.5	SG-C6-1	C6	7/27/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C7-1-5	5	SG-C7-1	C7	7/27/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C7-1-15	15	SG-C7-1	C7	7/27/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C8-1-4.5	4.5	SG-C8-1	C8	7/27/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C8-1-15.5	15.5	SG-C8-1	C8	7/27/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C9-1-5.5	5.5	SG-C9-1	C9	7/27/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C9-1-14	14	SG-C9-1	C9	7/27/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C10-1-4.5	4.5	SG-C10-1	C10	7/30/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C10-1-16.5	16.5	SG-C10-1	C10	7/30/2018	5.5 U	3.6	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C11-1-5	5	SG-C11-1	C11	7/30/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C11-1-16	16	SG-C11-1	C11	7/30/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C12-1-5	5	SG-C12-1	C12	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	11	4.5 U	22	1.9 U	5.6 U
SG-C12-1-15	15	SG-C12-1	C12	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	6.4	4.5 U	16	1.9 U	5.8
SG-C13-1-2.5	2.5	SG-C13-1	C13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C15-1-4.5	4.5	SG-C15-1	C15	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C15-1-15	15	SG-C15-1	C15	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.2	4.5 U	3.9 U	1.9 U	5.6 U
SG-C16-1-5.5	5.5	SG-C16-1	C16	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C16-1-15	15	SG-C16-1	C16	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	18	1.9 U	5.6 U
SG-C17-1-8	8	SG-C17-1	C17	7/17/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.8	4.5 U	3.9 U	1.9 U	5.6 U
SG-C17-1-15	15	SG-C17-1	C17	7/17/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C20-1-6.3	6.3	SG-C20-1	C20	7/30/2018	5.5 U	5.8	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : µg/m³	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : µg/m³	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-B2-1-5	5	SG-B2-1	B2	6/12/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	4	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-B2-1-15.5	15.5	SG-B2-1	B2	6/12/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	4.2	70 U	7.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-B3-1-5	5	SG-B3-1	B3	6/12/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	23	70 U	2.1 U	6.3 U	4.5 U	8.4	2.3 U
SG-B3-1-15	15	SG-B3-1	B3	6/12/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	9	70 U	2.1 U	6.3 U	4.5 U	24	2.3 U
SG-C2-1-5	5	SG-C2-1	C2	8/14/2018	1.4 U	4.2	1.4 U	1.8 U	4.8 U	110	70 U	5.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-C2-1-14	14	SG-C2-1	C2	8/14/2018	1.4 U	4	1.4 U	1.8 U	4.8 U	390	70 U	3.4	6.3 U	6.2	3.2 U	2.3 U
SG-C3-1-4	4	SG-C3-1	C3	6/18/2018	230	120	370	1.8 U	25	3.7 U	70 U	24	6.3 U	4.5 U	3.2 U	2.3 U
SG-C3-1-15	15	SG-C3-1	C3	6/18/2018	5400	1300	1700	1.8 U	2600	12	500	25	6.3 U	4.5 U	3.2 U	2.3 U
SG-C4-1-4.5	4.5	SG-C4-1	C4	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C4-1-15	15	SG-C4-1	C4	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	37	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C5-1-5	5	SG-C5-1	C5	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.8	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C5-1-16.8	16.8	SG-C5-1	C5	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	22	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C6-1-2.5	2.5	SG-C6-1	C6	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	30	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C6-1-14.5	14.5	SG-C6-1	C6	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	64	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C7-1-5	5	SG-C7-1	C7	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	23	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C7-1-15	15	SG-C7-1	C7	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	28	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C8-1-4.5	4.5	SG-C8-1	C8	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	45	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C8-1-15.5	15.5	SG-C8-1	C8	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	30	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C9-1-5.5	5.5	SG-C9-1	C9	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	26	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C9-1-14	14	SG-C9-1	C9	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	18	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C10-1-4.5	4.5	SG-C10-1	C10	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	53	70 U	2.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-C10-1-16.5	16.5	SG-C10-1	C10	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	31	70 U	2.4	6.3 U	4.5 U	3.2 U	2.3 U
SG-C11-1-5	5	SG-C11-1	C11	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	84	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C11-1-16	16	SG-C11-1	C11	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	65	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C12-1-5	5	SG-C12-1	C12	8/14/2018	1.4 U	3.6	1.4 U	1.8 U	4.8 U	190	70 U	3.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-C12-1-15	15	SG-C12-1	C12	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	120	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C13-1-2.5	2.5	SG-C13-1	C13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	46	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C15-1-4.5	4.5	SG-C15-1	C15	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	390	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C15-1-15	15	SG-C15-1	C15	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	290	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C16-1-5.5	5.5	SG-C16-1	C16	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	200	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C16-1-15	15	SG-C16-1	C16	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	310	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C17-1-8	8	SG-C17-1	C17	7/17/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	220	70 U	2.8	6.3 U	4.5 U	3.2 U	2.3 U
SG-C17-1-15	15	SG-C17-1	C17	7/17/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	250	70 U	2.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-C20-1-6.3	6.3	SG-C20-1	C20	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	300	70 U	2.2	6.3 U	4.5 U	3.2 U	2.3 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[a] : µg/m³	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[b] : µg/m³	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-C20-1-14.5	14.5	SG-C20-1	C20	7/30/2018	97	4.7 U	0.4 U	29	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C21-1-5.5	5.5	SG-C21-1	C21	7/25/2018	2100	4.7 U	0.4 U	***23000***	230	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C21-1-15	15	SG-C21-1	C21	7/25/2018	830	4.7 U	0.4 U	***9300***	56	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C22-1-4.5	4.5	SG-C22-1	C22	8/1/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C22-1-14.5	14.5	SG-C22-1	C22	8/1/2018	44	4.7 U	0.4 U	7.2	3.6	6.6 U	**3.3** U	4.7 U	19	**45** U	2.9 U	3.1 U
SG-C23-1-2.5	2.5	SG-C23-1	C23	7/25/2018	70	4.7 U	0.4 U	87	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C23-1-14	14	SG-C23-1	C23	7/25/2018	8.4	4.7 U	0.4 U	96	6.2	6.6 U	**3.3** U	4.7 U	4.6	**45** U	2.9 U	3.1 U
SG-C24-1-6.5	6.5	SG-C24-1	C24	7/25/2018	2.3 U	4.7 U	0.4 U	70	2.1 U	6.6 U	**3.3** U	4.7 U	470	**45** U	2.9 U	3.1 U
SG-C24-1-14	14	SG-C24-1	C24	7/25/2018	2.3 U	4.7 U	0.4 U	110	4.8	6.6 U	**3.3** U	4.7 U	680	**45** U	2.9 U	180
SG-C25-1-5	5	SG-C25-1	C25	8/1/2018	29	4.7 U	0.4 U	420	5.6	6.6 U	**3.3** U	4.7 U	4000	**45** U	2.9 U	140
SG-C25-1-15	15	SG-C25-1	C25	8/1/2018	20	4.7 U	0.4 U	370	6.6	6.6 U	**3.3** U	4.7 U	5600	**45** U	2.9 U	3.1 U
SG-C29-1-5	5	SG-C29-1	C29	8/6/2018	10	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-C29-1-15	15	SG-C29-1	C29	8/6/2018	16	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D2-1-6.5	6.5	SG-D2-1	D2	6/12/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D2-1-15	15	SG-D2-1	D2	6/12/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D3-1-5.5	5.5	SG-D3-1	D3	6/12/2018	2.3 U	4.7 U	0.4 U	42	2.1 U	6.6 U	**3.3** U	4.7 U	29	**45** U	2.9 U	3.1 U
SG-D3-1-15	15	SG-D3-1	D3	6/12/2018	2.3 U	4.7 U	0.4 U	10	2.1 U	6.6 U	**3.3** U	4.7 U	300	**45** U	2.9 U	3.1 U
SG-D4-1-4	4	SG-D4-1	D4	6/12/2018	2.3 U	4.7 U	0.4 U	17	2.1 U	6.6 U	**3.3** U	4.7 U	24	**45** U	2.9 U	3.1 U
SG-D4-1-15	15	SG-D4-1	D4	6/12/2018	2.3 U	4.7 U	0.4 U	20	2.1 U	6.6 U	**3.3** U	9.4	1.8 U	**45** U	2.9 U	3.1 U
SG-D4-2-5.5	5.5	SG-D4-2	D4	6/13/2018	2.3 U	4.7 U	0.4 U	82	2.1 U	6.6 U	**3.3** U	4.7 U	39	**45** U	2.9 U	3.1 U
SG-D4-2-15	15	SG-D4-2	D4	6/13/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4.4	**45** U	2.9 U	3.1 U
SG-D5-1-5.5	5.5	SG-D5-1	D5	6/19/2018	2.3 U	4.7 U	0.4 U	40	2.1 U	6.6 U	**3.3** U	4.7 U	5	**45** U	2.9 U	3.1 U
SG-D5-1-15	15	SG-D5-1	D5	6/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5	**45** U	2.9 U	3.1 U
SG-D6-1-5	5	SG-D6-1	D6	8/2/2018	2.3 U	4.7 U	0.4 U	2.7 U	6.2	6.6 U	**3.3** U	4.7 U	9.2	**45** U	2.9 U	3.1 U
SG-D6-1-15	15	SG-D6-1	D6	8/2/2018	2.3 U	4.7 U	0.4 U	4	2.1 U	6.6 U	**3.3** U	4.7 U	6	**45** U	2.9 U	3.1 U
SG-D6-2-5	5	SG-D6-2	D6	8/2/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5.8	**45** U	2.9 U	3.1 U
SG-D6-2-16	16	SG-D6-2	D6	8/2/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4	**45** U	2.9 U	3.1 U
SG-D7-1-5	5	SG-D7-1	D7	6/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3.4	**45** U	2.9 U	3.1 U
SG-D7-1-13.5	13.5	SG-D7-1	D7	6/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D8-1-4	4	SG-D8-1	D8	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	350	**45** U	2.9 U	3.1 U
SG-D8-1-13.5	13.5	SG-D8-1	D8	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	270	**45** U	2.9 U	3.1 U
SG-D9-1-4	4	SG-D9-1	D9	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	170	**45** U	2.9 U	3.1 U
SG-D9-1-13.5	13.5	SG-D9-1	D9	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	120	**45** U	2.9 U	3.1 U
SG-D10-1-5	5	SG-D10-1	D10	6/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	9.2	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : µg/m^3	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : µg/m^3	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-C20-1-14.5	14.5	SG-C20-1	C20	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C21-1-5.5	5.5	SG-C21-1	C21	7/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C21-1-15	15	SG-C21-1	C21	7/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C22-1-4.5	4.5	SG-C22-1	C22	8/1/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	7.6	26	2.6 U	3.6 U	4.2 U	6.2 U
SG-C22-1-14.5	14.5	SG-C22-1	C22	8/1/2018	3.4 U	5.1 U	9	3.2 U	4.1 U	6.1 U	5	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C23-1-2.5	2.5	SG-C23-1	C23	7/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	8	1.2 U	2.6 U	3.6 U	4.2 U	74
SG-C23-1-14	14	SG-C23-1	C23	7/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	3	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C24-1-6.5	6.5	SG-C24-1	C24	7/25/2018	3.4 U	5.1 U	690	3.2 U	4.1 U	6.1 U	66	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C24-1-14	14	SG-C24-1	C24	7/25/2018	3.4 U	5.1 U	72	3.2 U	4.1 U	6.1 U	25	1.2 U	2.6 U	39	4.2 U	6.2 U
SG-C25-1-5	5	SG-C25-1	C25	8/1/2018	3.4 U	5.1 U	440	3.2 U	4.1 U	6.1 U	42	1.2 U	2.6 U	40	4.2 U	6.2 U
SG-C25-1-15	15	SG-C25-1	C25	8/1/2018	3.4 U	5.1 U	1800	3.2 U	4.1 U	6.1 U	26	2.8	2.6 U	48	4.2 U	6.2 U
SG-C29-1-5	5	SG-C29-1	C29	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-C29-1-15	15	SG-C29-1	C29	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D2-1-6.5	6.5	SG-D2-1	D2	6/12/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D2-1-15	15	SG-D2-1	D2	6/12/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	15	6.2 U
SG-D3-1-5.5	5.5	SG-D3-1	D3	6/12/2018	3.4 U	5.1 U	10	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D3-1-15	15	SG-D3-1	D3	6/12/2018	3.4 U	5.1 U	39	3.2 U	4.1 U	6.1 U	***2600***	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D4-1-4	4	SG-D4-1	D4	6/12/2018	7.4	5.1 U	13	3.2 U	4.1 U	6.1 U	24	41	2.6 U	3.6 U	4.2 U	6.2 U
SG-D4-1-15	15	SG-D4-1	D4	6/12/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	15	8.6	2.6 U	3.6 U	4.2 U	6.2 U
SG-D4-2-5.5	5.5	SG-D4-2	D4	6/13/2018	3.4 U	5.1 U	22	3.2 U	4.1 U	6.1 U	29	7	2.6 U	3.6 U	4.2 U	6.2 U
SG-D4-2-15	15	SG-D4-2	D4	6/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D5-1-5.5	5.5	SG-D5-1	D5	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	6	14	2.6 U	3.6 U	4.2 U	6.2 U
SG-D5-1-15	15	SG-D5-1	D5	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D6-1-5	5	SG-D6-1	D6	8/2/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D6-1-15	15	SG-D6-1	D6	8/2/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.8	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D6-2-5	5	SG-D6-2	D6	8/2/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D6-2-16	16	SG-D6-2	D6	8/2/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D7-1-5	5	SG-D7-1	D7	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D7-1-13.5	13.5	SG-D7-1	D7	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D8-1-4	4	SG-D8-1	D8	6/18/2018	3.4 U	5.1 U	93	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D8-1-13.5	13.5	SG-D8-1	D8	6/18/2018	3.4 U	5.1 U	68	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D9-1-4	4	SG-D9-1	D9	6/18/2018	3.4 U	5.1 U	44	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D9-1-13.5	13.5	SG-D9-1	D9	6/18/2018	3.4 U	5.1 U	27	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D10-1-5	5	SG-D10-1	D10	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : µg/m^3	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : µg/m^3	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-C20-1-14.5	14.5	SG-C20-1	C20	7/30/2018	5.5 U	7.2	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C21-1-5.5	5.5	SG-C21-1	C21	7/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C21-1-15	15	SG-C21-1	C21	7/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C22-1-4.5	4.5	SG-C22-1	C22	8/1/2018	5.5 U	2.6 U	5.9 U	8 U	2.2	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C22-1-14.5	14.5	SG-C22-1	C22	8/1/2018	5.5 U	2.6 U	41	8 U	7.6	94	4.5 U	3.9 U	1.9 U	13
SG-C23-1-2.5	2.5	SG-C23-1	C23	7/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C23-1-14	14	SG-C23-1	C23	7/25/2018	50	4.2	5.9 U	8 U	1.6 U	3.2	4.5 U	3.9 U	1.9 U	5.6 U
SG-C24-1-6.5	6.5	SG-C24-1	C24	7/25/2018	8.8	2.6 U	390	8 U	230	130	4.5 U	59	500	210
SG-C24-1-14	14	SG-C24-1	C24	7/25/2018	93	2.6 U	400	8 U	180	140	4.5 U	32	350	230
SG-C25-1-5	5	SG-C25-1	C25	8/1/2018	350	2.6 U	710	8 U	300	680	4.5 U	***1800***	660	300
SG-C25-1-15	15	SG-C25-1	C25	8/1/2018	400	2.6 U	910	8 U	280	1900	4.5 U	***2400***	510	350
SG-C29-1-5	5	SG-C29-1	C29	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-C29-1-15	15	SG-C29-1	C29	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D2-1-6.5	6.5	SG-D2-1	D2	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-D2-1-15	15	SG-D2-1	D2	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D3-1-5.5	5.5	SG-D3-1	D3	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	160	30	4.5 U	3.9 U	95	16
SG-D3-1-15	15	SG-D3-1	D3	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	2000	59	4.5 U	***830***	2300	120
SG-D4-1-4	4	SG-D4-1	D4	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	53	1.9 U	4.5 U	**100**	130	22
SG-D4-1-15	15	SG-D4-1	D4	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	150	1.9 U	4.5 U	47	260	13
SG-D4-2-5.5	5.5	SG-D4-2	D4	6/13/2018	5.5 U	2.6 U	24	8 U	4	65	4.5 U	3.9 U	3.8	7.6
SG-D4-2-15	15	SG-D4-2	D4	6/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3.8	4.5 U	3.9 U	1.9 U	5.6 U
SG-D5-1-5.5	5.5	SG-D5-1	D5	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	4.6	4.5 U	3.9 U	1.9 U	5.6 U
SG-D5-1-15	15	SG-D5-1	D5	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D6-1-5	5	SG-D6-1	D6	8/2/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	40	1.9 U	5.6 U
SG-D6-1-15	15	SG-D6-1	D6	8/2/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.8	4.5 U	3.9 U	1.9 U	5.6 U
SG-D6-2-5	5	SG-D6-2	D6	8/2/2018	5.5 U	5.2	5.9 U	8 U	1.6 U	1.9 U	4.5 U	12	1.9 U	5.6 U
SG-D6-2-16	16	SG-D6-2	D6	8/2/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-D7-1-5	5	SG-D7-1	D7	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D7-1-13.5	13.5	SG-D7-1	D7	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D8-1-4	4	SG-D8-1	D8	6/18/2018	5.5 U	2.6 U	17	8 U	12	59	4.5 U	3.9 U	35	14
SG-D8-1-13.5	13.5	SG-D8-1	D8	6/18/2018	5.5 U	2.6 U	13	8 U	8.6	40	4.5 U	3.9 U	29	11
SG-D9-1-4	4	SG-D9-1	D9	6/18/2018	5.5 U	2.6 U	8.8	8 U	6.6	23	4.5 U	3.9 U	32	6.6
SG-D9-1-13.5	13.5	SG-D9-1	D9	6/18/2018	5.5 U	2.6 U	5.9 U	8 U	3.2	18	4.5 U	3.9 U	14	5.6 U
SG-D10-1-5	5	SG-D10-1	D10	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : µg/m³	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : µg/m³	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-C20-1-14.5	14.5	SG-C20-1	C20	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	380	70 U	2.1 U	6.3 U	7.2	3.2 U	2.3 U
SG-C21-1-5.5	5.5	SG-C21-1	C21	7/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1300**	70 U	2.1 U	6.3 U	77	3.2 U	***200***
SG-C21-1-15	15	SG-C21-1	C21	7/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1100**	70 U	2.1 U	6.3 U	110	4.2	**20**
SG-C22-1-4.5	4.5	SG-C22-1	C22	8/1/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	130	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C22-1-14.5	14.5	SG-C22-1	C22	8/1/2018	13	17	6.2	1.8 U	4.8 U	**470**	70 U	5	6.3 U	38	3.2 U	2.3 U
SG-C23-1-2.5	2.5	SG-C23-1	C23	7/25/2018	4.4	3.1 U	6.8	1.8 U	4.8 U	62	70 U	3.4	6.3 U	6.4	3.2 U	2.3 U
SG-C23-1-14	14	SG-C23-1	C23	7/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	330	70 U	2.6	6.3 U	140	3.2 U	4.4
SG-C24-1-6.5	6.5	SG-C24-1	C24	7/25/2018	500	160	220	1.8 U	4.8 U	62	70 U	81	6.3 U	19	3.2 U	2.3 U
SG-C24-1-14	14	SG-C24-1	C24	7/25/2018	480	270	210	1.8 U	4.8 U	110	70 U	42	6.3 U	81	3.2 U	**18**
SG-C25-1-5	5	SG-C25-1	C25	8/1/2018	790	670	380	1.8 U	4.8 U	**1300**	70 U	110	6.3 U	120	3.2 U	**25**
SG-C25-1-15	15	SG-C25-1	C25	8/1/2018	840	970	280	1.8 U	4.8 U	**720**	70 U	87	6.3 U	120	3.2 U	**31**
SG-C29-1-5	5	SG-C29-1	C29	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	26	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-C29-1-15	15	SG-C29-1	C29	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	22	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D2-1-6.5	6.5	SG-D2-1	D2	6/12/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	5.2	70 U	2.8	6.3 U	4.5 U	3.2 U	2.3 U
SG-D2-1-15	15	SG-D2-1	D2	6/12/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D3-1-5.5	5.5	SG-D3-1	D3	6/12/2018	100	3.1 U	150	1.8 U	32	3.7 U	70 U	27	6.3 U	4.5 U	3.2 U	2.3 U
SG-D3-1-15	15	SG-D3-1	D3	6/12/2018	4000	58	2100	1.8 U	110	3.7 U	990	47	6.3 U	4.5 U	3.2 U	2.3 U
SG-D4-1-4	4	SG-D4-1	D4	6/12/2018	110	3.1 U	150	1.8 U	4.8 U	3.7 U	70 U	8.4	6.3 U	4.5 U	3.2 U	2.3 U
SG-D4-1-15	15	SG-D4-1	D4	6/12/2018	130	3.1 U	860	1.8 U	55	3.7 U	70 U	9	6.3 U	4.5 U	3.2 U	2.3 U
SG-D4-2-5.5	5.5	SG-D4-2	D4	6/13/2018	9.8	36	1.4 U	2.6	4.8 U	20	70 U	53	6.3 U	4.5 U	3.2 U	6.6
SG-D4-2-15	15	SG-D4-2	D4	6/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	4.8	6.3 U	4.5 U	3.2 U	2.3 U
SG-D5-1-5.5	5.5	SG-D5-1	D5	6/19/2018	1.4 U	3.1 U	13	1.8 U	4.8 U	3.7 U	70 U	5.4	6.3 U	4.5 U	3.2 U	2.3 U
SG-D5-1-15	15	SG-D5-1	D5	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D6-1-5	5	SG-D6-1	D6	8/2/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	160	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D6-1-15	15	SG-D6-1	D6	8/2/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	36	70 U	2.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-D6-2-5	5	SG-D6-2	D6	8/2/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	110	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D6-2-16	16	SG-D6-2	D6	8/2/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	29	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D7-1-5	5	SG-D7-1	D7	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	20	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D7-1-13.5	13.5	SG-D7-1	D7	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	4	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D8-1-4	4	SG-D8-1	D8	6/18/2018	55	7.2	22	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D8-1-13.5	13.5	SG-D8-1	D8	6/18/2018	39	3.1 U	15	1.8 U	4.8 U	6.4	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D9-1-4	4	SG-D9-1	D9	6/18/2018	26	4	11	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D9-1-13.5	13.5	SG-D9-1	D9	6/18/2018	18	3.1 U	7.4	1.8 U	4.8 U	8.2	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D10-1-5	5	SG-D10-1	D10	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	8.6	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[(a)] : µg/m³	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[(b)] : µg/m³	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-D10-1-16	16	SG-D10-1	D10	6/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4.6	**45** U	2.9 U	3.1 U
SG-D11-1-4.5	4.5	SG-D11-1	D11	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3.6	**45** U	2.9 U	3.1 U
SG-D11-1-14.5	14.5	SG-D11-1	D11	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.2	**45** U	2.9 U	3.1 U
SG-D12-1-5.5	5.5	SG-D12-1	D12	6/21/2018	24	4.7 U	0.4 U	2.7 U	4.4	6.6 U	**3.3** U	4.7 U	6.4	**45** U	2.9 U	3.1 U
SG-D12-1-15	15	SG-D12-1	D12	6/21/2018	5.6	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.4	**45** U	2.9 U	3.1 U
SG-D13-1-5	5	SG-D13-1	D13	6/25/2018	5.8	4.7 U	0.4 U	2.7 U	5.2	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D13-1-15	15	SG-D13-1	D13	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D14-1-5	5	SG-D14-1	D14	8/2/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	28	**45** U	2.9 U	3.1 U
SG-D14-1-15	15	SG-D14-1	D14	8/2/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	16	**45** U	2.9 U	3.1 U
SG-D15-1-5.5	5.5	SG-D15-1	D15	6/28/2018	2.3 U	4.7 U	53	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	6.2	**45** U	2.9 U	3.1 U
SG-D15-1-15	15	SG-D15-1	D15	6/28/2018	2.3 U	4.7 U	55	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	6.6	**45** U	2.9 U	3.1 U
SG-D15-2-5	5	SG-D15-2	D15	8/14/2018	2.3 U	4.7 U	56	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	12	**45** U	2.9 U	3.1 U
SG-D15-2-16	16	SG-D15-2	D15	8/14/2018	2.3 U	4.7 U	56	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3.4	**45** U	2.9 U	3.1 U
SG-D16-1-5	5	SG-D16-1	D16	6/22/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D16-1-15	15	SG-D16-1	D16	6/22/2018	10	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D17-1-4	4	SG-D17-1	D17	6/22/2018	100	4.7 U	0.4 U	2.7 U	15	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D17-1-15	15	SG-D17-1	D17	6/22/2018	190	4.7 U	0.4 U	2.7 U	17	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D18-1-2.5	2.5	SG-D18-1	D18	7/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D18-1-15	15	SG-D18-1	D18	7/19/2018	22	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D18-2-7	7	SG-D18-2	D18	7/17/2018	45	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3.2	**45** U	2.9 U	3.1 U
SG-D18-2-15	15	SG-D18-2	D18	7/17/2018	110	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-D19-1-2.5	2.5	SG-D19-1	D19	7/23/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D19-1-15	15	SG-D19-1	D19	7/23/2018	34	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D19-2-2.5	2.5	SG-D19-2	D19	7/19/2018	12	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D19-2-14.5	14.5	SG-D19-2	D19	7/19/2018	120	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D20-1-5	5	SG-D20-1	D20	7/30/2018	35	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D20-1-14	14	SG-D20-1	D20	7/30/2018	170	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D21-1-6	6	SG-D21-1	D21	7/30/2018	660	4.7 U	0.4 U	11	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D21-1-15	15	SG-D21-1	D21	7/30/2018	1100	4.7 U	0.4 U	220	20	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D22-1-5	5	SG-D22-1	D22	8/1/2018	440	4.7 U	0.4 U	16	2.1 U	6.6 U	**3.3** U	4.7 U	2	**45** U	2.9 U	3.1 U
SG-D22-1-14.5	14.5	SG-D22-1	D22	8/1/2018	620	4.7 U	0.4 U	3.8	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D23-1-6.5	6.5	SG-D23-1	D23	7/25/2018	35	4.7 U	0.4 U	180	7.6	6.6 U	**3.3** U	4.7 U	69	**45** U	2.9 U	3.1 U
SG-D23-1-16	16	SG-D23-1	D23	7/25/2018	70	4.7 U	0.4 U	75	2.1 U	6.6 U	**3.3** U	4.7 U	16	**45** U	2.9 U	3.1 U
SG-D23-2-4.5	4.5	SG-D23-2	D23	7/25/2018	190	4.7 U	0.4 U	100	25	6.6 U	**3.3** U	4.7 U	16	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[a] : $\mu g/m^3$	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[b] : $\mu g/m^3$	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-D10-1-16	16	SG-D10-1	D10	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D11-1-4.5	4.5	SG-D11-1	D11	6/21/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D11-1-14.5	14.5	SG-D11-1	D11	6/21/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D12-1-5.5	5.5	SG-D12-1	D12	6/21/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D12-1-15	15	SG-D12-1	D12	6/21/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D13-1-5	5	SG-D13-1	D13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D13-1-15	15	SG-D13-1	D13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D14-1-5	5	SG-D14-1	D14	8/2/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D14-1-15	15	SG-D14-1	D14	8/2/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D15-1-5.5	5.5	SG-D15-1	D15	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D15-1-15	15	SG-D15-1	D15	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D15-2-5	5	SG-D15-2	D15	8/14/2018	3.4 U	5.1 U	3	3.2 U	4.1 U	6.1 U	2.2 U	2	2.6 U	3.6 U	4.2 U	6.2 U
SG-D15-2-16	16	SG-D15-2	D15	8/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D16-1-5	5	SG-D16-1	D16	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D16-1-15	15	SG-D16-1	D16	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D17-1-4	4	SG-D17-1	D17	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D17-1-15	15	SG-D17-1	D17	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D18-1-2.5	2.5	SG-D18-1	D18	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D18-1-15	15	SG-D18-1	D18	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D18-2-7	7	SG-D18-2	D18	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D18-2-15	15	SG-D18-2	D18	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D19-1-2.5	2.5	SG-D19-1	D19	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D19-1-15	15	SG-D19-1	D19	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D19-2-2.5	2.5	SG-D19-2	D19	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D19-2-14.5	14.5	SG-D19-2	D19	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D20-1-5	5	SG-D20-1	D20	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D20-1-14	14	SG-D20-1	D20	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D21-1-6	6	SG-D21-1	D21	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D21-1-15	15	SG-D21-1	D21	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D22-1-5	5	SG-D22-1	D22	8/1/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D22-1-14.5	14.5	SG-D22-1	D22	8/1/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D23-1-6.5	6.5	SG-D23-1	D23	7/25/2018	3.4 U	5.1 U	20	3.2 U	4.1 U	6.1 U	25	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D23-1-16	16	SG-D23-1	D23	7/25/2018	3.4 U	5.1 U	18	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D23-2-4.5	4.5	SG-D23-2	D23	7/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	9.2	1.2 U	2.6 U	3.6 U	13	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : $\mu g/m^3$	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : $\mu g/m^3$	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-D10-1-16	16	SG-D10-1	D10	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D11-1-4.5	4.5	SG-D11-1	D11	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D11-1-14.5	14.5	SG-D11-1	D11	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D12-1-5.5	5.5	SG-D12-1	D12	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D12-1-15	15	SG-D12-1	D12	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D13-1-5	5	SG-D13-1	D13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D13-1-15	15	SG-D13-1	D13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D14-1-5	5	SG-D14-1	D14	8/2/2018	5.5 U	2.6 U	5.9 U	8 U	5	2	4.5 U	34	22	6.6
SG-D14-1-15	15	SG-D14-1	D14	8/2/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	32	15	5.6 U
SG-D15-1-5.5	5.5	SG-D15-1	D15	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D15-1-15	15	SG-D15-1	D15	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D15-2-5	5	SG-D15-2	D15	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	40	1.9 U	5.6 U
SG-D15-2-16	16	SG-D15-2	D15	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.2	4.5 U	19	1.9 U	5.6 U
SG-D16-1-5	5	SG-D16-1	D16	6/22/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D16-1-15	15	SG-D16-1	D16	6/22/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D17-1-4	4	SG-D17-1	D17	6/22/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	20
SG-D17-1-15	15	SG-D17-1	D17	6/22/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D18-1-2.5	2.5	SG-D18-1	D18	7/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D18-1-15	15	SG-D18-1	D18	7/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D18-2-7	7	SG-D18-2	D18	7/17/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	4	4.5 U	3.9 U	1.9 U	5.6 U
SG-D18-2-15	15	SG-D18-2	D18	7/17/2018	5.5 U	6.6	5.9 U	8 U	1.6 U	2	4.5 U	3.9 U	1.9 U	5.6 U
SG-D19-1-2.5	2.5	SG-D19-1	D19	7/23/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D19-1-15	15	SG-D19-1	D19	7/23/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D19-2-2.5	2.5	SG-D19-2	D19	7/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D19-2-14.5	14.5	SG-D19-2	D19	7/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D20-1-5	5	SG-D20-1	D20	7/30/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D20-1-14	14	SG-D20-1	D20	7/30/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D21-1-6	6	SG-D21-1	D21	7/30/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D21-1-15	15	SG-D21-1	D21	7/30/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D22-1-5	5	SG-D22-1	D22	8/1/2018	5.5 U	6.2	5.9 U	8 U	1.6 U	3.6	4.5 U	3.9 U	1.9 U	5.6 U
SG-D22-1-14.5	14.5	SG-D22-1	D22	8/1/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3.2	4.5 U	3.9 U	1.9 U	5.6 U
SG-D23-1-6.5	6.5	SG-D23-1	D23	7/25/2018	200	3	39	8 U	12	40	4.5 U	3.9 U	33	34
SG-D23-1-16	16	SG-D23-1	D23	7/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.8	4.5 U	3.9 U	18	5.6 U
SG-D23-2-4.5	4.5	SG-D23-2	D23	7/25/2018	140	2.6 U	5.9 U	8 U	2.2	5	4.5 U	3.9 U	7.2	10

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : µg/m^3	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : µg/m^3	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-D10-1-16	16	SG-D10-1	D10	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	35	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D11-1-4.5	4.5	SG-D11-1	D11	6/21/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	37	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D11-1-14.5	14.5	SG-D11-1	D11	6/21/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	99	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D12-1-5.5	5.5	SG-D12-1	D12	6/21/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	51	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D12-1-15	15	SG-D12-1	D12	6/21/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	73	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D13-1-5	5	SG-D13-1	D13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	230	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D13-1-15	15	SG-D13-1	D13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	220	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D14-1-5	5	SG-D14-1	D14	8/2/2018	13	3.1 U	12	1.8 U	4.8 U	170	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D14-1-15	15	SG-D14-1	D14	8/2/2018	7.6	3.1 U	1.4 U	1.8 U	4.8 U	180	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D15-1-5.5	5.5	SG-D15-1	D15	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	270	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D15-1-15	15	SG-D15-1	D15	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	360	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D15-2-5	5	SG-D15-2	D15	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	360	70 U	2.1 U	6.3 U	13	3.2 U	2.3 U
SG-D15-2-16	16	SG-D15-2	D15	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**550**	70 U	2.2	6.3 U	17	3.2 U	2.3 U
SG-D16-1-5	5	SG-D16-1	D16	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	430	70 U	2.1 U	6.3 U	6	3.2 U	2.3 U
SG-D16-1-15	15	SG-D16-1	D16	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**770**	70 U	2.1 U	6.3 U	58	3.2 U	2.3 U
SG-D17-1-4	4	SG-D17-1	D17	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1200**	70 U	4	6.3 U	4.5 U	3.2 U	2.3 U
SG-D17-1-15	15	SG-D17-1	D17	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1700**	70 U	2.1 U	6.3 U	21	3.2 U	2.3 U
SG-D18-1-2.5	2.5	SG-D18-1	D18	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1000**	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D18-1-15	15	SG-D18-1	D18	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**890**	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D18-2-7	7	SG-D18-2	D18	7/17/2018	1.4 U	4	1.4 U	1.8 U	4.8 U	**910**	70 U	5.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-D18-2-15	15	SG-D18-2	D18	7/17/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1300**	70 U	3.6	6.3 U	7.8	3.2 U	2.3 U
SG-D19-1-2.5	2.5	SG-D19-1	D19	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	52	70 U	2.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-D19-1-15	15	SG-D19-1	D19	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	72	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D19-2-2.5	2.5	SG-D19-2	D19	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**700**	70 U	2.1 U	6.3 U	9	3.2 U	2.3 U
SG-D19-2-14.5	14.5	SG-D19-2	D19	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1400**	70 U	2.1 U	6.3 U	25	3.2 U	2.3 U
SG-D20-1-5	5	SG-D20-1	D20	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	290	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D20-1-14	14	SG-D20-1	D20	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**760**	70 U	2.1 U	6.3 U	52	3.2 U	2.3 U
SG-D21-1-6	6	SG-D21-1	D21	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3700***	70 U	2.1 U	6.3 U	120	3.2 U	2.3 U
SG-D21-1-15	15	SG-D21-1	D21	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4600***	70 U	2.1 U	6.3 U	240	3.2 U	2.3 U
SG-D22-1-5	5	SG-D22-1	D22	8/1/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3300***	70 U	2.6	6.3 U	230	3.2 U	2.3 U
SG-D22-1-14.5	14.5	SG-D22-1	D22	8/1/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3200***	70 U	2.1 U	6.3 U	180	3.2 U	2.3 U
SG-D23-1-6.5	6.5	SG-D23-1	D23	7/25/2018	31	26	15	1.8 U	4.8 U	**1800**	70 U	18	8	210	3.2 U	2.3 U
SG-D23-1-16	16	SG-D23-1	D23	7/25/2018	8.6	3.1 U	5.6	1.8 U	4.8 U	**1300**	70 U	2.4	6.3 U	170	3.2 U	2.3 U
SG-D23-2-4.5	4.5	SG-D23-2	D23	7/25/2018	7.2	3.1 U	1.4 U	1.8 U	4.8 U	***4800***	70 U	3.2	15	**1900**	3.2 U	5.6

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[(a)] : µg/m³	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[(b)] : µg/m³	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-D23-2-14	14	SG-D23-2	D23	7/25/2018	180	4.7 U	0.4 U	38	2.1 U	6.6 U	**3.3** U	4.7 U	7.2	**45** U	2.9 U	3.1 U
SG-D24-1-4.5	4.5	SG-D24-1	D24	7/25/2018	26	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5.8	**45** U	2.9 U	3.1 U
SG-D24-1-15	15	SG-D24-1	D24	7/25/2018	23	4.7 U	0.4 U	17	2.1 U	6.6 U	**3.3** U	4.7 U	9.2	**45** U	2.9 U	3.1 U
SG-D24-2-5	5	SG-D24-2	D24	7/26/2018	160	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-D24-2-14	14	SG-D24-2	D24	7/26/2018	130	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-D25-1-5	5	SG-D25-1	D25	8/1/2018	73	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	110	**45** U	2.9 U	3.1 U
SG-D25-1-14	14	SG-D25-1	D25	8/1/2018	43	4.7 U	0.4 U	23	2.1 U	6.6 U	**3.3** U	4.7 U	69	**45** U	2.9 U	3.1 U
SG-D26-1-6	6	SG-D26-1	D26	8/6/2018	16	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D26-1-15	15	SG-D26-1	D26	8/6/2018	22	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D26-2-5	5	SG-D26-2	D26	8/6/2018	87	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D26-2-15	15	SG-D26-2	D26	8/6/2018	24	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D27-1-5	5	SG-D27-1	D27	8/9/2018	2.3 U	4.7 U	0.4 U	8	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D27-1-15	15	SG-D27-1	D27	8/9/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D29-1-5	5	SG-D29-1	D29	8/6/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-D29-1-15	15	SG-D29-1	D29	8/6/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E4-1-5	5	SG-E4-1	E4	6/12/2018	40	4.7 U	0.4 U	38	2.1 U	6.6 U	**3.3** U	4.7 U	61	**45** U	2.9 U	3.1 U
SG-E4-1-15	15	SG-E4-1	E4	6/12/2018	25	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5.2	**45** U	2.9 U	3.1 U
SG-E5-1-4.5	4.5	SG-E5-1	E5	6/26/2018	2.3 U	4.7 U	0.4 U	2.7	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E5-1-15	15	SG-E5-1	E5	6/26/2018	2.3 U	4.7 U	0.4 U	2.7	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E5-2-3	3	SG-E5-2	E5	6/26/2018	2.3 U	4.7 U	0.4 U	2.7	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E5-2-14	14	SG-E5-2	E5	6/26/2018	2.3 U	4.7 U	0.4 U	2.7	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E6-1-5	5	SG-E6-1	E6	6/26/2018	2.3 U	4.7 U	0.4 U	2.7	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E6-1-15	15	SG-E6-1	E6	6/26/2018	2.3 U	4.7 U	0.4 U	2.7	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E6-2-2	2	SG-E6-2	E6	6/26/2018	2.3 U	4.7 U	0.4 U	2.7	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E6-2-15	15	SG-E6-2	E6	6/26/2018	2.3 U	4.7 U	0.4 U	2.7	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E7-1-4	4	SG-E7-1	E7	6/27/2018	2.3 U	4.7 U	0.4 U	310	28	6.6 U	**3.3** U	4.7 U	1900	**45** U	2.9 U	3.1 U
SG-E7-1-15	15	SG-E7-1	E7	6/27/2018	2.3 U	4.7 U	0.4 U	13	2.1 U	6.6 U	**3.3** U	4.7 U	120	**45** U	2.9 U	3.1 U
SG-E7-2-5	5	SG-E7-2	E7	6/27/2018	2.3 U	4.7 U	0.4 U	5.2	2.1 U	6.6 U	**3.3** U	4.7 U	130	**45** U	2.9 U	3.1 U
SG-E7-2-15	15	SG-E7-2	E7	6/27/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	45	**45** U	2.9 U	3.1 U
SG-E8-1-4.5	4.5	SG-E8-1	E8	6/27/2018	2.3 U	4.7 U	0.4 U	820	2.1 U	6.6 U	**3.3** U	4.7 U	1600	**45** U	2.9 U	3.1 U
SG-E8-1-15	15	SG-E8-1	E8	6/27/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	57	**45** U	2.9 U	3.1 U
SG-E9-1-5	5	SG-E9-1	E9	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	260	**45** U	2.9 U	3.1 U
SG-E9-1-15	15	SG-E9-1	E9	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	77	**45** U	2.9 U	3.1 U
SG-E10-1-5	5	SG-E10-1	E10	6/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	6.2	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : µg/m^3	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : µg/m^3	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-D23-2-14	14	SG-D23-2	D23	7/25/2018	3.4 U	5.1 U	8.4	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	5.6	6.2 U
SG-D24-1-4.5	4.5	SG-D24-1	D24	7/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D24-1-15	15	SG-D24-1	D24	7/25/2018	3.4 U	5.1 U	8.8	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D24-2-5	5	SG-D24-2	D24	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D24-2-14	14	SG-D24-2	D24	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	15	6.2 U
SG-D25-1-5	5	SG-D25-1	D25	8/1/2018	3.4 U	5.1 U	25	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D25-1-14	14	SG-D25-1	D25	8/1/2018	3.4 U	5.1 U	16	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D26-1-6	6	SG-D26-1	D26	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D26-1-15	15	SG-D26-1	D26	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D26-2-5	5	SG-D26-2	D26	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D26-2-15	15	SG-D26-2	D26	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D27-1-5	5	SG-D27-1	D27	8/9/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D27-1-15	15	SG-D27-1	D27	8/9/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D29-1-5	5	SG-D29-1	D29	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-D29-1-15	15	SG-D29-1	D29	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E4-1-5	5	SG-E4-1	E4	6/12/2018	3.4 U	5.1 U	28	3.2 U	4.1 U	6.1 U	20	18	2.6 U	3.6 U	4.2 U	6.2 U
SG-E4-1-15	15	SG-E4-1	E4	6/12/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E5-1-4.5	4.5	SG-E5-1	E5	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E5-1-15	15	SG-E5-1	E5	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E5-2-3	3	SG-E5-2	E5	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E5-2-14	14	SG-E5-2	E5	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E6-1-5	5	SG-E6-1	E6	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E6-1-15	15	SG-E6-1	E6	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E6-2-2	2	SG-E6-2	E6	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E6-2-15	15	SG-E6-2	E6	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E7-1-4	4	SG-E7-1	E7	6/27/2018	3.4 U	5.1 U	820	3.2 U	4.1 U	6.1 U	**160**	1.2 U	2.6 U	34	4.2 U	6.2 U
SG-E7-1-15	15	SG-E7-1	E7	6/27/2018	3.4 U	5.1 U	45	3.2 U	4.1 U	6.1 U	5.6	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E7-2-5	5	SG-E7-2	E7	6/27/2018	3.4 U	5.1 U	38	3.2 U	4.1 U	6.1 U	38	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E7-2-15	15	SG-E7-2	E7	6/27/2018	3.4 U	5.1 U	12	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E8-1-4.5	4.5	SG-E8-1	E8	6/27/2018	3.4 U	5.1 U	600	3.2 U	4.1 U	6.1 U	**160**	12	2.6 U	3.6 U	4.2 U	6.2 U
SG-E8-1-15	15	SG-E8-1	E8	6/27/2018	3.4 U	5.1 U	20	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E9-1-5	5	SG-E9-1	E9	6/18/2018	3.4 U	5.1 U	55	3.2 U	4.1 U	6.1 U	5.6	1.2 U	2.6 U	3.6 U	4.2 U	20
SG-E9-1-15	15	SG-E9-1	E9	6/18/2018	3.4 U	5.1 U	18	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E10-1-5	5	SG-E10-1	E10	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	15	2.6 U	3.6 U	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : μg/m^3	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : μg/m^3	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3
SG-D23-2-14	14	SG-D23-2	D23	7/25/2018	16	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	8	5.6 U
SG-D24-1-4.5	4.5	SG-D24-1	D24	7/25/2018	10	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D24-1-15	15	SG-D24-1	D24	7/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	14	1.9 U	5.6 U
SG-D24-2-5	5	SG-D24-2	D24	7/26/2018	5.5 U	3	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D24-2-14	14	SG-D24-2	D24	7/26/2018	5.5 U	4.8	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D25-1-5	5	SG-D25-1	D25	8/1/2018	5.5 U	2.6 U	5.9 U	8 U	4.6	12	4.5 U	**160**	18	7.4
SG-D25-1-14	14	SG-D25-1	D25	8/1/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	6.6	4.5 U	78	9	5.6 U
SG-D26-1-6	6	SG-D26-1	D26	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D26-1-15	15	SG-D26-1	D26	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D26-2-5	5	SG-D26-2	D26	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D26-2-15	15	SG-D26-2	D26	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D27-1-5	5	SG-D27-1	D27	8/9/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D27-1-15	15	SG-D27-1	D27	8/9/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.2	4.5 U	3.9 U	1.9 U	5.6 U
SG-D29-1-5	5	SG-D29-1	D29	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-D29-1-15	15	SG-D29-1	D29	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E4-1-5	5	SG-E4-1	E4	6/12/2018	5.5 U	2.6 U	30	8 U	18	78	4.5 U	26	52	16
SG-E4-1-15	15	SG-E4-1	E4	6/12/2018	5.5 U	2.6 U	5.9 U	8 U	6.6	2	4.5 U	3.9 U	36	5.6 U
SG-E5-1-4.5	4.5	SG-E5-1	E5	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E5-1-15	15	SG-E5-1	E5	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E5-2-3	3	SG-E5-2	E5	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E5-2-14	14	SG-E5-2	E5	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E6-1-5	5	SG-E6-1	E6	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E6-1-15	15	SG-E6-1	E6	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E6-2-2	2	SG-E6-2	E6	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E6-2-15	15	SG-E6-2	E6	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E7-1-4	4	SG-E7-1	E7	6/27/2018	650	2.6 U	800	8 U	380	2100	4.5 U	**140**	330	340
SG-E7-1-15	15	SG-E7-1	E7	6/27/2018	12	2.6 U	15	8 U	15	41	4.5 U	41	34	31
SG-E7-2-5	5	SG-E7-2	E7	6/27/2018	10	2.6 U	17	8 U	19	37	4.5 U	**90**	30	32
SG-E7-2-15	15	SG-E7-2	E7	6/27/2018	5.5 U	2.6 U	5.9 U	8 U	3.2	12	4.5 U	43	12	9.8
SG-E8-1-4.5	4.5	SG-E8-1	E8	6/27/2018	12	2.6 U	550	8 U	220	2100	4.5 U	**150**	130	190
SG-E8-1-15	15	SG-E8-1	E8	6/27/2018	5.5 U	2.6 U	9	8 U	5.2	35	4.5 U	29	9.4	8.6
SG-E9-1-5	5	SG-E9-1	E9	6/18/2018	5.5 U	2.6 U	16	8 U	6.4	47	4.5 U	**120**	49	7.8
SG-E9-1-15	15	SG-E9-1	E9	6/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	7	4.5 U	22	8.2	5.6 U
SG-E10-1-5	5	SG-E10-1	E10	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.2	4.5 U	3.9 U	1.9 U	5.6 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : µg/m^3	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : µg/m^3	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-D23-2-14	14	SG-D23-2	D23	7/25/2018	3.6	3.1 U	1.4 U	1.8 U	4.8 U	***2900***	70 U	2.1 U	6.3 U	**510**	3.2 U	2.3 U
SG-D24-1-4.5	4.5	SG-D24-1	D24	7/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1400**	70 U	2.1 U	6.3 U	**720**	3.2 U	2.3 U
SG-D24-1-15	15	SG-D24-1	D24	7/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1000**	70 U	2.1 U	6.3 U	410	3.2 U	2.3 U
SG-D24-2-5	5	SG-D24-2	D24	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4600***	70 U	3.2	6.3 U	170	3.2 U	2.3 U
SG-D24-2-14	14	SG-D24-2	D24	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3200***	70 U	2.8	6.3 U	**490**	3.2 U	2.3 U
SG-D25-1-5	5	SG-D25-1	D25	8/1/2018	13	6.4	7.4	1.8 U	4.8 U	***3900***	70 U	2.1 U	6.3 U	94	3.2 U	2.3 U
SG-D25-1-14	14	SG-D25-1	D25	8/1/2018	7.6	3.8	4.2	1.8 U	4.8 U	***2800***	70 U	2.1 U	6.3 U	270	3.2 U	2.3 U
SG-D26-1-6	6	SG-D26-1	D26	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**510**	70 U	3.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-D26-1-15	15	SG-D26-1	D26	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**500**	70 U	3	6.3 U	6	3.2 U	2.3 U
SG-D26-2-5	5	SG-D26-2	D26	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4300***	70 U	4	6.3 U	54	3.2 U	2.3 U
SG-D26-2-15	15	SG-D26-2	D26	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**2000**	70 U	2.8	6.3 U	28	3.2 U	2.3 U
SG-D27-1-5	5	SG-D27-1	D27	8/9/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**730**	70 U	2.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-D27-1-15	15	SG-D27-1	D27	8/9/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**570**	70 U	2.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-D29-1-5	5	SG-D29-1	D29	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	40	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-D29-1-15	15	SG-D29-1	D29	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	44	70 U	2.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-E4-1-5	5	SG-E4-1	E4	6/12/2018	45	45	63	1.8 U	8.2	91	70 U	89	6.3 U	20	3.2 U	2.3 U
SG-E4-1-15	15	SG-E4-1	E4	6/12/2018	21	3.1 U	26	1.8 U	4.8 U	9.2	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E5-1-4.5	4.5	SG-E5-1	E5	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E5-1-15	15	SG-E5-1	E5	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E5-2-3	3	SG-E5-2	E5	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E5-2-14	14	SG-E5-2	E5	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E6-1-5	5	SG-E6-1	E6	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E6-1-15	15	SG-E6-1	E6	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E6-2-2	2	SG-E6-2	E6	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E6-2-15	15	SG-E6-2	E6	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E7-1-4	4	SG-E7-1	E7	6/27/2018	640	1100	530	1.8 U	4.8 U	400	70 U	550	29	460	3.2 U	***270***
SG-E7-1-15	15	SG-E7-1	E7	6/27/2018	27	30	34	1.8 U	4.8 U	9.4	70 U	6.4	6.3 U	4.5 U	3.2 U	**110**
SG-E7-2-5	5	SG-E7-2	E7	6/27/2018	23	15	35	1.8 U	4.8 U	15	70 U	7	6.3 U	6.6	3.2 U	**12**
SG-E7-2-15	15	SG-E7-2	E7	6/27/2018	7.6	6.8	8.6	1.8 U	4.8 U	3.7 U	70 U	2.2	6.3 U	4.5 U	3.2 U	**51**
SG-E8-1-4.5	4.5	SG-E8-1	E8	6/27/2018	380	1100	320	1.8 U	4.8 U	73	70 U	740	6.3 U	83	3.2 U	**43**
SG-E8-1-15	15	SG-E8-1	E8	6/27/2018	10	20	13	1.8 U	4.8 U	3.7 U	70 U	6.4	6.3 U	4.5 U	3.2 U	2.3 U
SG-E9-1-5	5	SG-E9-1	E9	6/18/2018	24	9.4	9	1.8 U	4.8 U	11	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E9-1-15	15	SG-E9-1	E9	6/18/2018	8.4	3.1 U	1.4 U	1.8 U	4.8 U	5.4	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E10-1-5	5	SG-E10-1	E10	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	9.6	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	**71-55-6**	**79-00-5**	**76-13-1**	**75-34-3**	**75-35-4**	**87-61-6**	**96-18-4**	**120-82-1**	**95-63-6**	**96-12-8**	**106-93-4**	**95-50-1**
				Analytical Method	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**
				Analyte	**1,1,1-TCA**	**1,1,2-TCA**	**1,1,2-Trichloro-trifluoroethane**	**1,1-DCA**	**1,1-DCE**	**1,2,3-TCB**	**1,2,3-TCP**	**1,2,4-TCB**	**1,2,4-TMB**	**DBCP**	**EDB**	**1,2-Dichloro benzene**
				Residential Screening Level[(a)] : µg/m^3	**1000000**	**180**	**5200000**	**1800**	**73000**	**3300**	**0.14**	**380**	**63000**	**0.17**	**4.7**	**210000**
				Commercial Screening Level[(b)] : µg/m^3	**4400000**	**770**	**22000000**	**7700**	**310000**	**14000**	**1.6**	**1700**	**260000**	**2**	**20**	**880000**
Sample ID	**Depth (ft-bgs)**	**Location**	**Grid Cell**	**Sample Date**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**
SG-E10-1-15	15	SG-E10-1	E10	6/19/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4	**45** U	2.9 U	3.1 U
SG-E11-1-5	5	SG-E11-1	E11	6/22/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.2	**45** U	2.9 U	3.1 U
SG-E11-1-13.5	13.5	SG-E11-1	E11	6/22/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.8	**45** U	2.9 U	3.1 U
SG-E12-1-5	5	SG-E12-1	E12	6/22/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E12-1-14	14	SG-E12-1	E12	6/22/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E13-1-5	5	SG-E13-1	E13	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E13-1-15	15	SG-E13-1	E13	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E14-1-5	5	SG-E14-1	E14	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3.2	**45** U	2.9 U	3.1 U
SG-E14-1-15	15	SG-E14-1	E14	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3	**45** U	2.9 U	3.1 U
SG-E15-1-5	5	SG-E15-1	E15	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	7	**45** U	2.9 U	3.1 U
SG-E15-1-14	14	SG-E15-1	E15	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E15-2-5	5	SG-E15-2	E15	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	8.8	**45** U	2.9 U	3.1 U
SG-E15-2-15	15	SG-E15-2	E15	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E16-1-7	7	SG-E16-1	E16	6/22/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	7.2	**45** U	2.9 U	3.1 U
SG-E16-1-15	15	SG-E16-1	E16	6/22/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E16-2-5	5	SG-E16-2	E16	8/2/2018	10	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	11	**45** U	2.9 U	3.1 U
SG-E17-1-2.8	2.8	SG-E17-1	E17	7/17/2018	2.3	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-E17-1-15	15	SG-E17-1	E17	7/17/2018	27	4.7 U	0.4 U	4.6	2.1	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-E17-2-5.5	5.5	SG-E17-2	E17	7/17/2018	26	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-E17-2-15	15	SG-E17-2	E17	7/17/2018	71	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-E18-1-5.5	5.5	SG-E18-1	E18	7/18/2018	170	4.7 U	0.4 U	2.7 U	64	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E18-1-15	15	SG-E18-1	E18	7/18/2018	88	4.7 U	0.4 U	2.7 U	35	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E18-2-5.5	5.5	SG-E18-2	E18	7/18/2018	210	4.7 U	0.4 U	2.7 U	73	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E18-2-14.5	14.5	SG-E18-2	E18	7/18/2018	130	4.7 U	0.4 U	7	33	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E19-1-5.5	5.5	SG-E19-1	E19	7/19/2018	180	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E19-1-15	15	SG-E19-1	E19	7/19/2018	320	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E19-2-6	6	SG-E19-2	E19	7/19/2018	200	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E19-2-15	15	SG-E19-2	E19	7/19/2018	290	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E20-1-4	4	SG-E20-1	E20	7/24/2018	330	4.7 U	0.4 U	2.7 U	55	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E20-1-14	14	SG-E20-1	E20	7/24/2018	510	4.7 U	0.4 U	2.7 U	19	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E21-1-6.5	6.5	SG-E21-1	E21	7/30/2018	1400	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E21-1-17	17	SG-E21-1	E21	7/30/2018	4700	4.7 U	0.4 U	120	100	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E21-2-6	6	SG-E21-2	E21	7/31/2018	7500	4.7 U	0.4 U	38	610	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E21-2-15	15	SG-E21-2	E21	7/31/2018	12000	4.7 U	0.4 U	270	430	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : µg/m³	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : µg/m³	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-E10-1-15	15	SG-E10-1	E10	6/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E11-1-5	5	SG-E11-1	E11	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	4.6	2.6 U	3.6 U	4.2 U	6.2 U
SG-E11-1-13.5	13.5	SG-E11-1	E11	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E12-1-5	5	SG-E12-1	E12	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E12-1-14	14	SG-E12-1	E12	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E13-1-5	5	SG-E13-1	E13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E13-1-15	15	SG-E13-1	E13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E14-1-5	5	SG-E14-1	E14	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E14-1-15	15	SG-E14-1	E14	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E15-1-5	5	SG-E15-1	E15	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E15-1-14	14	SG-E15-1	E15	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E15-2-5	5	SG-E15-2	E15	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E15-2-15	15	SG-E15-2	E15	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E16-1-7	7	SG-E16-1	E16	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	4.2	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E16-1-15	15	SG-E16-1	E16	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E16-2-5	5	SG-E16-2	E16	8/2/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E17-1-2.8	2.8	SG-E17-1	E17	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E17-1-15	15	SG-E17-1	E17	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E17-2-5.5	5.5	SG-E17-2	E17	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E17-2-15	15	SG-E17-2	E17	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E18-1-5.5	5.5	SG-E18-1	E18	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E18-1-15	15	SG-E18-1	E18	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E18-2-5.5	5.5	SG-E18-2	E18	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E18-2-14.5	14.5	SG-E18-2	E18	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E19-1-5.5	5.5	SG-E19-1	E19	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E19-1-15	15	SG-E19-1	E19	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E19-2-6	6	SG-E19-2	E19	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E19-2-15	15	SG-E19-2	E19	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E20-1-4	4	SG-E20-1	E20	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E20-1-14	14	SG-E20-1	E20	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E21-1-6.5	6.5	SG-E21-1	E21	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E21-1-17	17	SG-E21-1	E21	7/30/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	6.2	6.2 U
SG-E21-2-6	6	SG-E21-2	E21	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	10	1.2 U	2.6 U	3.6 U	9.4	6.2 U
SG-E21-2-15	15	SG-E21-2	E21	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	27	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : $\mu g/m^3$	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : $\mu g/m^3$	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-E10-1-15	15	SG-E10-1	E10	6/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E11-1-5	5	SG-E11-1	E11	6/22/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E11-1-13.5	13.5	SG-E11-1	E11	6/22/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E12-1-5	5	SG-E12-1	E12	6/22/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E12-1-14	14	SG-E12-1	E12	6/22/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E13-1-5	5	SG-E13-1	E13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E13-1-15	15	SG-E13-1	E13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E14-1-5	5	SG-E14-1	E14	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E14-1-15	15	SG-E14-1	E14	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E15-1-5	5	SG-E15-1	E15	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E15-1-14	14	SG-E15-1	E15	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E15-2-5	5	SG-E15-2	E15	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-E15-2-15	15	SG-E15-2	E15	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E16-1-7	7	SG-E16-1	E16	6/22/2018	5.5 U	2.6 U	6.2	8 U	1.6 U	5	4.5 U	3.9 U	1.9 U	120
SG-E16-1-15	15	SG-E16-1	E16	6/22/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	7
SG-E16-2-5	5	SG-E16-2	E16	8/2/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	21	8.6	5.6 U
SG-E17-1-2.8	2.8	SG-E17-1	E17	7/17/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E17-1-15	15	SG-E17-1	E17	7/17/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E17-2-5.5	5.5	SG-E17-2	E17	7/17/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E17-2-15	15	SG-E17-2	E17	7/17/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E18-1-5.5	5.5	SG-E18-1	E18	7/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E18-1-15	15	SG-E18-1	E18	7/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E18-2-5.5	5.5	SG-E18-2	E18	7/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E18-2-14.5	14.5	SG-E18-2	E18	7/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E19-1-5.5	5.5	SG-E19-1	E19	7/19/2018	5.5 U	5	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E19-1-15	15	SG-E19-1	E19	7/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E19-2-6	6	SG-E19-2	E19	7/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E19-2-15	15	SG-E19-2	E19	7/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E20-1-4	4	SG-E20-1	E20	7/24/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E20-1-14	14	SG-E20-1	E20	7/24/2018	5.5 U	6	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E21-1-6.5	6.5	SG-E21-1	E21	7/30/2018	5.5 U	3.8	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E21-1-17	17	SG-E21-1	E21	7/30/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E21-2-6	6	SG-E21-2	E21	7/31/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E21-2-15	15	SG-E21-2	E21	7/31/2018	6	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : µg/m³	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : µg/m³	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-E10-1-15	15	SG-E10-1	E10	6/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	7.6	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E11-1-5	5	SG-E11-1	E11	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	24	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E11-1-13.5	13.5	SG-E11-1	E11	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	83	70 U	2.1 U	6.3 U	5.4	3.2 U	2.3 U
SG-E12-1-5	5	SG-E12-1	E12	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	43	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E12-1-14	14	SG-E12-1	E12	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	140	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E13-1-5	5	SG-E13-1	E13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	130	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E13-1-15	15	SG-E13-1	E13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	170	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E14-1-5	5	SG-E14-1	E14	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	31	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E14-1-15	15	SG-E14-1	E14	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	99	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E15-1-5	5	SG-E15-1	E15	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	20	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E15-1-14	14	SG-E15-1	E15	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	120	70 U	2.1 U	6.3 U	7.2	3.2 U	2.3 U
SG-E15-2-5	5	SG-E15-2	E15	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	140	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E15-2-15	15	SG-E15-2	E15	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	260	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E16-1-7	7	SG-E16-1	E16	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	340	70 U	7.8	6.3 U	4.5 U	3.2 U	2.3 U
SG-E16-1-15	15	SG-E16-1	E16	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1200**	70 U	2.1 U	6.3 U	21	3.2 U	2.3 U
SG-E16-2-5	5	SG-E16-2	E16	8/2/2018	4.6	3.1 U	1.4 U	1.8 U	4.8 U	**1100**	70 U	2.1 U	6.3 U	13	3.2 U	2.3 U
SG-E17-1-2.8	2.8	SG-E17-1	E17	7/17/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	67	70 U	2.1 U	6.3 U	6	3.2 U	2.3 U
SG-E17-1-15	15	SG-E17-1	E17	7/17/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2700***	70 U	2.1 U	6.3 U	230	3.2 U	2.3 U
SG-E17-2-5.5	5.5	SG-E17-2	E17	7/17/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**820**	70 U	2.1 U	6.3 U	15	3.2 U	2.3 U
SG-E17-2-15	15	SG-E17-2	E17	7/17/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1900**	70 U	2.1 U	6.3 U	60	3.2 U	2.3 U
SG-E18-1-5.5	5.5	SG-E18-1	E18	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1300**	70 U	2.1 U	6.3 U	11	3.2 U	2.3 U
SG-E18-1-15	15	SG-E18-1	E18	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2900***	70 U	2.1 U	6.3 U	100	3.2 U	2.3 U
SG-E18-2-5.5	5.5	SG-E18-2	E18	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1900**	70 U	2.1 U	6.3 U	74	3.2 U	2.3 U
SG-E18-2-14.5	14.5	SG-E18-2	E18	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3400***	70 U	2.1 U	6.3 U	220	3.2 U	2.3 U
SG-E19-1-5.5	5.5	SG-E19-1	E19	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1600**	70 U	2.1 U	6.3 U	6	3.2 U	2.3 U
SG-E19-1-15	15	SG-E19-1	E19	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2800***	70 U	2.1 U	6.3 U	17	3.2 U	2.3 U
SG-E19-2-6	6	SG-E19-2	E19	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2200***	70 U	2.1 U	6.3 U	24	3.2 U	2.3 U
SG-E19-2-15	15	SG-E19-2	E19	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2700***	70 U	2.1 U	6.3 U	74	3.2 U	2.3 U
SG-E20-1-4	4	SG-E20-1	E20	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3400***	70 U	2.1 U	6.3 U	11	3.2 U	2.3 U
SG-E20-1-14	14	SG-E20-1	E20	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3000***	70 U	2.2	6.3 U	5.8	3.2 U	2.3 U
SG-E21-1-6.5	6.5	SG-E21-1	E21	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7400***	70 U	2.1 U	6.3 U	22	3.2 U	2.3 U
SG-E21-1-17	17	SG-E21-1	E21	7/30/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***18000***	70 U	2.1 U	6.3 U	460	3.2 U	2.3 U
SG-E21-2-6	6	SG-E21-2	E21	7/31/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***22000***	70 U	2.8	6.3 U	**790**	3.2 U	2.3 U
SG-E21-2-15	15	SG-E21-2	E21	7/31/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***29000***	70 U	2.1 U	6.3 U	**1100**	3.2 U	2.3 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[(a)] : µg/m³	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[(b)] : µg/m³	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-E22-1-5	5	SG-E22-1	E22	8/1/2018	8100	4.7 U	0.4 U	8	69	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E22-1-15	15	SG-E22-1	E22	8/1/2018	7000	4.7 U	0.4 U	44	120	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E22-2-6.5	6.5	SG-E22-2	E22	7/31/2018	20000	4.7 U	0.4 U	340	560	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E22-2-14.5	14.5	SG-E22-2	E22	7/31/2018	21000	4.7 U	0.4 U	410	520	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E23-1-5	5	SG-E23-1	E23	7/26/2018	1400	4.7 U	0.4 U	720	370	6.6	**3.3** U	4.7 U	9	**45** U	2.9 U	3.1 U
SG-E23-1-17	17	SG-E23-1	E23	7/26/2018	1800	4.7 U	0.4 U	440	150	6.6	**3.3** U	4.7 U	2.8	**45** U	2.9 U	3.1 U
SG-E24-1-4	4	SG-E24-1	E24	7/26/2018	1200	4.7 U	0.4 U	4.6	2.1	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-E24-1-16.5	16.5	SG-E24-1	E24	7/26/2018	1100	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-E24-2-4.5	4.5	SG-E24-2	E24	7/26/2018	5800	4.7 U	0.4 U	2.7 U	4.6	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-E24-2-17	17	SG-E24-2	E24	7/26/2018	4200	4.7 U	0.4 U	7.2	13	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-E25-1-5.5	5.5	SG-E25-1	E25	8/1/2018	1200	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	52	**45** U	2.9 U	3.1 U
SG-E25-1-15	15	SG-E25-1	E25	8/1/2018	1500	4.7 U	0.4 U	22	2.1 U	6.6 U	**3.3** U	4.7 U	31	**45** U	2.9 U	3.1 U
SG-E26-1-5	5	SG-E26-1	E26	8/8/2018	52	4.7 U	0.4 U	2.7 U	22	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E26-1-14.5	14.5	SG-E26-1	E26	8/8/2018	140	4.7 U	0.4 U	2.7 U	11	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E27-1-5	5	SG-E27-1	E27	8/10/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2	**45** U	2.9 U	3.1 U
SG-E27-1-15	15	SG-E27-1	E27	8/10/2018	13	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E27-2-5	5	SG-E27-2	E27	8/6/2018	85	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E27-2-15	15	SG-E27-2	E27	8/6/2018	35	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-E29-1-5	5	SG-E29-1	E29	8/10/2018	2.3 U	4.7 U	0.4 U	9.2	2.1 U	6.6 U	**3.3** U	4.7 U	2.4	**45** U	2.9 U	3.1 U
SG-E29-1-14	14	SG-E29-1	E29	8/10/2018	2.3 U	4.7 U	0.4 U	20	4.4	6.6 U	**3.3** U	4.7 U	110	**45** U	2.9 U	3.1 U
SG-E3-1-5.5	5.5	SG-E3-1	E3	6/13/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	41	**45** U	2.9 U	3.1 U
SG-E3-1-15	15	SG-E3-1	E3	6/13/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5.6	**45** U	2.9 U	3.1 U
SG-E30-1-5	5	SG-E30-1	E30	8/10/2018	2.3 U	4.7 U	0.4 U	4.6	2.1 U	6.6 U	**3.3** U	4.7 U	9	**45** U	2.9 U	3.1 U
SG-E30-1-14.5	14.5	SG-E30-1	E30	8/10/2018	47	4.7 U	0.4 U	110	5	6.6 U	**3.3** U	4.7 U	4.4	**45** U	2.9 U	3.1 U
SG-F3-1-5	5	SG-F3-1	F3	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1400	**45** U	2.9 U	3.1 U
SG-F3-1-15	15	SG-F3-1	F3	6/18/2018	7.8	4.7 U	0.4 U	2.7 U	4.4	6.6 U	**3.3** U	4.7 U	610	**45** U	2.9 U	3.1 U
SG-F4-1-5	5	SG-F4-1	F4	6/20/2018	69	4.7 U	0.4 U	970	32	6.6 U	**3.3** U	4.7 U	3	**45** U	2.9 U	3.1 U
SG-F4-1-15	15	SG-F4-1	F4	6/20/2018	45	4.7 U	0.4 U	9.6	15	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F5-1-4.5	4.5	SG-F5-1	F5	6/14/2018	31	4.7 U	0.4 U	190	15	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F5-1-15	15	SG-F5-1	F5	6/14/2018	2.3 U	4.7 U	0.4 U	260	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F5-2-5	5	SG-F5-2	F5	6/14/2018	2.3 U	4.7 U	0.4 U	19	5.6	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F5-2-15	15	SG-F5-2	F5	6/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	3.8	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F6-1-5	5	SG-F6-1	F6	6/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F6-1-15	15	SG-F6-1	F6	6/14/2018	2.3 U	4.7 U	0.4 U	7.8	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[a] : $\mu g/m^3$	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[b] : $\mu g/m^3$	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-E22-1-5	5	SG-E22-1	E22	8/1/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	6.4	1.2 U	2.6 U	3.6 U	5.8	6.2 U
SG-E22-1-15	15	SG-E22-1	E22	8/1/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	5	1.2 U	2.6 U	3.6 U	11	6.2 U
SG-E22-2-6.5	6.5	SG-E22-2	E22	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	12	1.2 U	2.6 U	3.6 U	57	6.2 U
SG-E22-2-14.5	14.5	SG-E22-2	E22	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	9.4	1.2 U	2.6 U	3.6 U	55	6.2 U
SG-E23-1-5	5	SG-E23-1	E23	7/26/2018	3.4 U	5.1 U	2.4	3.2 U	4.1 U	6.1 U	47	1.2 U	2.6 U	3.6 U	7.8	6.2 U
SG-E23-1-17	17	SG-E23-1	E23	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.4	1.2 U	2.6 U	3.6 U	8.2	6.2 U
SG-E24-1-4	4	SG-E24-1	E24	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E24-1-16.5	16.5	SG-E24-1	E24	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E24-2-4.5	4.5	SG-E24-2	E24	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.4	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E24-2-17	17	SG-E24-2	E24	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E25-1-5.5	5.5	SG-E25-1	E25	8/1/2018	3.4 U	5.1 U	11	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E25-1-15	15	SG-E25-1	E25	8/1/2018	3.4 U	5.1 U	6.6	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E26-1-5	5	SG-E26-1	E26	8/8/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E26-1-14.5	14.5	SG-E26-1	E26	8/8/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E27-1-5	5	SG-E27-1	E27	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E27-1-15	15	SG-E27-1	E27	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E27-2-5	5	SG-E27-2	E27	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E27-2-15	15	SG-E27-2	E27	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E29-1-5	5	SG-E29-1	E29	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E29-1-14	14	SG-E29-1	E29	8/10/2018	3.4 U	5.1 U	9.2	3.2 U	4.1 U	6.1 U	76	6	2.6 U	3.6 U	4.2 U	6.2 U
SG-E3-1-5.5	5.5	SG-E3-1	E3	6/13/2018	3.4 U	5.1 U	12	3.2 U	4.1 U	6.1 U	36	3	2.6 U	3.6 U	4.2 U	6.2 U
SG-E3-1-15	15	SG-E3-1	E3	6/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E30-1-5	5	SG-E30-1	E30	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.6	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-E30-1-14.5	14.5	SG-E30-1	E30	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F3-1-5	5	SG-F3-1	F3	6/18/2018	3.4 U	5.1 U	430	3.2 U	4.1 U	6.1 U	9.4	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F3-1-15	15	SG-F3-1	F3	6/18/2018	3.4 U	5.1 U	160	3.2 U	4.1 U	6.1 U	3	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F4-1-5	5	SG-F4-1	F4	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F4-1-15	15	SG-F4-1	F4	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F5-1-4.5	4.5	SG-F5-1	F5	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	1000	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F5-1-15	15	SG-F5-1	F5	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	24	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F5-2-5	5	SG-F5-2	F5	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F5-2-15	15	SG-F5-2	F5	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F6-1-5	5	SG-F6-1	F6	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F6-1-15	15	SG-F6-1	F6	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	4.2	1.2 U	2.6 U	33	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : µg/m^3	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : µg/m^3	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-E22-1-5	5	SG-E22-1	E22	8/1/2018	5.5 U	6	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E22-1-15	15	SG-E22-1	E22	8/1/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E22-2-6.5	6.5	SG-E22-2	E22	7/31/2018	9.2	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E22-2-14.5	14.5	SG-E22-2	E22	7/31/2018	9.4	6.4	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E23-1-5	5	SG-E23-1	E23	7/26/2018	700	8	5.9 U	8 U	1.6 U	12	4.5 U	3.9 U	1.9 U	5.8
SG-E23-1-17	17	SG-E23-1	E23	7/26/2018	130	7	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E24-1-4	4	SG-E24-1	E24	7/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E24-1-16.5	16.5	SG-E24-1	E24	7/26/2018	5.5 U	5.8	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E24-2-4.5	4.5	SG-E24-2	E24	7/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E24-2-17	17	SG-E24-2	E24	7/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E25-1-5.5	5.5	SG-E25-1	E25	8/1/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.6	4.5 U	49	10	5.6 U
SG-E25-1-15	15	SG-E25-1	E25	8/1/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3.8	4.5 U	45	1.9 U	5.6 U
SG-E26-1-5	5	SG-E26-1	E26	8/8/2018	5.5 U	5.4	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E26-1-14.5	14.5	SG-E26-1	E26	8/8/2018	5.5 U	5	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E27-1-5	5	SG-E27-1	E27	8/10/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-E27-1-15	15	SG-E27-1	E27	8/10/2018	5.5 U	5	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E27-2-5	5	SG-E27-2	E27	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E27-2-15	15	SG-E27-2	E27	8/6/2018	5.5 U	3.6	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E29-1-5	5	SG-E29-1	E29	8/10/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-E29-1-14	14	SG-E29-1	E29	8/10/2018	24	8.2	48	8 U	130	110	4.5 U	3.9 U	250	54
SG-E3-1-5.5	5.5	SG-E3-1	E3	6/13/2018	5.5 U	2.6 U	12	8 U	7.4	51	4.5 U	3.9 U	1.9 U	14
SG-E3-1-15	15	SG-E3-1	E3	6/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3	4.5 U	3.9 U	1.9 U	5.6 U
SG-E30-1-5	5	SG-E30-1	E30	8/10/2018	5.5 U	2.6 U	5.9 U	8 U	4.8	4.8	4.5 U	3.9 U	21	5.6 U
SG-E30-1-14.5	14.5	SG-E30-1	E30	8/10/2018	25	2.6 U	5.9 U	8 U	1.6 U	3	4.5 U	3.9 U	8.6	5.6 U
SG-F3-1-5	5	SG-F3-1	F3	6/18/2018	5.5 U	2.6 U	92	8 U	51	290	4.5 U	67	140	62
SG-F3-1-15	15	SG-F3-1	F3	6/18/2018	5.5 U	2.6 U	33	8 U	20	110	4.5 U	26	110	22
SG-F4-1-5	5	SG-F4-1	F4	6/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F4-1-15	15	SG-F4-1	F4	6/20/2018	5.5 U	2.6 U	5.9 U	8 U	6	1.9 U	4.5 U	3.9 U	9.6	5.6 U
SG-F5-1-4.5	4.5	SG-F5-1	F5	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F5-1-15	15	SG-F5-1	F5	6/14/2018	90	2.6 U	5.9 U	8 U	1.6 U	8.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-F5-2-5	5	SG-F5-2	F5	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F5-2-15	15	SG-F5-2	F5	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F6-1-5	5	SG-F6-1	F6	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2	4.5 U	3.9 U	1.9 U	5.6 U
SG-F6-1-15	15	SG-F6-1	F6	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	3.8	7	4.5 U	3.9 U	1.9 U	5.6 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : µg/m^3	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : µg/m^3	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-E22-1-5	5	SG-E22-1	E22	8/1/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***22000***	70 U	2.6	6.3 U	**820**	3.2 U	2.3 U
SG-E22-1-15	15	SG-E22-1	E22	8/1/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***22000***	70 U	2.1 U	6.3 U	**700**	3.2 U	2.3 U
SG-E22-2-6.5	6.5	SG-E22-2	E22	7/31/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***40000***	70 U	2.1 U	6.3 U	**2300**	3.2 U	2.3 U
SG-E22-2-14.5	14.5	SG-E22-2	E22	7/31/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***39000***	70 U	2.6	6.3 U	**2000**	3.2 U	2.3 U
SG-E23-1-5	5	SG-E23-1	E23	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***17000***	70 U	19	190	***4600***	3.2 U	**74**
SG-E23-1-17	17	SG-E23-1	E23	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***9200***	70 U	3.6	37	**1200**	3.2 U	**15**
SG-E24-1-4	4	SG-E24-1	E24	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7100***	70 U	2.1 U	6.3 U	**590**	3.2 U	2.3 U
SG-E24-1-16.5	16.5	SG-E24-1	E24	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4200***	70 U	2.1 U	6.3 U	140	3.2 U	2.3 U
SG-E24-2-4.5	4.5	SG-E24-2	E24	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***11000***	70 U	2.1 U	6.3 U	220	3.2 U	2.3
SG-E24-2-17	17	SG-E24-2	E24	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***5400***	70 U	2.1 U	6.3 U	130	3.2 U	2.3 U
SG-E25-1-5.5	5.5	SG-E25-1	E25	8/1/2018	5.2	3.1 U	1.4 U	1.8 U	4.8 U	***6300***	70 U	2.1 U	6.3 U	20	3.2 U	2.3 U
SG-E25-1-15	15	SG-E25-1	E25	8/1/2018	3.2	3.1 U	1.4 U	1.8 U	4.8 U	***4100***	70 U	6	6.3 U	91	3.2 U	2.3 U
SG-E26-1-5	5	SG-E26-1	E26	8/8/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	460	70 U	2.8	6.3 U	4.5 U	3.2 U	2.3 U
SG-E26-1-14.5	14.5	SG-E26-1	E26	8/8/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	400	70 U	2.8	6.3 U	4.5 U	3.2 U	2.3 U
SG-E27-1-5	5	SG-E27-1	E27	8/10/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	400	70 U	3.4	6.3 U	4.5 U	3.2 U	2.3 U
SG-E27-1-15	15	SG-E27-1	E27	8/10/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	270	70 U	2.2 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E27-2-5	5	SG-E27-2	E27	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	320	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E27-2-15	15	SG-E27-2	E27	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	210	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-E29-1-5	5	SG-E29-1	E29	8/10/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	190	70 U	3.4	6.3 U	4.5 U	3.2 U	2.3 U
SG-E29-1-14	14	SG-E29-1	E29	8/10/2018	330	120	100	1.8 U	4.8 U	120	70 U	45	6.3 U	24	3.2 U	2.3 U
SG-E3-1-5.5	5.5	SG-E3-1	E3	6/13/2018	8.4	20	3.6	1.8 U	4.8 U	3.7 U	70 U	31	6.3 U	4.5 U	3.2 U	2.3 U
SG-E3-1-15	15	SG-E3-1	E3	6/13/2018	1.4 U	3.1 U	5.6	1.8 U	4.8 U	3.7 U	70 U	4.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-E30-1-5	5	SG-E30-1	E30	8/10/2018	14	3.8	5.4	1.8 U	4.8 U	320	70 U	3.6	6.3 U	11	3.2 U	2.3 U
SG-E30-1-14.5	14.5	SG-E30-1	E30	8/10/2018	4.8	3.1 U	1.4 U	1.8 U	4.8 U	**1800**	70 U	3.2	6.3 U	34	3.2 U	2.3 U
SG-F3-1-5	5	SG-F3-1	F3	6/18/2018	240	41	93	1.8 U	4.8 U	160	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F3-1-15	15	SG-F3-1	F3	6/18/2018	94	13	36	1.8 U	4.8 U	170	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F4-1-5	5	SG-F4-1	F4	6/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	17	70 U	2.6	6.3 U	4.5 U	3.2 U	**47**
SG-F4-1-15	15	SG-F4-1	F4	6/20/2018	7.2	3.1 U	15	1.8 U	4.8 U	44	70 U	2.8	6.3 U	4.5 U	3.2 U	2.3 U
SG-F5-1-4.5	4.5	SG-F5-1	F5	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	410	70 U	2.2	6.3 U	70	3.2 U	**11**
SG-F5-1-15	15	SG-F5-1	F5	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	62	70 U	6	34	27	3.2 U	***1500***
SG-F5-2-5	5	SG-F5-2	F5	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	130	70 U	2.6	6.3 U	7.2	3.2 U	2.3 U
SG-F5-2-15	15	SG-F5-2	F5	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	64	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F6-1-5	5	SG-F6-1	F6	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	60	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F6-1-15	15	SG-F6-1	F6	6/14/2018	1.4 U	3.1 U	4	1.8 U	4.8 U	48	70 U	4.4	6.3 U	4.5 U	3.2 U	**22**

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[(a)] : µg/m^3	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[(b)] : µg/m^3	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-F6-2-5	5	SG-F6-2	F6	6/27/2018	2.3 U	4.7 U	0.4 U	530	8	6.6 U	**3.3** U	4.7 U	4300	**45** U	2.9 U	3.1 U
SG-F6-2-14	14	SG-F6-2	F6	6/27/2018	2.3 U	4.7 U	0.4 U	43	2.1 U	6.6 U	**3.3** U	4.7 U	3000	**45** U	2.9 U	3.1 U
SG-F7-1-4	4	SG-F7-1	F7	6/27/2018	2.3 U	4.7 U	0.4 U	330	7	6.6 U	**3.3** U	4.7 U	2500	**45** U	2.9 U	3.1 U
SG-F7-1-14.5	14.5	SG-F7-1	F7	6/27/2018	2.3 U	4.7 U	0.4 U	69	2.1 U	6.6 U	**3.3** U	4.7 U	2800	**45** U	2.9 U	3.1 U
SG-F7-2-4.5	4.5	SG-F7-2	F7	6/27/2018	2.3 U	4.7 U	0.4 U	220	2.1 U	6.6 U	**3.3** U	4.7 U	2300	**45** U	2.9 U	3.1 U
SG-F7-2-14	14	SG-F7-2	F7	6/27/2018	2.3 U	4.7 U	0.4 U	70	2.1 U	6.6 U	**3.3** U	4.7 U	640	**45** U	2.9 U	3.1 U
SG-F8-1-4.5	4.5	SG-F8-1	F8	6/20/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.4	**45** U	2.9 U	3.1 U
SG-F8-1-15	15	SG-F8-1	F8	6/20/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5.6	**45** U	2.9 U	3.1 U
SG-F9-1-4.5	4.5	SG-F9-1	F9	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F9-1-15	15	SG-F9-1	F9	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F10-1-5	5	SG-F10-1	F10	7/31/2018	2.3 U	4.7 U	0.4 U	61	79	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F10-1-15	15	SG-F10-1	F10	7/31/2018	2.3 U	4.7 U	0.4 U	23	29	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F11-1-5	5	SG-F11-1	F11	6/22/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F11-1-13.5	13.5	SG-F11-1	F11	6/22/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F12-1-4.5	4.5	SG-F12-1	F12	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F12-1-13.5	13.5	SG-F12-1	F12	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F13-1-5	5	SG-F13-1	F13	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F13-1-15	15	SG-F13-1	F13	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F14-1-5	5	SG-F14-1	F14	6/28/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	13	**45** U	2.9 U	3.1 U
SG-F14-1-14	14	SG-F14-1	F14	6/28/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	7.2	**45** U	2.9 U	3.1 U
SG-F15-1-5.5	5.5	SG-F15-1	F15	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F15-1-15	15	SG-F15-1	F15	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F15-2-5.5	5.5	SG-F15-2	F15	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F15-2-15	15	SG-F15-2	F15	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F16-1-5.5	5.5	SG-F16-1	F16	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.2	**45** U	2.9 U	3.1 U
SG-F16-1-15	15	SG-F16-1	F16	6/29/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3.8	**45** U	2.9 U	3.1 U
SG-F16-2-6	6	SG-F16-2	F16	7/16/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-F16-2-17.5	17.5	SG-F16-2	F16	7/16/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-F17-1-6	6	SG-F17-1	F17	7/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F17-1-14	14	SG-F17-1	F17	7/18/2018	13	4.7 U	0.4 U	38	5.4	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F17-2-5	5	SG-F17-2	F17	7/18/2018	94	4.7 U	0.4 U	7.2	34	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F17-2-12	12	SG-F17-2	F17	7/18/2018	160	4.7 U	0.4 U	56	37	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F18-1-5.3	5.3	SG-F18-1	F18	7/18/2018	150	4.7 U	0.4 U	2.7 U	8.2	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F18-1-15	15	SG-F18-1	F18	7/18/2018	200	4.7 U	0.4 U	28	11	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : µg/m^3	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : µg/m^3	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-F6-2-5	5	SG-F6-2	F6	6/27/2018	3.4 U	5.1 U	1600	3.2 U	4.1 U	6.1 U	***460***	9.6	2.6 U	1900	4.2 U	6.2 U
SG-F6-2-14	14	SG-F6-2	F6	6/27/2018	3.4 U	5.1 U	250	3.2 U	4.1 U	6.1 U	**170**	1.2 U	2.6 U	1200	4.2 U	6.2 U
SG-F7-1-4	4	SG-F7-1	F7	6/27/2018	3.4 U	5.1 U	570	3.2 U	4.1 U	6.1 U	**420**	39	2.6 U	1300	4.2 U	6.2 U
SG-F7-1-14.5	14.5	SG-F7-1	F7	6/27/2018	3.4 U	5.1 U	120	3.2 U	4.1 U	6.1 U	**210**	1.8	2.6 U	360	4.2 U	6.2 U
SG-F7-2-4.5	4.5	SG-F7-2	F7	6/27/2018	3.4 U	5.1 U	240	3.2 U	4.1 U	6.1 U	***730***	7.4	2.6 U	740	4.2 U	6.2 U
SG-F7-2-14	14	SG-F7-2	F7	6/27/2018	3.4 U	5.1 U	35	3.2 U	4.1 U	6.1 U	**170**	11	2.6 U	100	4.2 U	6.2 U
SG-F8-1-4.5	4.5	SG-F8-1	F8	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F8-1-15	15	SG-F8-1	F8	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F9-1-4.5	4.5	SG-F9-1	F9	6/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	5	6.2 U
SG-F9-1-15	15	SG-F9-1	F9	6/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F10-1-5	5	SG-F10-1	F10	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	7.8	5.8	2.6 U	3.6 U	9.8	6.2 U
SG-F10-1-15	15	SG-F10-1	F10	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	3.2	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F11-1-5	5	SG-F11-1	F11	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F11-1-13.5	13.5	SG-F11-1	F11	6/22/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F12-1-4.5	4.5	SG-F12-1	F12	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F12-1-13.5	13.5	SG-F12-1	F12	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F13-1-5	5	SG-F13-1	F13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F13-1-15	15	SG-F13-1	F13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F14-1-5	5	SG-F14-1	F14	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F14-1-14	14	SG-F14-1	F14	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F15-1-5.5	5.5	SG-F15-1	F15	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F15-1-15	15	SG-F15-1	F15	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F15-2-5.5	5.5	SG-F15-2	F15	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F15-2-15	15	SG-F15-2	F15	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F16-1-5.5	5.5	SG-F16-1	F16	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F16-1-15	15	SG-F16-1	F16	6/29/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F16-2-6	6	SG-F16-2	F16	7/16/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F16-2-17.5	17.5	SG-F16-2	F16	7/16/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F17-1-6	6	SG-F17-1	F17	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F17-1-14	14	SG-F17-1	F17	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F17-2-5	5	SG-F17-2	F17	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F17-2-12	12	SG-F17-2	F17	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F18-1-5.3	5.3	SG-F18-1	F18	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F18-1-15	15	SG-F18-1	F18	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : µg/m³	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : µg/m³	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-F6-2-5	5	SG-F6-2	F6	6/27/2018	1200	2.6 U	2300	8 U	760	1900	4.5 U	590	660	830
SG-F6-2-14	14	SG-F6-2	F6	6/27/2018	47	2.6 U	740	8 U	410	600	4.5 U	640	450	470
SG-F7-1-4	4	SG-F7-1	F7	6/27/2018	750	2.6 U	1400	8 U	520	670	4.5 U	240	660	740
SG-F7-1-14.5	14.5	SG-F7-1	F7	6/27/2018	180	2.6 U	1100	8 U	530	420	4.5 U	810	760	470
SG-F7-2-4.5	4.5	SG-F7-2	F7	6/27/2018	410	2.6 U	2500	8 U	1000	1600	4.5 U	930	1100	720
SG-F7-2-14	14	SG-F7-2	F7	6/27/2018	130	2.6 U	650	8 U	440	180	4.5 U	970	860	370
SG-F8-1-4.5	4.5	SG-F8-1	F8	6/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F8-1-15	15	SG-F8-1	F8	6/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3.2	4.5 U	3.9 U	1.9 U	5.6 U
SG-F9-1-4.5	4.5	SG-F9-1	F9	6/15/2018	5.5 U	2.6 U	5.9 U	8 U	2.8	1.9 U	4.5 U	9.2	15	5.6 U
SG-F9-1-15	15	SG-F9-1	F9	6/15/2018	5.5 U	2.6 U	5.9 U	8 U	2.6	1.9 U	4.5 U	14	11	5.6 U
SG-F10-1-5	5	SG-F10-1	F10	7/31/2018	4900	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F10-1-15	15	SG-F10-1	F10	7/31/2018	310	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F11-1-5	5	SG-F11-1	F11	6/22/2018	14	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F11-1-13.5	13.5	SG-F11-1	F11	6/22/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F12-1-4.5	4.5	SG-F12-1	F12	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F12-1-13.5	13.5	SG-F12-1	F12	6/25/2018	5.5 U	3	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F13-1-5	5	SG-F13-1	F13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F13-1-15	15	SG-F13-1	F13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F14-1-5	5	SG-F14-1	F14	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	5.4	4.5 U	26	1.9 U	5.6 U
SG-F14-1-14	14	SG-F14-1	F14	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2	4.5 U	3.9 U	1.9 U	5.6 U
SG-F15-1-5.5	5.5	SG-F15-1	F15	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F15-1-15	15	SG-F15-1	F15	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F15-2-5.5	5.5	SG-F15-2	F15	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F15-2-15	15	SG-F15-2	F15	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F16-1-5.5	5.5	SG-F16-1	F16	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F16-1-15	15	SG-F16-1	F16	6/29/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3	4.5 U	3.9 U	1.9 U	5.6 U
SG-F16-2-6	6	SG-F16-2	F16	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F16-2-17.5	17.5	SG-F16-2	F16	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.6	4.5 U	3.9 U	1.9 U	5.6 U
SG-F17-1-6	6	SG-F17-1	F17	7/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F17-1-14	14	SG-F17-1	F17	7/18/2018	16	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F17-2-5	5	SG-F17-2	F17	7/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F17-2-12	12	SG-F17-2	F17	7/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F18-1-5.3	5.3	SG-F18-1	F18	7/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F18-1-15	15	SG-F18-1	F18	7/18/2018	15	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : $\mu g/m^3$	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : $\mu g/m^3$	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-F6-2-5	5	SG-F6-2	F6	6/27/2018	1500	1600	770	1.8 U	4.8 U	120	70 U	630	330	260	3.2 U	***13000***
SG-F6-2-14	14	SG-F6-2	F6	6/27/2018	690	870	510	1.8 U	4.8 U	6.4	70 U	210	58	28	3.2 U	***1400***
SG-F7-1-4	4	SG-F7-1	F7	6/27/2018	990	660	720	1.8 U	4.8 U	130	70 U	470	210	150	3.2 U	***7600***
SG-F7-1-14.5	14.5	SG-F7-1	F7	6/27/2018	930	460	620	1.8 U	4.8 U	18	70 U	250	74	21	3.2 U	***3000***
SG-F7-2-4.5	4.5	SG-F7-2	F7	6/27/2018	1800	630	1100	1.8 U	91	51	70 U	550	37	96	3.2 U	***1900***
SG-F7-2-14	14	SG-F7-2	F7	6/27/2018	850	180	680	1.8 U	42	19	70 U	96	22	30	3.2 U	***850***
SG-F8-1-4.5	4.5	SG-F8-1	F8	6/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	8.6	70 U	2.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-F8-1-15	15	SG-F8-1	F8	6/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	15	70 U	2.4	6.3 U	4.5 U	3.2 U	2.3 U
SG-F9-1-4.5	4.5	SG-F9-1	F9	6/15/2018	9.2	3.1 U	11	1.8 U	4.8 U	7.6	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F9-1-15	15	SG-F9-1	F9	6/15/2018	5.8	3.1 U	6.6	1.8 U	4.8 U	11	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F10-1-5	5	SG-F10-1	F10	7/31/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	23	70 U	11	850	***3700***	3.2 U	***290***
SG-F10-1-15	15	SG-F10-1	F10	7/31/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	32	70 U	2.1 U	6.3 U	**1200**	3.2 U	2.3 U
SG-F11-1-5	5	SG-F11-1	F11	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	74	70 U	2.1 U	6.3 U	380	3.2 U	2.3 U
SG-F11-1-13.5	13.5	SG-F11-1	F11	6/22/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	58	70 U	2.1 U	6.3 U	320	3.2 U	2.3 U
SG-F12-1-4.5	4.5	SG-F12-1	F12	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	43	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F12-1-13.5	13.5	SG-F12-1	F12	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	110	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F13-1-5	5	SG-F13-1	F13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	270	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F13-1-15	15	SG-F13-1	F13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	310	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F14-1-5	5	SG-F14-1	F14	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	59	70 U	2.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-F14-1-14	14	SG-F14-1	F14	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	94	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F15-1-5.5	5.5	SG-F15-1	F15	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	120	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F15-1-15	15	SG-F15-1	F15	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	170	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F15-2-5.5	5.5	SG-F15-2	F15	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	160	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F15-2-15	15	SG-F15-2	F15	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	340	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F16-1-5.5	5.5	SG-F16-1	F16	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1300**	70 U	2.1 U	6.3 U	100	3.2 U	2.3 U
SG-F16-1-15	15	SG-F16-1	F16	6/29/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1400**	70 U	2.1 U	6.3 U	140	3.2 U	2.3 U
SG-F16-2-6	6	SG-F16-2	F16	7/16/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**2000**	70 U	4.8	6.3 U	140	3.2 U	2.3 U
SG-F16-2-17.5	17.5	SG-F16-2	F16	7/16/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**2000**	70 U	5.2	6.3 U	140	3.2 U	2.3 U
SG-F17-1-6	6	SG-F17-1	F17	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**790**	70 U	2.1 U	6.3 U	32	3.2 U	2.3 U
SG-F17-1-14	14	SG-F17-1	F17	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4700***	70 U	2.1 U	6.3 U	**730**	3.2 U	2.3 U
SG-F17-2-5	5	SG-F17-2	F17	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***8800***	70 U	2.1 U	6.3 U	400	3.2 U	2.3 U
SG-F17-2-12	12	SG-F17-2	F17	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***8800***	70 U	2.1 U	6.3 U	**710**	3.2 U	2.3 U
SG-F18-1-5.3	5.3	SG-F18-1	F18	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7200***	70 U	2.1 U	6.3 U	**650**	3.2 U	2.3 U
SG-F18-1-15	15	SG-F18-1	F18	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7600***	70 U	2.1 U	6.3 U	**1000**	3.2 U	2.3 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[(a)] : µg/m^3	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[(b)] : µg/m^3	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-F18-2-6.5	6.5	SG-F18-2	F18	8/3/2018	51	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2	**45** U	2.9 U	3.1 U
SG-F18-2-15	15	SG-F18-2	F18	8/3/2018	130	4.7 U	0.4 U	5.2	2.1 U	6.6 U	**3.3** U	4.7 U	5	**45** U	2.9 U	3.1 U
SG-F19-1-5.5	5.5	SG-F19-1	F19	7/20/2018	200	4.7 U	0.4 U	2.7 U	70	6.6	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F19-1-15	15	SG-F19-1	F19	7/20/2018	330	4.7 U	0.4 U	2.7 U	53	6.6	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F19-2-5.5	5.5	SG-F19-2	F19	7/23/2018	860	4.7 U	0.4 U	3	120	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F19-2-15	15	SG-F19-2	F19	7/23/2018	1600	4.7 U	0.4 U	19	85	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F20-1-4.5	4.5	SG-F20-1	F20	7/24/2018	3700	4.7 U	0.4 U	2.7 U	68	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F20-1-14.5	14.5	SG-F20-1	F20	7/24/2018	2600	4.7 U	0.4 U	2.7 U	7.6	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F20-2-5.5	5.5	SG-F20-2	F20	7/24/2018	4100	4.7 U	0.4 U	10	7	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F20-2-14.5	14.5	SG-F20-2	F20	7/24/2018	4400	4.7 U	0.4 U	34	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F21-1-6	6	SG-F21-1	F21	7/24/2018	5700	4.7 U	0.4 U	2.7 U	5.8	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F21-1-14.5	14.5	SG-F21-1	F21	7/24/2018	7100	4.7 U	0.4 U	67	46	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F21-2-5	5	SG-F21-2	F21	8/13/2018	1900	4.7 U	0.4 U	2.7 U	330	6.6 U	**3.3** U	4.7 U	2	**45** U	2.9 U	3.1 U
SG-F21-2-15.5	15.5	SG-F21-2	F21	8/13/2018	1600	4.7 U	0.4 U	2.7 U	280	6.6 U	**3.3** U	4.7 U	3.2	**45** U	2.9 U	3.1 U
SG-F22-1-5.5	5.5	SG-F22-1	F22	7/31/2018	11000	4.7 U	0.4 U	22	150	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F22-1-14	14	SG-F22-1	F22	7/31/2018	11000	4.7 U	0.4 U	290	280	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F22-2-5	5	SG-F22-2	F22	8/13/2018	970	4.7 U	7	6.6	170	6.6 U	**3.3** U	4.7 U	2	**45** U	2.9 U	3.1 U
SG-F22-2-16.5	16.5	SG-F22-2	F22	8/13/2018	910	4.7 U	0.4 U	6.8	120	6.6 U	**3.3** U	4.7 U	2.4	**45** U	2.9 U	3.1 U
SG-F23-1-2.6	2.6	SG-F23-1	F23	7/26/2018	7900	4.7 U	0.4 U	450	26	6.6	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F23-1-17	17	SG-F23-1	F23	7/26/2018	7300	4.7 U	0.4 U	410	34	6.6	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F24-1-3	3	SG-F24-1	F24	7/27/2018	31000	4.7 U	9.6	370	33	6.6 U	**3.3** U	4.7 U	5.8	**45** U	2.9 U	3.1 U
SG-F24-1-17	17	SG-F24-1	F24	7/27/2018	16000	4.7 U	10	**3200**	70	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F24-2-4.5	4.5	SG-F24-2	F24	7/27/2018	5600	4.7 U	0.4 U	290	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F24-2-16	16	SG-F24-2	F24	7/27/2018	7200	4.7 U	0.4 U	470	15	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F25-1-5	5	SG-F25-1	F25	8/8/2018	16	**270**	0.4 U	***25000***	900	6.6 U	**3.3** U	4.7 U	200	**45** U	2.9 U	3.1 U
SG-F25-1-15	15	SG-F25-1	F25	8/8/2018	370	4.7 U	0.4 U	**3400**	80	6.6 U	**3.3** U	4.7 U	40	**45** U	2.9 U	3.1 U
SG-F25-2-5	5	SG-F25-2	F25	8/8/2018	98000	**240**	110	***57000***	2300	6.6 U	**3.3** U	4.7 U	11	**45** U	2.9 U	33
SG-F25-2-11.5	11.5	SG-F25-2	F25	8/8/2018	180000	***2900***	1300	***170000***	13000	6.6 U	**3.3** U	4.7 U	17	**45** U	2.9 U	29
SG-F26-1-5	5	SG-F26-1	F26	7/31/2018	660	4.7 U	0.4 U	18	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F26-1-17	17	SG-F26-1	F26	7/31/2018	30	4.7 U	0.4 U	**2500**	19	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F27-1-2	2	SG-F27-1	F27	7/31/2018	17	4.7 U	0.4 U	33	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F27-1-17	17	SG-F27-1	F27	7/31/2018	30	4.7 U	0.4 U	97	4.2	6.6 U	**3.3** U	4.7 U	5.8	**45** U	2.9 U	3.1 U
SG-F27-2-5	5	SG-F27-2	F27	8/7/2018	21	4.7 U	0.4 U	14	2.1 U	6.6 U	**3.3** U	4.7 U	4.4	**45** U	2.9 U	3.1 U
SG-F27-2-14.5	14.5	SG-F27-2	F27	8/7/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	8.6	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : $\mu g/m^3$	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : $\mu g/m^3$	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-F18-2-6.5	6.5	SG-F18-2	F18	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F18-2-15	15	SG-F18-2	F18	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F19-1-5.5	5.5	SG-F19-1	F19	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F19-1-15	15	SG-F19-1	F19	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F19-2-5.5	5.5	SG-F19-2	F19	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F19-2-15	15	SG-F19-2	F19	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F20-1-4.5	4.5	SG-F20-1	F20	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F20-1-14.5	14.5	SG-F20-1	F20	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F20-2-5.5	5.5	SG-F20-2	F20	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.6	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F20-2-14.5	14.5	SG-F20-2	F20	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F21-1-6	6	SG-F21-1	F21	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F21-1-14.5	14.5	SG-F21-1	F21	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F21-2-5	5	SG-F21-2	F21	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F21-2-15.5	15.5	SG-F21-2	F21	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F22-1-5.5	5.5	SG-F22-1	F22	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	9.4	1.2 U	2.6 U	3.6 U	9	6.2 U
SG-F22-1-14	14	SG-F22-1	F22	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	7	1.2 U	2.6 U	3.6 U	17	6.2 U
SG-F22-2-5	5	SG-F22-2	F22	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F22-2-16.5	16.5	SG-F22-2	F22	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F23-1-2.6	2.6	SG-F23-1	F23	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	10	1.2 U	2.6 U	3.6 U	16	6.2 U
SG-F23-1-17	17	SG-F23-1	F23	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	5.4	1.2 U	2.6 U	3.6 U	12	6.2 U
SG-F24-1-3	3	SG-F24-1	F24	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.6	1.2 U	2.6 U	3.6 U	55	6.2 U
SG-F24-1-17	17	SG-F24-1	F24	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	42	6.2 U
SG-F24-2-4.5	4.5	SG-F24-2	F24	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	8.4	6.2 U
SG-F24-2-16	16	SG-F24-2	F24	7/27/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.4	1.2 U	2.6 U	3.6 U	8.2	6.2 U
SG-F25-1-5	5	SG-F25-1	F25	8/8/2018	3.4 U	5.1 U	94	3.2 U	4.1 U	6.1 U	62	1.2 U	44	850	4.2 U	8.8
SG-F25-1-15	15	SG-F25-1	F25	8/8/2018	3.4 U	5.1 U	20	3.2 U	4.1 U	6.1 U	18	1.2 U	10	180	4.2 U	6.2 U
SG-F25-2-5	5	SG-F25-2	F25	8/8/2018	**280**	5.1 U	3.8	3.2 U	4.1 U	1000	44	7.4	58	300	**300**	6.2 U
SG-F25-2-11.5	11.5	SG-F25-2	F25	8/8/2018	***1500***	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	**190**	1.2 U	1100	13000	**450**	100
SG-F26-1-5	5	SG-F26-1	F26	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F26-1-17	17	SG-F26-1	F26	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F27-1-2	2	SG-F27-1	F27	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	62	1.2 U	2.6 U	3.6 U	4.2 U	31
SG-F27-1-17	17	SG-F27-1	F27	7/31/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	23	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F27-2-5	5	SG-F27-2	F27	8/7/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	5.4	6.2 U
SG-F27-2-14.5	14.5	SG-F27-2	F27	8/7/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	8	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : µg/m^3	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : µg/m^3	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-F18-2-6.5	6.5	SG-F18-2	F18	8/3/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F18-2-15	15	SG-F18-2	F18	8/3/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	**120**	1.9 U	5.6 U
SG-F19-1-5.5	5.5	SG-F19-1	F19	7/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F19-1-15	15	SG-F19-1	F19	7/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F19-2-5.5	5.5	SG-F19-2	F19	7/23/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F19-2-15	15	SG-F19-2	F19	7/23/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F20-1-4.5	4.5	SG-F20-1	F20	7/24/2018	5.5 U	4.8	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F20-1-14.5	14.5	SG-F20-1	F20	7/24/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F20-2-5.5	5.5	SG-F20-2	F20	7/24/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F20-2-14.5	14.5	SG-F20-2	F20	7/24/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F21-1-6	6	SG-F21-1	F21	7/24/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F21-1-14.5	14.5	SG-F21-1	F21	7/24/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F21-2-5	5	SG-F21-2	F21	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2	4.5 U	3.9 U	1.9 U	5.6 U
SG-F21-2-15.5	15.5	SG-F21-2	F21	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3	4.5 U	3.9 U	1.9 U	5.6 U
SG-F22-1-5.5	5.5	SG-F22-1	F22	7/31/2018	37	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F22-1-14	14	SG-F22-1	F22	7/31/2018	23	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F22-2-5	5	SG-F22-2	F22	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F22-2-16.5	16.5	SG-F22-2	F22	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.6	4.5 U	3.9 U	1.9 U	5.6 U
SG-F23-1-2.6	2.6	SG-F23-1	F23	7/26/2018	110	2.6 U	5.9 U	8 U	1.6 U	2.6	4.5 U	3.9 U	1.9 U	5.6 U
SG-F23-1-17	17	SG-F23-1	F23	7/26/2018	41	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F24-1-3	3	SG-F24-1	F24	7/27/2018	19	2.6 U	5.9 U	8 U	1.6 U	2.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-F24-1-17	17	SG-F24-1	F24	7/27/2018	24	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F24-2-4.5	4.5	SG-F24-2	F24	7/27/2018	60	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F24-2-16	16	SG-F24-2	F24	7/27/2018	120	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F25-1-5	5	SG-F25-1	F25	8/8/2018	***40000***	2.6 U	210	8 U	51	560	4.5 U	3.9 U	30	34
SG-F25-1-15	15	SG-F25-1	F25	8/8/2018	**12000**	2.6 U	46	8 U	11	120	4.5 U	3.9 U	8	6.6
SG-F25-2-5	5	SG-F25-2	F25	8/8/2018	**23000**	5.6	5.9 U	8 U	1.6 U	13	15	3.9 U	1.9 U	5.6 U
SG-F25-2-11.5	11.5	SG-F25-2	F25	8/8/2018	***84000***	180	63	8 U	1.6 U	12	470	3.9 U	1.9 U	5.6 U
SG-F26-1-5	5	SG-F26-1	F26	7/31/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F26-1-17	17	SG-F26-1	F26	7/31/2018	300	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F27-1-2	2	SG-F27-1	F27	7/31/2018	83	2.6 U	45	8 U	92	58	4.5 U	3.9 U	170	13
SG-F27-1-17	17	SG-F27-1	F27	7/31/2018	27	2.6 U	5.9 U	8 U	36	8.4	4.5 U	3.9 U	46	5.6 U
SG-F27-2-5	5	SG-F27-2	F27	8/7/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	6.4	5.6 U
SG-F27-2-14.5	14.5	SG-F27-2	F27	8/7/2018	5.5 U	2.6 U	5.9 U	8 U	23	6	4.5 U	3.9 U	27	5.6 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : $\mu g/m^3$	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : $\mu g/m^3$	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-F18-2-6.5	6.5	SG-F18-2	F18	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4400***	70 U	2.1 U	6.3 U	160	3.2 U	2.3 U
SG-F18-2-15	15	SG-F18-2	F18	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7300***	70 U	2.1 U	6.3 U	450	3.2 U	2.3 U
SG-F19-1-5.5	5.5	SG-F19-1	F19	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4000***	70 U	2.1 U	6.3 U	5.2	3.2 U	2.3 U
SG-F19-1-15	15	SG-F19-1	F19	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3900***	70 U	2.1 U	6.3 U	22	3.2 U	2.3 U
SG-F19-2-5.5	5.5	SG-F19-2	F19	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***9000***	70 U	2.1 U	6.3 U	320	3.2 U	2.3 U
SG-F19-2-15	15	SG-F19-2	F19	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***9700***	70 U	2.1 U	6.3 U	**550**	3.2 U	2.3 U
SG-F20-1-4.5	4.5	SG-F20-1	F20	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***6300***	70 U	2.8	6.3 U	38	3.2 U	2.3 U
SG-F20-1-14.5	14.5	SG-F20-1	F20	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***5000***	70 U	2.1 U	6.3 U	24	3.2 U	2.3 U
SG-F20-2-5.5	5.5	SG-F20-2	F20	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***8300***	70 U	2.4	6.3 U	100	3.2 U	2.3 U
SG-F20-2-14.5	14.5	SG-F20-2	F20	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7700***	70 U	2.1 U	6.3 U	100	3.2 U	2.3 U
SG-F21-1-6	6	SG-F21-1	F21	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***11000***	70 U	2.1 U	6.3 U	190	3.2 U	2.3 U
SG-F21-1-14.5	14.5	SG-F21-1	F21	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***15000***	70 U	2.1 U	6.3 U	290	3.2 U	2.3 U
SG-F21-2-5	5	SG-F21-2	F21	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***9300***	70 U	3	6.3 U	**500**	3.2 U	2.3 U
SG-F21-2-15.5	15.5	SG-F21-2	F21	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7700***	70 U	2.8	6.3 U	300	3.2 U	2.3 U
SG-F22-1-5.5	5.5	SG-F22-1	F22	7/31/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***29000***	70 U	2.1 U	6.3 U	**1500**	3.2 U	2.3 U
SG-F22-1-14	14	SG-F22-1	F22	7/31/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***28000***	70 U	2.1 U	6.3 U	**1300**	3.2 U	2.3 U
SG-F22-2-5	5	SG-F22-2	F22	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***11000***	70 U	3.4	6.3 U	**710**	3.2 U	2.3 U
SG-F22-2-16.5	16.5	SG-F22-2	F22	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7200***	70 U	3	6.3 U	170	3.2 U	2.3 U
SG-F23-1-2.6	2.6	SG-F23-1	F23	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***14000***	70 U	3	40	**2200**	3.2 U	2.3 U
SG-F23-1-17	17	SG-F23-1	F23	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***9300***	70 U	2.1 U	6.3 U	**930**	3.2 U	2.3 U
SG-F24-1-3	3	SG-F24-1	F24	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***9000***	70 U	2.1 U	6.3 U	**990**	3.2 U	2.3 U
SG-F24-1-17	17	SG-F24-1	F24	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***6100***	70 U	2.1 U	6.3 U	**730**	3.2 U	2.3 U
SG-F24-2-4.5	4.5	SG-F24-2	F24	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3900***	70 U	2.1 U	11	**530**	3.2 U	2.3 U
SG-F24-2-16	16	SG-F24-2	F24	7/27/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***5700***	70 U	2.1 U	16	**880**	3.2 U	2.3 U
SG-F25-1-5	5	SG-F25-1	F25	8/8/2018	78	180	40	1.8 U	4.8 U	**1100**	70 U	490	1400	**820**	3.2 U	***13000***
SG-F25-1-15	15	SG-F25-1	F25	8/8/2018	18	38	8	1.8 U	4.8 U	**1900**	70 U	110	210	260	3.2 U	***1500***
SG-F25-2-5	5	SG-F25-2	F25	8/8/2018	3	4.2	1.4 U	1.8 U	4.8 U	***98000***	70 U	14	740	***24000***	3.2 U	**53**
SG-F25-2-11.5	11.5	SG-F25-2	F25	8/8/2018	1.4 U	7.4	1.4 U	1.8 U	4.8 U	***110000***	77	880	2400	***46000***	3.2 U	***940***
SG-F26-1-5	5	SG-F26-1	F26	7/31/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1800**	70 U	2.1 U	6.3 U	42	3.2 U	2.3 U
SG-F26-1-17	17	SG-F26-1	F26	7/31/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**740**	70 U	3	32	62	3.2 U	***350***
SG-F27-1-2	2	SG-F27-1	F27	7/31/2018	170	32	190	1.8 U	4.8 U	**570**	70 U	34	6.3 U	29	3.2 U	***170***
SG-F27-1-17	17	SG-F27-1	F27	7/31/2018	35	3.1 U	53	1.8 U	4.8 U	**680**	70 U	6.6	6.3 U	20	3.2 U	**86**
SG-F27-2-5	5	SG-F27-2	F27	8/7/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	280	70 U	2.6	6.3 U	45	3.2 U	2.3 U
SG-F27-2-14.5	14.5	SG-F27-2	F27	8/7/2018	32	10	16	1.8 U	4.8 U	54	70 U	5.4	6.3 U	6.2	3.2 U	2.3 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[a] : µg/m^3	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[b] : µg/m^3	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-F28-1-4.5	4.5	SG-F28-1	F28	8/9/2018	14	4.7 U	0.4 U	12	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F28-1-9.5	9.5	SG-F28-1	F28	8/9/2018	130	4.7 U	0.4 U	7.6	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F28-2-5	5	SG-F28-2	F28	8/10/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2	**45** U	2.9 U	3.1 U
SG-F28-2-13.5	13.5	SG-F28-2	F28	8/10/2018	2.3 U	4.7 U	0.4 U	3.4	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-F29-1-5.5	5.5	SG-F29-1	F29	8/10/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.6	**45** U	2.9 U	3.1 U
SG-F29-1-15	15	SG-F29-1	F29	8/10/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G3-1-5.5	5.5	SG-G3-1	G3	6/13/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.6	**45** U	2.9 U	3.1 U
SG-G3-1-15	15	SG-G3-1	G3	6/13/2018	32	4.7 U	0.4 U	2.7 U	12	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G4-1-5	5	SG-G4-1	G4	6/13/2018	150	4.7 U	0.4 U	2.7 U	8.6	6.6 U	**3.3** U	4.7 U	2.6	**45** U	2.9 U	3.1 U
SG-G4-1-15	15	SG-G4-1	G4	6/13/2018	240	4.7 U	0.4 U	2.7 U	5	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G4-2-6	6	SG-G4-2	G4	6/13/2018	59	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4	**45** U	2.9 U	3.1 U
SG-G4-2-15	15	SG-G4-2	G4	6/13/2018	66	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G5-1-5	5	SG-G5-1	G5	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G5-1-9.5	9.5	SG-G5-1	G5	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3.4	**45** U	2.9 U	3.1 U
SG-G6-1-5	5	SG-G6-1	G6	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.6	**45** U	2.9 U	3.1 U
SG-G6-1-15	15	SG-G6-1	G6	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.8	**45** U	2.9 U	3.1 U
SG-G7-1-5	5	SG-G7-1	G7	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	9	**45** U	2.9 U	3.1 U
SG-G7-1-14	14	SG-G7-1	G7	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G7-2-5.5	5.5	SG-G7-2	G7	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G7-2-15	15	SG-G7-2	G7	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G8-1-2.5	2.5	SG-G8-1	G8	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	6.2	**45** U	2.9 U	3.1 U
SG-G8-1-15	15	SG-G8-1	G8	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	33	**45** U	2.9 U	3.1 U
SG-G8-2-5.5	5.5	SG-G8-2	G8	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	26	**45** U	2.9 U	16
SG-G8-2-14.5	14.5	SG-G8-2	G8	6/15/2018	2.3 U	4.7 U	0.4 U	5.8	2.1 U	6.6 U	**3.3** U	4.7 U	47	**45** U	***29***	3.1 U
SG-G9-1-6	6	SG-G9-1	G9	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	46	**45** U	2.9 U	3.1 U
SG-G9-1-15	15	SG-G9-1	G9	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	22	**45** U	2.9 U	3.1 U
SG-G10-1-5	5	SG-G10-1	G10	6/20/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.4	**45** U	2.9 U	3.1 U
SG-G10-1-13	13	SG-G10-1	G10	6/20/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	120	**45** U	2.9 U	3.1 U
SG-G11-1-5	5	SG-G11-1	G11	6/20/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G11-1-14	14	SG-G11-1	G11	6/20/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G12-1-5.5	5.5	SG-G12-1	G12	6/20/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3.6	**45** U	2.9 U	3.1 U
SG-G12-1-15	15	SG-G12-1	G12	6/20/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G13-1-5	5	SG-G13-1	G13	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G13-1-15	15	SG-G13-1	G13	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : µg/m³	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : µg/m³	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-F28-1-4.5	4.5	SG-F28-1	F28	8/9/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F28-1-9.5	9.5	SG-F28-1	F28	8/9/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F28-2-5	5	SG-F28-2	F28	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F28-2-13.5	13.5	SG-F28-2	F28	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F29-1-5.5	5.5	SG-F29-1	F29	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-F29-1-15	15	SG-F29-1	F29	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G3-1-5.5	5.5	SG-G3-1	G3	6/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G3-1-15	15	SG-G3-1	G3	6/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G4-1-5	5	SG-G4-1	G4	6/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G4-1-15	15	SG-G4-1	G4	6/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G4-2-6	6	SG-G4-2	G4	6/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G4-2-15	15	SG-G4-2	G4	6/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G5-1-5	5	SG-G5-1	G5	8/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G5-1-9.5	9.5	SG-G5-1	G5	8/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G6-1-5	5	SG-G6-1	G6	8/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G6-1-15	15	SG-G6-1	G6	8/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G7-1-5	5	SG-G7-1	G7	8/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G7-1-14	14	SG-G7-1	G7	8/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G7-2-5.5	5.5	SG-G7-2	G7	6/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G7-2-15	15	SG-G7-2	G7	6/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G8-1-2.5	2.5	SG-G8-1	G8	6/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	4	2.4	2.6 U	3.6 U	4.2 U	6.2 U
SG-G8-1-15	15	SG-G8-1	G8	6/15/2018	3.4 U	27	97	3.2 U	7.6	6.1 U	14	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G8-2-5.5	5.5	SG-G8-2	G8	6/15/2018	3.4 U	41	130	3.2 U	14	6.1 U	22	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G8-2-14.5	14.5	SG-G8-2	G8	6/15/2018	3.6	5.1 U	15	59	15	6.1 U	32	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G9-1-6	6	SG-G9-1	G9	6/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	4	35	2.6 U	3.6 U	4.2 U	6.2 U
SG-G9-1-15	15	SG-G9-1	G9	6/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.8	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G10-1-5	5	SG-G10-1	G10	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G10-1-13	13	SG-G10-1	G10	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	22	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G11-1-5	5	SG-G11-1	G11	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	8	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G11-1-14	14	SG-G11-1	G11	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	4	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G12-1-5.5	5.5	SG-G12-1	G12	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G12-1-15	15	SG-G12-1	G12	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G13-1-5	5	SG-G13-1	G13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G13-1-15	15	SG-G13-1	G13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : μg/m^3	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : μg/m^3	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3	μg/m^3
SG-F28-1-4.5	4.5	SG-F28-1	F28	8/9/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3	4.5 U	3.9 U	1.9 U	5.6 U
SG-F28-1-9.5	9.5	SG-F28-1	F28	8/9/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2	4.5 U	3.9 U	1.9 U	5.6 U
SG-F28-2-5	5	SG-F28-2	F28	8/10/2018	5.5 U	3.4	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F28-2-13.5	13.5	SG-F28-2	F28	8/10/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F29-1-5.5	5.5	SG-F29-1	F29	8/10/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-F29-1-15	15	SG-F29-1	F29	8/10/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G3-1-5.5	5.5	SG-G3-1	G3	6/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2	4.5 U	3.9 U	1.9 U	5.6 U
SG-G3-1-15	15	SG-G3-1	G3	6/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G4-1-5	5	SG-G4-1	G4	6/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G4-1-15	15	SG-G4-1	G4	6/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G4-2-6	6	SG-G4-2	G4	6/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G4-2-15	15	SG-G4-2	G4	6/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G5-1-5	5	SG-G5-1	G5	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	35	1.9 U	5.6 U
SG-G5-1-9.5	9.5	SG-G5-1	G5	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3.2	4.5 U	3.9 U	1.9 U	5.6 U
SG-G6-1-5	5	SG-G6-1	G6	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	34	1.9 U	5.6 U
SG-G6-1-15	15	SG-G6-1	G6	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	24	1.9 U	5.6 U
SG-G7-1-5	5	SG-G7-1	G7	8/14/2018	5.5 U	5.2	5.9 U	8 U	1.6 U	1.9 U	4.5 U	24	1.9 U	5.6 U
SG-G7-1-14	14	SG-G7-1	G7	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G7-2-5.5	5.5	SG-G7-2	G7	6/15/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G7-2-15	15	SG-G7-2	G7	6/15/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G8-1-2.5	2.5	SG-G8-1	G8	6/15/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3.2	4.5 U	3.9 U	1.9 U	5.6 U
SG-G8-1-15	15	SG-G8-1	G8	6/15/2018	5.5 U	2.6 U	5.9 U	8 U	410	1.9 U	4.5 U	3.9 U	500	49
SG-G8-2-5.5	5.5	SG-G8-2	G8	6/15/2018	5.5 U	2.6 U	150	8 U	120	23	4.5 U	80	210	28
SG-G8-2-14.5	14.5	SG-G8-2	G8	6/15/2018	9.8	2.6 U	36	8 U	300	33	4.5 U	**130**	370	34
SG-G9-1-6	6	SG-G9-1	G9	6/15/2018	5.5 U	2.6 U	5.9 U	8 U	63	1.9 U	4.5 U	55	200	18
SG-G9-1-15	15	SG-G9-1	G9	6/15/2018	5.5 U	2.6 U	9.6	8 U	39	1.9 U	4.5 U	34	92	5.6 U
SG-G10-1-5	5	SG-G10-1	G10	6/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G10-1-13	13	SG-G10-1	G10	6/20/2018	33	2.6 U	5.9 U	8 U	300	14	4.5 U	3.9 U	390	5.6 U
SG-G11-1-5	5	SG-G11-1	G11	6/20/2018	11	2.6 U	5.9 U	8 U	300	1.9 U	4.5 U	**96**	470	5.6 U
SG-G11-1-14	14	SG-G11-1	G11	6/20/2018	5.5 U	2.6 U	5.9 U	8 U	310	1.9 U	4.5 U	3.9 U	510	5.6 U
SG-G12-1-5.5	5.5	SG-G12-1	G12	6/20/2018	5.5 U	2.6 U	5.9 U	8 U	4.8	1.9 U	4.5 U	3.9 U	22	5.6 U
SG-G12-1-15	15	SG-G12-1	G12	6/20/2018	5.5 U	2.6 U	5.9 U	8 U	2.4	1.9 U	4.5 U	3.9 U	13	5.6 U
SG-G13-1-5	5	SG-G13-1	G13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G13-1-15	15	SG-G13-1	G13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : µg/m^3	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : µg/m^3	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-F28-1-4.5	4.5	SG-F28-1	F28	8/9/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**620**	70 U	2.6	6.3 U	13	3.2 U	2.3 U
SG-F28-1-9.5	9.5	SG-F28-1	F28	8/9/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**580**	70 U	2.2	6.3 U	11	3.2 U	2.3 U
SG-F28-2-5	5	SG-F28-2	F28	8/10/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	140	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F28-2-13.5	13.5	SG-F28-2	F28	8/10/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	140	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-F29-1-5.5	5.5	SG-F29-1	F29	8/10/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	150	70 U	2.1 U	6.3 U	9.4	3.2 U	2.3 U
SG-F29-1-15	15	SG-F29-1	F29	8/10/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	150	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G3-1-5.5	5.5	SG-G3-1	G3	6/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	180	70 U	3.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-G3-1-15	15	SG-G3-1	G3	6/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**470**	70 U	3	6.3 U	4.5 U	3.2 U	2.3 U
SG-G4-1-5	5	SG-G4-1	G4	6/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	91	70 U	3.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-G4-1-15	15	SG-G4-1	G4	6/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	97	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G4-2-6	6	SG-G4-2	G4	6/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	160	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G4-2-15	15	SG-G4-2	G4	6/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	140	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G5-1-5	5	SG-G5-1	G5	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	65	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G5-1-9.5	9.5	SG-G5-1	G5	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	60	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G6-1-5	5	SG-G6-1	G6	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	170	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G6-1-15	15	SG-G6-1	G6	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	94	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G7-1-5	5	SG-G7-1	G7	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	55	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G7-1-14	14	SG-G7-1	G7	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	96	70 U	2.1 U	6.3 U	5.6	3.2 U	2.3 U
SG-G7-2-5.5	5.5	SG-G7-2	G7	6/15/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	17	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G7-2-15	15	SG-G7-2	G7	6/15/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G8-1-2.5	2.5	SG-G8-1	G8	6/15/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	10	70 U	5.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-G8-1-15	15	SG-G8-1	G8	6/15/2018	540	43	760	1.8 U	36	3.7 U	70 U	8.8	6.3 U	4.5 U	3.2 U	2.3 U
SG-G8-2-5.5	5.5	SG-G8-2	G8	6/15/2018	250	46	150	1.8 U	20	3.7 U	70 U	37	6.3 U	4.5 U	3.2 U	2.3 U
SG-G8-2-14.5	14.5	SG-G8-2	G8	6/15/2018	630	64	380	1.8 U	29	3.7 U	70 U	25	6.3 U	6.2	3.2 U	2.3 U
SG-G9-1-6	6	SG-G9-1	G9	6/15/2018	110	10	260	1.8 U	15	6	70 U	7.6	6.3 U	5	3.2 U	2.3 U
SG-G9-1-15	15	SG-G9-1	G9	6/15/2018	52	3.1 U	190	1.8 U	11	7.6	70 U	4.2	6.3 U	8.2	3.2 U	2.3 U
SG-G10-1-5	5	SG-G10-1	G10	6/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	8.8	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G10-1-13	13	SG-G10-1	G10	6/20/2018	410	3.1 U	470	1.8 U	40	4.8	70 U	13	8.8	9.2	3.2 U	**110**
SG-G11-1-5	5	SG-G11-1	G11	6/20/2018	360	3.1 U	750	1.8 U	60	8.2	70 U	4.8	6.3 U	7.8	3.2 U	2.3 U
SG-G11-1-14	14	SG-G11-1	G11	6/20/2018	340	3.1 U	830	1.8 U	53	4.4	70 U	4.4	6.3 U	8.6	3.2 U	2.3 U
SG-G12-1-5.5	5.5	SG-G12-1	G12	6/20/2018	7.6	3.1 U	19	1.8 U	4.8 U	180	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G12-1-15	15	SG-G12-1	G12	6/20/2018	4.6	3.1 U	11	1.8 U	4.8 U	160	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G13-1-5	5	SG-G13-1	G13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	430	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G13-1-15	15	SG-G13-1	G13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	320	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[(a)] : µg/m³	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[(b)] : µg/m³	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-G14-1-5	5	SG-G14-1	G14	6/28/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	6.6	**45** U	2.9 U	3.1 U
SG-G14-1-15	15	SG-G14-1	G14	6/28/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G15-1-5.5	5.5	SG-G15-1	G15	7/16/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-G15-1-15	15	SG-G15-1	G15	7/16/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-G15-2-5	5	SG-G15-2	G15	7/16/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-G15-2-15	15	SG-G15-2	G15	7/16/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-G16-1-5	5	SG-G16-1	G16	7/16/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-G16-1-15	15	SG-G16-1	G16	7/16/2018	33	4.7 U	0.4 U	6.8	2.1	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-G17-1-5	5	SG-G17-1	G17	7/18/2018	44	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G17-1-15	15	SG-G17-1	G17	7/18/2018	340	4.7 U	0.4 U	8.6	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G17-2-5	5	SG-G17-2	G17	7/20/2018	270	4.7 U	0.4 U	2.7 U	43	6.6	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G17-2-15	15	SG-G17-2	G17	7/20/2018	500	4.7 U	0.4 U	47	76	6.6	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G18-1-5	5	SG-G18-1	G18	7/19/2018	210	4.7 U	0.4 U	2.7 U	18	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G18-1-15	15	SG-G18-1	G18	7/19/2018	460	4.7 U	0.4 U	15	8.6	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G18-2-5.5	5.5	SG-G18-2	G18	8/3/2018	730	4.7 U	7.6	1200	140	6.6 U	**3.3** U	4.7 U	5.2	**45** U	2.9 U	3.1 U
SG-G18-2-14.5	14.5	SG-G18-2	G18	8/3/2018	830	4.7 U	5.8	1100	69	6.6 U	**3.3** U	4.7 U	2.8	**45** U	2.9 U	3.1 U
SG-G19-2-5	5	SG-G19-2	G19	8/3/2018	320	4.7 U	0.4 U	5.6	20	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G19-2-15	15	SG-G19-2	G19	8/3/2018	520	4.7 U	0.4 U	12	4.8	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G20-1-5.5	5.5	SG-G20-1	G20	7/24/2018	3800	4.7 U	0.4 U	8.2	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G20-1-15	15	SG-G20-1	G20	7/24/2018	3800	4.7 U	0.4 U	32	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G20-2-5	5	SG-G20-2	G20	7/24/2018	1900	4.7 U	0.4 U	18	2.1 U	6.6 U	**3.3** U	4.7 U	2.2	**45** U	2.9 U	3.1 U
SG-G20-2-14.5	14.5	SG-G20-2	G20	7/24/2018	2500	4.7 U	0.4 U	77	6.6	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G21-1-5	5	SG-G21-1	G21	8/13/2018	1400	4.7 U	0.4 U	10	120	6.6 U	**3.3** U	4.7 U	2	**45** U	2.9 U	3.1 U
SG-G21-1-14	14	SG-G21-1	G21	8/13/2018	1100	4.7 U	1	78	100	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G21-2-5	5	SG-G21-2	G21	8/13/2018	1300	4.7 U	0.4 U	18	13	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G21-2-16.5	16.5	SG-G21-2	G21	8/13/2018	1300	4.7 U	2.8	91	13	6.6 U	**3.3** U	4.7 U	5.8	**45** U	2.9 U	3.1 U
SG-G22-1-5.5	5.5	SG-G22-1	G22	8/13/2018	160	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G22-1-15	15	SG-G22-1	G22	8/13/2018	370	4.7 U	0.4 U	11	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G22-2-5	5	SG-G22-2	G22	8/15/2018	640	4.7 U	0.4 U	600	87	6.6 U	**3.3** U	4.7 U	8.2	**45** U	2.9 U	3.1 U
SG-G22-2-15.5	15.5	SG-G22-2	G22	8/15/2018	100	4.7 U	0.4 U	340	26	6.6 U	**3.3** U	4.7 U	120	**45** U	2.9 U	3.1 U
SG-G23-1-6.5	6.5	SG-G23-1	G23	8/15/2018	3400	4.7 U	0.4 U	220	440	6.6 U	**3.3** U	4.7 U	210	**45** U	2.9 U	3.1 U
SG-G23-1-15	15	SG-G23-1	G23	8/15/2018	3400	4.7 U	0.4 U	27	400	6.6 U	**3.3** U	4.7 U	75	**45** U	2.9 U	3.1 U
SG-G23-2-5	5	SG-G23-2	G23	8/15/2018	110	4.7 U	0.4 U	**4200**	360	6.6 U	**3.3** U	4.7 U	110	**45** U	2.9 U	3.1 U
SG-G23-2-15.5	15.5	SG-G23-2	G23	8/15/2018	1500	4.7 U	0.4 U	930	210	6.6 U	**3.3** U	4.7 U	75	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[a] : $\mu g/m^3$	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[b] : $\mu g/m^3$	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-G14-1-5	5	SG-G14-1	G14	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	12	2.6 U	3.6 U	4.2 U	6.2 U
SG-G14-1-15	15	SG-G14-1	G14	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G15-1-5.5	5.5	SG-G15-1	G15	7/16/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G15-1-15	15	SG-G15-1	G15	7/16/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G15-2-5	5	SG-G15-2	G15	7/16/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G15-2-15	15	SG-G15-2	G15	7/16/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G16-1-5	5	SG-G16-1	G16	7/16/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G16-1-15	15	SG-G16-1	G16	7/16/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G17-1-5	5	SG-G17-1	G17	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G17-1-15	15	SG-G17-1	G17	7/18/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G17-2-5	5	SG-G17-2	G17	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G17-2-15	15	SG-G17-2	G17	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G18-1-5	5	SG-G18-1	G18	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G18-1-15	15	SG-G18-1	G18	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G18-2-5.5	5.5	SG-G18-2	G18	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G18-2-14.5	14.5	SG-G18-2	G18	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G19-2-5	5	SG-G19-2	G19	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G19-2-15	15	SG-G19-2	G19	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G20-1-5.5	5.5	SG-G20-1	G20	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G20-1-15	15	SG-G20-1	G20	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G20-2-5	5	SG-G20-2	G20	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.6	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G20-2-14.5	14.5	SG-G20-2	G20	7/24/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G21-1-5	5	SG-G21-1	G21	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G21-1-14	14	SG-G21-1	G21	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G21-2-5	5	SG-G21-2	G21	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G21-2-16.5	16.5	SG-G21-2	G21	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.8	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G22-1-5.5	5.5	SG-G22-1	G22	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G22-1-15	15	SG-G22-1	G22	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G22-2-5	5	SG-G22-2	G22	8/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	4.6	5.8	2.6 U	3.6 U	8	6.2 U
SG-G22-2-15.5	15.5	SG-G22-2	G22	8/15/2018	3.4 U	5.1 U	13	3.2 U	4.1 U	6.1 U	55	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G23-1-6.5	6.5	SG-G23-1	G23	8/15/2018	3.4 U	5.1 U	58	3.2 U	4.1 U	6.1 U	14	33	2.6 U	3.6 U	4.2 U	6.2 U
SG-G23-1-15	15	SG-G23-1	G23	8/15/2018	3.4 U	5.1 U	18	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G23-2-5	5	SG-G23-2	G23	8/15/2018	3.4 U	5.1 U	39	3.2 U	4.1 U	6.1 U	87	1.2 U	2.6 U	460	4.2 U	6.2 U
SG-G23-2-15.5	15.5	SG-G23-2	G23	8/15/2018	3.4 U	5.1 U	26	3.2 U	4.1 U	6.1 U	39	1.2 U	2.6 U	49	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[a] : µg/m³	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[b] : µg/m³	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-G14-1-5	5	SG-G14-1	G14	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	24	1.9 U	5.6 U
SG-G14-1-15	15	SG-G14-1	G14	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G15-1-5.5	5.5	SG-G15-1	G15	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G15-1-15	15	SG-G15-1	G15	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2	4.5 U	3.9 U	1.9 U	5.6 U
SG-G15-2-5	5	SG-G15-2	G15	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G15-2-15	15	SG-G15-2	G15	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G16-1-5	5	SG-G16-1	G16	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G16-1-15	15	SG-G16-1	G16	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G17-1-5	5	SG-G17-1	G17	7/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G17-1-15	15	SG-G17-1	G17	7/18/2018	12	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G17-2-5	5	SG-G17-2	G17	7/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G17-2-15	15	SG-G17-2	G17	7/20/2018	66	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G18-1-5	5	SG-G18-1	G18	7/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G18-1-15	15	SG-G18-1	G18	7/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G18-2-5.5	5.5	SG-G18-2	G18	8/3/2018	370	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G18-2-14.5	14.5	SG-G18-2	G18	8/3/2018	280	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G19-2-5	5	SG-G19-2	G19	8/3/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G19-2-15	15	SG-G19-2	G19	8/3/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G20-1-5.5	5.5	SG-G20-1	G20	7/24/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G20-1-15	15	SG-G20-1	G20	7/24/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G20-2-5	5	SG-G20-2	G20	7/24/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G20-2-14.5	14.5	SG-G20-2	G20	7/24/2018	7.8	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G21-1-5	5	SG-G21-1	G21	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G21-1-14	14	SG-G21-1	G21	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G21-2-5	5	SG-G21-2	G21	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G21-2-16.5	16.5	SG-G21-2	G21	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	4.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-G22-1-5.5	5.5	SG-G22-1	G22	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G22-1-15	15	SG-G22-1	G22	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G22-2-5	5	SG-G22-2	G22	8/15/2018	50	2.6 U	5.9 U	8 U	1.6 U	5.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-G22-2-15.5	15.5	SG-G22-2	G22	8/15/2018	310	2.6 U	39	8 U	22	65	4.5 U	83	46	120
SG-G23-1-6.5	6.5	SG-G23-1	G23	8/15/2018	120	3.8	49	8 U	7.4	200	4.5 U	15	13	15
SG-G23-1-15	15	SG-G23-1	G23	8/15/2018	5.5 U	2.6 U	9.2	8 U	1.6 U	42	4.5 U	16	3.8	5.6 U
SG-G23-2-5	5	SG-G23-2	G23	8/15/2018	870	2.6 U	39	8 U	1.6 U	160	4.5 U	16	6	110
SG-G23-2-15.5	15.5	SG-G23-2	G23	8/15/2018	430	2.6 U	16	8 U	16	95	4.5 U	3.9 U	18	62

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Residential Screening Level[(a)] : µg/m^3	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : µg/m^3	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
					µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-G14-1-5	5	SG-G14-1	G14	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	270	70 U	2.1 U	6.3 U	5.8	3.2 U	2.3 U
SG-G14-1-15	15	SG-G14-1	G14	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	270	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-G15-1-5.5	5.5	SG-G15-1	G15	7/16/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	260	70 U	4.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-G15-1-15	15	SG-G15-1	G15	7/16/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	370	70 U	4.4	6.3 U	6.8	3.2 U	2.3 U
SG-G15-2-5	5	SG-G15-2	G15	7/16/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	210	70 U	3.8	6.3 U	4.5 U	3.2 U	2.3 U
SG-G15-2-15	15	SG-G15-2	G15	7/16/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**750**	70 U	4	6.3 U	52	3.2 U	2.3 U
SG-G16-1-5	5	SG-G16-1	G16	7/16/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1100**	70 U	2.1 U	6.3 U	27	3.2 U	2.3 U
SG-G16-1-15	15	SG-G16-1	G16	7/16/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1900**	70 U	2.1 U	6.3 U	180	3.2 U	2.3 U
SG-G17-1-5	5	SG-G17-1	G17	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1600**	70 U	2.1 U	6.3 U	26	3.2 U	2.3 U
SG-G17-1-15	15	SG-G17-1	G17	7/18/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***5600***	70 U	2.1 U	6.3 U	**650**	3.2 U	2.3 U
SG-G17-2-5	5	SG-G17-2	G17	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4200***	70 U	2.6	6.3 U	290	3.2 U	2.3 U
SG-G17-2-15	15	SG-G17-2	G17	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***5900***	70 U	2.2	6.3 U	**810**	3.2 U	2.3 U
SG-G18-1-5	5	SG-G18-1	G18	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***8500***	70 U	2.1 U	6.3 U	210	3.2 U	2.3 U
SG-G18-1-15	15	SG-G18-1	G18	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***10000***	70 U	2.1 U	6.3 U	**540**	3.2 U	2.3 U
SG-G18-2-5.5	5.5	SG-G18-2	G18	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7300***	70 U	2.1 U	22	**640**	3.2 U	**31**
SG-G18-2-14.5	14.5	SG-G18-2	G18	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7100***	70 U	2.2	19	**650**	3.2 U	9
SG-G19-2-5	5	SG-G19-2	G19	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***11000***	70 U	2.1 U	6.3 U	250	3.2 U	2.3 U
SG-G19-2-15	15	SG-G19-2	G19	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***12000***	70 U	2.1 U	6.3 U	320	3.2 U	2.3 U
SG-G20-1-5.5	5.5	SG-G20-1	G20	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***16000***	70 U	2.6	6.3 U	250	3.2 U	2.3 U
SG-G20-1-15	15	SG-G20-1	G20	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***15000***	70 U	2.8	6.3 U	310	3.2 U	2.3 U
SG-G20-2-5	5	SG-G20-2	G20	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***16000***	70 U	3.4	6.3 U	**530**	3.2 U	2.3 U
SG-G20-2-14.5	14.5	SG-G20-2	G20	7/24/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***20000***	70 U	2.1 U	6.3 U	**1100**	3.2 U	2.3 U
SG-G21-1-5	5	SG-G21-1	G21	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7400***	70 U	3.2	6.3 U	430	3.2 U	2.3 U
SG-G21-1-14	14	SG-G21-1	G21	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***6200***	70 U	3	6.3 U	190	3.2 U	2.3 U
SG-G21-2-5	5	SG-G21-2	G21	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3900***	70 U	2.1 U	6.3 U	100	3.2 U	2.3 U
SG-G21-2-16.5	16.5	SG-G21-2	G21	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3400***	70 U	2.1 U	6.3 U	130	3.2 U	2.3 U
SG-G22-1-5.5	5.5	SG-G22-1	G22	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1600**	70 U	2.1 U	6.3 U	55	3.2 U	2.3 U
SG-G22-1-15	15	SG-G22-1	G22	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2200***	70 U	2.1 U	6.3 U	38	3.2 U	2.3 U
SG-G22-2-5	5	SG-G22-2	G22	8/15/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4700***	70 U	7.4	6.3 U	**510**	3.2 U	**33**
SG-G22-2-15.5	15.5	SG-G22-2	G22	8/15/2018	26	49	23	1.8 U	4.8 U	**1000**	70 U	51	27	440	3.2 U	***540***
SG-G23-1-6.5	6.5	SG-G23-1	G23	8/15/2018	35	79	1.4 U	3.8	4.8 U	***10000***	70 U	91	11	**960**	3.2 U	**45**
SG-G23-1-15	15	SG-G23-1	G23	8/15/2018	8.8	16	55	1.8 U	4.8 U	***8000***	70 U	11	6.3 U	390	3.2 U	2.3 U
SG-G23-2-5	5	SG-G23-2	G23	8/15/2018	17	53	3.4	1.8 U	4.8 U	***2900***	70 U	110	180	**1900**	3.2 U	***2800***
SG-G23-2-15.5	15.5	SG-G23-2	G23	8/15/2018	12	36	1.4 U	1.8 U	4.8 U	**1400**	70 U	30	21	**500**	3.2 U	***880***

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[(a)] : µg/m³	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[(b)] : µg/m³	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-G24-1-5	5	SG-G24-1	G24	8/7/2018	110	4.7 U	0.4 U	5.4	43	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G24-1-15	15	SG-G24-1	G24	8/7/2018	480	4.7 U	0.4 U	48	68	6.6 U	**3.3** U	4.7 U	2.4	**45** U	2.9 U	3.1 U
SG-G25-2-5	5	SG-G25-2	G25	8/8/2018	5900	41	0.4 U	***18000***	200	6.6 U	**3.3** U	4.7 U	4.8	**45** U	2.9 U	3.1 U
SG-G25-2-13	13	SG-G25-2	G25	8/8/2018	1400	4.7 U	0.4 U	**6500**	130	6.6 U	**3.3** U	4.7 U	15	**45** U	2.9 U	3.1 U
SG-G26-1-5	5	SG-G26-1	G26	8/7/2018	1200	4.7 U	0.4 U	750	66	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G26-1-16	16	SG-G26-1	G26	8/7/2018	290	4.7 U	0.4 U	810	7.2	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G26-2-4.5	4.5	SG-G26-2	G26	8/7/2018	16	4.7 U	0.4 U	4.2	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G26-2-15	15	SG-G26-2	G26	8/7/2018	2.3 U	4.7 U	0.4 U	3.2	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G27-1-5	5	SG-G27-1	G27	8/8/2018	270	4.7 U	0.4 U	230	2.1 U	6.6 U	**3.3** U	4.7 U	3	**45** U	2.9 U	3.1 U
SG-G27-1-15	15	SG-G27-1	G27	8/8/2018	140	4.7 U	0.4 U	210	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G27-2-5	5	SG-G27-2	G27	8/8/2018	100	4.7 U	0.4 U	82	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G27-2-14	14	SG-G27-2	G27	8/8/2018	330	16	0.4 U	750	4	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G28-1-5	5	SG-G28-1	G28	8/9/2018	8.2	4.7 U	0.4 U	24	15	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-G28-1-9.5	9.5	SG-G28-1	G28	8/9/2018	250	4.7 U	0.4 U	1000	34	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H5-1-5.5	5.5	SG-H5-1	H5	6/13/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5.8	**45** U	2.9 U	3.1 U
SG-H5-1-15.5	15.5	SG-H5-1	H5	6/13/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H6-1-6	6	SG-H6-1	H6	6/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H6-1-15	15	SG-H6-1	H6	6/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H6-2-4	4	SG-H6-2	H6	6/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	6	**45** U	2.9 U	3.1 U
SG-H6-2-15	15	SG-H6-2	H6	6/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H6-3-5	5	SG-H6-3	H6	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5.8	**45** U	2.9 U	3.1 U
SG-H6-3-15	15	SG-H6-3	H6	8/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H7-1-1.8	1.8	SG-H7-1	H7	6/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	7	**45** U	2.9 U	3.1 U
SG-H7-1-14.5	14.5	SG-H7-1	H7	6/14/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H7-2-5	5	SG-H7-2	H7	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H7-2-15	15	SG-H7-2	H7	6/15/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H8-1-5	5	SG-H8-1	H8	8/2/2018	2.3 U	4.7 U	0.4 U	7.8	2.1 U	6.6 U	**3.3** U	4.7 U	23	**45** U	2.9 U	3.1 U
SG-H8-1-15	15	SG-H8-1	H8	8/2/2018	2.3 U	4.7 U	0.4 U	8.4	2.1 U	6.6 U	**3.3** U	4.7 U	1500	**45** U	2.9 U	3.1 U
SG-H9-1-5	5	SG-H9-1	H9	8/2/2018	2.3 U	4.7 U	0.4 U	13	2.1 U	6.6 U	**3.3** U	4.7 U	140	**45** U	2.9 U	3.1 U
SG-H9-1-15	15	SG-H9-1	H9	8/2/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	37	**45** U	2.9 U	3.1 U
SG-H10-1-4.5	4.5	SG-H10-1	H10	6/20/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	2.6	**45** U	2.9 U	3.1 U
SG-H10-1-14	14	SG-H10-1	H10	6/20/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3	**45** U	2.9 U	3.1 U
SG-H11-1-5	5	SG-H11-1	H11	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	18	**45** U	2.9 U	3.1 U
SG-H11-1-14.5	14.5	SG-H11-1	H11	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	620	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : µg/m³	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : µg/m³	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-G24-1-5	5	SG-G24-1	G24	8/7/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G24-1-15	15	SG-G24-1	G24	8/7/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G25-2-5	5	SG-G25-2	G25	8/8/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	14	1.2 U	17	49	17	31
SG-G25-2-13	13	SG-G25-2	G25	8/8/2018	3.4 U	5.1 U	5.8	3.2 U	4.1 U	6.1 U	22	1.2 U	8.2	65	4.2 U	25
SG-G26-1-5	5	SG-G26-1	G26	8/7/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	20	6.2 U
SG-G26-1-16	16	SG-G26-1	G26	8/7/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	5.4	1.2 U	2.6 U	3.6 U	5.6	6.2 U
SG-G26-2-4.5	4.5	SG-G26-2	G26	8/7/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G26-2-15	15	SG-G26-2	G26	8/7/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G27-1-5	5	SG-G27-1	G27	8/8/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	28
SG-G27-1-15	15	SG-G27-1	G27	8/8/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	22
SG-G27-2-5	5	SG-G27-2	G27	8/8/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	25
SG-G27-2-14	14	SG-G27-2	G27	8/8/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G28-1-5	5	SG-G28-1	G28	8/9/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-G28-1-9.5	9.5	SG-G28-1	G28	8/9/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H5-1-5.5	5.5	SG-H5-1	H5	6/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H5-1-15.5	15.5	SG-H5-1	H5	6/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H6-1-6	6	SG-H6-1	H6	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H6-1-15	15	SG-H6-1	H6	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	7	6.2 U
SG-H6-2-4	4	SG-H6-2	H6	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H6-2-15	15	SG-H6-2	H6	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H6-3-5	5	SG-H6-3	H6	8/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H6-3-15	15	SG-H6-3	H6	8/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H7-1-1.8	1.8	SG-H7-1	H7	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H7-1-14.5	14.5	SG-H7-1	H7	6/14/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H7-2-5	5	SG-H7-2	H7	6/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H7-2-15	15	SG-H7-2	H7	6/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H8-1-5	5	SG-H8-1	H8	8/2/2018	3.4 U	5.1 U	27	3.2 U	4.1 U	6.1 U	19	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H8-1-15	15	SG-H8-1	H8	8/2/2018	3.4 U	5.1 U	120	3.2 U	4.1 U	6.1 U	16	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H9-1-5	5	SG-H9-1	H9	8/2/2018	3.4 U	5.1 U	17	3.2 U	4.1 U	6.1 U	14	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H9-1-15	15	SG-H9-1	H9	8/2/2018	3.4 U	5.1 U	4	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H10-1-4.5	4.5	SG-H10-1	H10	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H10-1-14	14	SG-H10-1	H10	6/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H11-1-5	5	SG-H11-1	H11	6/21/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	5.4	4	2.6 U	3.6 U	4.2 U	6.2 U
SG-H11-1-14.5	14.5	SG-H11-1	H11	6/21/2018	3.4 U	5.1 U	69	3.2 U	4.1 U	6.1 U	3.6	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : µg/m³	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : µg/m³	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-G24-1-5	5	SG-G24-1	G24	8/7/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G24-1-15	15	SG-G24-1	G24	8/7/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3.8	4.5 U	3.9 U	1.9 U	5.6 U
SG-G25-2-5	5	SG-G25-2	G25	8/8/2018	4700	2.6 U	5.9 U	8 U	1.6 U	4	4.5 U	3.9 U	1.9 U	5.6 U
SG-G25-2-13	13	SG-G25-2	G25	8/8/2018	1800	2.6 U	13	8 U	5.4	13	4.5 U	3.9 U	1.9 U	5.6 U
SG-G26-1-5	5	SG-G26-1	G26	8/7/2018	180	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G26-1-16	16	SG-G26-1	G26	8/7/2018	140	2.6 U	5.9 U	8 U	1.6 U	2	4.5 U	3.9 U	1.9 U	5.6 U
SG-G26-2-4.5	4.5	SG-G26-2	G26	8/7/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G26-2-15	15	SG-G26-2	G26	8/7/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G27-1-5	5	SG-G27-1	G27	8/8/2018	56	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G27-1-15	15	SG-G27-1	G27	8/8/2018	430	2.6 U	5.9 U	8 U	1.6 U	3.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-G27-2-5	5	SG-G27-2	G27	8/8/2018	65	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G27-2-14	14	SG-G27-2	G27	8/8/2018	160	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-G28-1-5	5	SG-G28-1	G28	8/9/2018	5.5 U	3.8	5.9 U	8 U	1.6 U	3.8	4.5 U	3.9 U	1.9 U	5.6 U
SG-G28-1-9.5	9.5	SG-G28-1	G28	8/9/2018	210	2.6 U	5.9 U	8 U	1.6 U	2.4	4.5 U	3.9 U	1.9 U	5.6 U
SG-H5-1-5.5	5.5	SG-H5-1	H5	6/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H5-1-15.5	15.5	SG-H5-1	H5	6/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H6-1-6	6	SG-H6-1	H6	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H6-1-15	15	SG-H6-1	H6	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H6-2-4	4	SG-H6-2	H6	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H6-2-15	15	SG-H6-2	H6	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H6-3-5	5	SG-H6-3	H6	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	56	1.9 U	5.6 U
SG-H6-3-15	15	SG-H6-3	H6	8/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	28	1.9 U	5.6 U
SG-H7-1-1.8	1.8	SG-H7-1	H7	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H7-1-14.5	14.5	SG-H7-1	H7	6/14/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H7-2-5	5	SG-H7-2	H7	6/15/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H7-2-15	15	SG-H7-2	H7	6/15/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H8-1-5	5	SG-H8-1	H8	8/2/2018	6.2	2.6 U	15	8 U	110	40	4.5 U	17	17	30
SG-H8-1-15	15	SG-H8-1	H8	8/2/2018	11	2.6 U	410	8 U	550	110	4.5 U	***680***	730	370
SG-H9-1-5	5	SG-H9-1	H9	8/2/2018	21	2.6 U	37	8 U	150	65	4.5 U	**120**	240	33
SG-H9-1-15	15	SG-H9-1	H9	8/2/2018	5.5 U	2.6 U	5.9 U	8 U	9.2	3.4	4.5 U	51	33	9.2
SG-H10-1-4.5	4.5	SG-H10-1	H10	6/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H10-1-14	14	SG-H10-1	H10	6/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H11-1-5	5	SG-H11-1	H11	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	40	10	4.5 U	3.9 U	1.9 U	10
SG-H11-1-14.5	14.5	SG-H11-1	H11	6/21/2018	5.5 U	2.6 U	80	8 U	130	1.9 U	4.5 U	**130**	380	160

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : $\mu g/m^3$	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : $\mu g/m^3$	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-G24-1-5	5	SG-G24-1	G24	8/7/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**930**	70 U	2.1 U	6.3 U	61	3.2 U	2.3 U
SG-G24-1-15	15	SG-G24-1	G24	8/7/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1100**	70 U	4.2	6.3 U	110	3.2 U	2.3 U
SG-G25-2-5	5	SG-G25-2	G25	8/8/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***27000***	70 U	9.2	500	***3600***	3.2 U	**100**
SG-G25-2-13	13	SG-G25-2	G25	8/8/2018	1.4 U	5.6	1.4 U	1.8 U	4.8 U	***22000***	70 U	18	190	**710**	3.2 U	***3300***
SG-G26-1-5	5	SG-G26-1	G26	8/7/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2700***	70 U	2.8	93	**810**	3.2 U	4.6
SG-G26-1-16	16	SG-G26-1	G26	8/7/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**880**	70 U	3.2	45	290	3.2 U	***220***
SG-G26-2-4.5	4.5	SG-G26-2	G26	8/7/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	57	70 U	3.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-G26-2-15	15	SG-G26-2	G26	8/7/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	88	70 U	2.6	6.3 U	14	3.2 U	2.3 U
SG-G27-1-5	5	SG-G27-1	G27	8/8/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***9500***	70 U	2.1 U	6.3 U	100	3.2 U	4.4
SG-G27-1-15	15	SG-G27-1	G27	8/8/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***6300***	70 U	2.6	6.3 U	67	3.2 U	8.2
SG-G27-2-5	5	SG-G27-2	G27	8/8/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4100***	70 U	2.1 U	6.3 U	35	3.2 U	2.3 U
SG-G27-2-14	14	SG-G27-2	G27	8/8/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***5200***	70 U	2.1 U	6.3 U	110	3.2 U	2.3 U
SG-G28-1-5	5	SG-G28-1	G28	8/9/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1000**	70 U	3.8	6.3 U	35	3.2 U	**21**
SG-G28-1-9.5	9.5	SG-G28-1	G28	8/9/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4300***	70 U	4.6	6.3 U	130	3.2 U	**29**
SG-H5-1-5.5	5.5	SG-H5-1	H5	6/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	64	70 U	2.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-H5-1-15.5	15.5	SG-H5-1	H5	6/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	52	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H6-1-6	6	SG-H6-1	H6	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	69	70 U	2.4	6.3 U	4.5 U	3.2 U	2.3 U
SG-H6-1-15	15	SG-H6-1	H6	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	74	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H6-2-4	4	SG-H6-2	H6	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	98	70 U	2.2	6.3 U	4.5 U	3.2 U	2.3 U
SG-H6-2-15	15	SG-H6-2	H6	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	100	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H6-3-5	5	SG-H6-3	H6	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	300	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H6-3-15	15	SG-H6-3	H6	8/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	62	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H7-1-1.8	1.8	SG-H7-1	H7	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	18	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H7-1-14.5	14.5	SG-H7-1	H7	6/14/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	56	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H7-2-5	5	SG-H7-2	H7	6/15/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	28	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H7-2-15	15	SG-H7-2	H7	6/15/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	21	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H8-1-5	5	SG-H8-1	H8	8/2/2018	69	16	51	1.8 U	4.8 U	60	70 U	22	6.3 U	4.5 U	3.2 U	2.3 U
SG-H8-1-15	15	SG-H8-1	H8	8/2/2018	1100	450	670	1.8 U	4.8 U	84	70 U	15	6.3 U	18	3.2 U	2.3 U
SG-H9-1-5	5	SG-H9-1	H9	8/2/2018	190	37	300	1.8 U	4.8 U	25	70 U	17	6.3 U	22	3.2 U	2.3 U
SG-H9-1-15	15	SG-H9-1	H9	8/2/2018	19	5.4	18	1.8 U	4.8 U	54	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H10-1-4.5	4.5	SG-H10-1	H10	6/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	13	70 U	2.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-H10-1-14	14	SG-H10-1	H10	6/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	15	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H11-1-5	5	SG-H11-1	H11	6/21/2018	31	19	29	1.8 U	6.4	11	70 U	7.8	6.3 U	5.4	3.2 U	2.3 U
SG-H11-1-14.5	14.5	SG-H11-1	H11	6/21/2018	190	59	250	1.8 U	23	39	70 U	4.6	6.3 U	5.2	3.2 U	2.3 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[(a)] : µg/m^3	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[(b)] : µg/m^3	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-H12-1-3	3	SG-H12-1	H12	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	39	**45** U	2.9 U	3.1 U
SG-H13-1-2	2	SG-H13-1	H13	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H13-1-15	15	SG-H13-1	H13	6/25/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H14-1-4.5	4.5	SG-H14-1	H14	6/28/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	5.6	**45** U	2.9 U	3.1 U
SG-H14-1-15	15	SG-H14-1	H14	6/28/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4.6	**45** U	2.9 U	3.1 U
SG-H15-1-2.3	2.3	SG-H15-1	H15	7/16/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-H15-1-14.5	14.5	SG-H15-1	H15	7/16/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-H16-1-2	2	SG-H16-1	H16	7/16/2018	65	4.7 U	0.4 U	47	2.1	6.6	**3.3** U	4.7 U	530	**45** U	2.9 U	3.1 U
SG-H16-1-15	15	SG-H16-1	H16	7/16/2018	280	4.7 U	0.4 U	5	2.1	6.6	**3.3** U	4.7 U	22	**45** U	2.9 U	3.1 U
SG-H17-1-5	5	SG-H17-1	H17	7/20/2018	79	4.7 U	0.4 U	2.7 U	12	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-H17-1-15	15	SG-H17-1	H17	7/20/2018	200	4.7 U	0.4 U	23	16	6.6	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H17-2-5	5	SG-H17-2	H17	7/20/2018	190	4.7 U	0.4 U	2.7 U	7.2	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-H17-2-15	15	SG-H17-2	H17	7/20/2018	380	4.7 U	0.4 U	10	6.2	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-H18-1-5	5	SG-H18-1	H18	7/19/2018	170	4.7 U	0.4 U	4.4	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H18-1-15	15	SG-H18-1	H18	7/19/2018	360	4.7 U	0.4 U	37	5.2	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H18-2-5.5	5.5	SG-H18-2	H18	7/20/2018	1200	4.7 U	0.4 U	1400	32	6.6	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H18-2-14.5	14.5	SG-H18-2	H18	7/20/2018	1100	4.7 U	0.4 U	1200	48	6.6	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H19-1-5	5	SG-H19-1	H19	7/20/2018	240	4.7 U	0.4 U	28	7	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-H19-1-15	15	SG-H19-1	H19	7/20/2018	390	4.7 U	0.4 U	71	13	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-H19-2-5	5	SG-H19-2	H19	7/26/2018	21	4.7 U	0.4 U	2.7 U	18	6.6	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H19-2-15	15	SG-H19-2	H19	7/26/2018	60	4.7 U	0.4 U	2.7 U	15	6.6	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-H20-1-5	5	SG-H20-1	H20	7/23/2018	180	4.7 U	0.4 U	11	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H20-1-16	16	SG-H20-1	H20	7/23/2018	2.3 U	4.7 U	0.4 U	39	2.1 U	6.6 U	**3.3** U	4.7 U	4	**45** U	2.9 U	3.1 U
SG-H21-1-5	5	SG-H21-1	H21	8/15/2018	89	4.7 U	0.4 U	140	6.6	6.6 U	**3.3** U	4.7 U	11	**45** U	2.9 U	3.1 U
SG-H21-1-15.5	15.5	SG-H21-1	H21	8/15/2018	110	4.7 U	0.4 U	160	3.6	6.6 U	**3.3** U	4.7 U	6.6	**45** U	2.9 U	3.1 U
SG-H21-2-5	5	SG-H21-2	H21	8/15/2018	2.3 U	4.7 U	0.4 U	75	2.6	6.6 U	**3.3** U	4.7 U	130	**45** U	2.9 U	3.1 U
SG-H22-1-5	5	SG-H22-1	H22	8/13/2018	340	4.7 U	0.4 U	23	2.1 U	6.6 U	**3.3** U	4.7 U	4.4	**45** U	2.9 U	3.1 U
SG-H22-1-7.5	7.5	SG-H22-1	H22	8/13/2018	280	4.7 U	0.4 U	28	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H22-2-5	5	SG-H22-2	H22	8/15/2018	1400	4.7 U	0.4 U	40	2.1 U	6.6 U	**3.3** U	4.7 U	5	**45** U	2.9 U	3.1 U
SG-H23-1-5	5	SG-H23-1	H23	8/13/2018	2.3 U	4.7 U	0.4 U	380	3.6	6.6 U	**3.3** U	4.7 U	1600	**45** U	2.9 U	3.1 U
SG-H23-1-14.5	14.5	SG-H23-1	H23	8/13/2018	2.3 U	4.7 U	0.4 U	850	33	6.6 U	**3.3** U	4.7 U	170	**45** U	2.9 U	3.1 U
SG-H24-1-5	5	SG-H24-1	H24	8/7/2018	2.3 U	4.7 U	0.4 U	78	2.1 U	6.6 U	**3.3** U	4.7 U	150	**45** U	2.9 U	3.1 U
SG-H24-1-10.5	10.5	SG-H24-1	H24	8/7/2018	2.3 U	4.7 U	0.4 U	66	2.1 U	6.6 U	**3.3** U	4.7 U	220	**45** U	2.9 U	3.1 U
SG-H24-2-5	5	SG-H24-2	H24	8/7/2018	2.3 U	4.7 U	0.4 U	140	2.1 U	6.6 U	**3.3** U	4.7 U	17	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : μg/m³	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : μg/m³	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³
SG-H12-1-3	3	SG-H12-1	H12	6/21/2018	3.4 U	5.1 U	12	3.2 U	4.1 U	6.1 U	2.2 U	7.2	2.6 U	3.6 U	4.2 U	6.2 U
SG-H13-1-2	2	SG-H13-1	H13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H13-1-15	15	SG-H13-1	H13	6/25/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H14-1-4.5	4.5	SG-H14-1	H14	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H14-1-15	15	SG-H14-1	H14	6/28/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H15-1-2.3	2.3	SG-H15-1	H15	7/16/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H15-1-14.5	14.5	SG-H15-1	H15	7/16/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H16-1-2	2	SG-H16-1	H16	7/16/2018	3.4 U	5.1 U	100	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H16-1-15	15	SG-H16-1	H16	7/16/2018	3.4 U	5.1 U	3.8	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H17-1-5	5	SG-H17-1	H17	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H17-1-15	15	SG-H17-1	H17	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H17-2-5	5	SG-H17-2	H17	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H17-2-15	15	SG-H17-2	H17	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H18-1-5	5	SG-H18-1	H18	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H18-1-15	15	SG-H18-1	H18	7/19/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	5.6	6.2 U
SG-H18-2-5.5	5.5	SG-H18-2	H18	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H18-2-14.5	14.5	SG-H18-2	H18	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H19-1-5	5	SG-H19-1	H19	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	12	6.2 U
SG-H19-1-15	15	SG-H19-1	H19	7/20/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	17	6.2 U
SG-H19-2-5	5	SG-H19-2	H19	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H19-2-15	15	SG-H19-2	H19	7/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H20-1-5	5	SG-H20-1	H20	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.6	6.2 U
SG-H20-1-16	16	SG-H20-1	H20	7/23/2018	3.4 U	5.1 U	2.4	3.2 U	4.1 U	6.1 U	46	1.2 U	2.6 U	13	4.2 U	6.2 U
SG-H21-1-5	5	SG-H21-1	H21	8/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	11	6.2 U
SG-H21-1-15.5	15.5	SG-H21-1	H21	8/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	6	6.2 U
SG-H21-2-5	5	SG-H21-2	H21	8/15/2018	3.4 U	5.1 U	55	3.2 U	4.1 U	6.1 U	36	1.2 U	2.6 U	23	4.2 U	6.2 U
SG-H22-1-5	5	SG-H22-1	H22	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H22-1-7.5	7.5	SG-H22-1	H22	8/13/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H22-2-5	5	SG-H22-2	H22	8/15/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H23-1-5	5	SG-H23-1	H23	8/13/2018	3.4 U	5.1 U	550	3.2 U	4.1 U	6.1 U	**420**	5.6	2.6 U	3600	4.2 U	6.2 U
SG-H23-1-14.5	14.5	SG-H23-1	H23	8/13/2018	3.4 U	5.1 U	60	3.2 U	4.1 U	6.1 U	**120**	1.2 U	2.6 U	79	4.2 U	6.2 U
SG-H24-1-5	5	SG-H24-1	H24	8/7/2018	3.4 U	5.1 U	110	3.2 U	4.1 U	6.1 U	**100**	1.2 U	2.6 U	700	4.2 U	6.2 U
SG-H24-1-10.5	10.5	SG-H24-1	H24	8/7/2018	3.4 U	5.1 U	99	3.2 U	4.1 U	6.1 U	**130**	4.2	2.6 U	1000	4.2 U	6.2 U
SG-H24-2-5	5	SG-H24-2	H24	8/7/2018	3.4 U	5.1 U	6.8	3.2 U	4.1 U	6.1 U	22	1.2 U	2.6 U	140	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : $\mu g/m^3$	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : $\mu g/m^3$	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-H12-1-3	3	SG-H12-1	H12	6/21/2018	5.5 U	2.6 U	6	8 U	8.8	1.9 U	4.5 U	25	20	14
SG-H13-1-2	2	SG-H13-1	H13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H13-1-15	15	SG-H13-1	H13	6/25/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H14-1-4.5	4.5	SG-H14-1	H14	6/28/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	17	1.9 U	5.6 U
SG-H14-1-15	15	SG-H14-1	H14	6/28/2018	5.5 U	4	5.9 U	8 U	1.6 U	2.6	4.5 U	3.9 U	1.9 U	5.6 U
SG-H15-1-2.3	2.3	SG-H15-1	H15	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H15-1-14.5	14.5	SG-H15-1	H15	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H16-1-2	2	SG-H16-1	H16	7/16/2018	1100	2.6 U	120	8	78	120	4.5 U	***500***	130	160
SG-H16-1-15	15	SG-H16-1	H16	7/16/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3.6	4.5 U	64	8	7.8
SG-H17-1-5	5	SG-H17-1	H17	7/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H17-1-15	15	SG-H17-1	H17	7/20/2018	5.5 U	3.8	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H17-2-5	5	SG-H17-2	H17	7/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H17-2-15	15	SG-H17-2	H17	7/20/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H18-1-5	5	SG-H18-1	H18	7/19/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H18-1-15	15	SG-H18-1	H18	7/19/2018	23	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H18-2-5.5	5.5	SG-H18-2	H18	7/20/2018	430	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H18-2-14.5	14.5	SG-H18-2	H18	7/20/2018	290	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H19-1-5	5	SG-H19-1	H19	7/20/2018	9.6	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H19-1-15	15	SG-H19-1	H19	7/20/2018	27	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H19-2-5	5	SG-H19-2	H19	7/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.2	4.5 U	3.9 U	1.9 U	5.6 U
SG-H19-2-15	15	SG-H19-2	H19	7/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H20-1-5	5	SG-H20-1	H20	7/23/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H20-1-16	16	SG-H20-1	H20	7/23/2018	110	2.6 U	5.9 U	8 U	19	6.4	4.5 U	3.9 U	21	5.6 U
SG-H21-1-5	5	SG-H21-1	H21	8/15/2018	12	2.6 U	5.9 U	8 U	1.6 U	4.2	4.5 U	28	1.9 U	7.2
SG-H21-1-15.5	15.5	SG-H21-1	H21	8/15/2018	28	2.6 U	5.9 U	8 U	1.6 U	3.4	4.5 U	16	1.9 U	5.6 U
SG-H21-2-5	5	SG-H21-2	H21	8/15/2018	100	2.6 U	80	8 U	47	220	4.5 U	83	36	19
SG-H22-1-5	5	SG-H22-1	H22	8/13/2018	5.5 U	4.4	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H22-1-7.5	7.5	SG-H22-1	H22	8/13/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H22-2-5	5	SG-H22-2	H22	8/15/2018	7.2	4.2	5.9 U	8 U	1.6 U	1.9 U	4.5 U	10	1.9 U	5.6 U
SG-H23-1-5	5	SG-H23-1	H23	8/13/2018	710	2.6 U	880	8 U	340	1600	4.5 U	***5100***	540	300
SG-H23-1-14.5	14.5	SG-H23-1	H23	8/13/2018	580	2.6 U	180	8 U	29	350	4.5 U	***570***	30	37
SG-H24-1-5	5	SG-H24-1	H24	8/7/2018	88	2.6 U	59	8 U	67	110	4.5 U	22	1.9 U	82
SG-H24-1-10.5	10.5	SG-H24-1	H24	8/7/2018	130	2.6 U	65	8 U	170	110	4.5 U	44	120	81
SG-H24-2-5	5	SG-H24-2	H24	8/7/2018	66	2.6 U	11	8 U	36	10	4.5 U	3.9 U	28	12

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : µg/m³	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : µg/m³	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-H12-1-3	3	SG-H12-1	H12	6/21/2018	12	3.1 U	33	1.8 U	4.8 U	20	70 U	5	6.3 U	4.5 U	3.2 U	2.3 U
SG-H13-1-2	2	SG-H13-1	H13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	150	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H13-1-15	15	SG-H13-1	H13	6/25/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	260	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H14-1-4.5	4.5	SG-H14-1	H14	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	190	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H14-1-15	15	SG-H14-1	H14	6/28/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	260	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H15-1-2.3	2.3	SG-H15-1	H15	7/16/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	15	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H15-1-14.5	14.5	SG-H15-1	H15	7/16/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	64	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H16-1-2	2	SG-H16-1	H16	7/16/2018	140	150	140	1.8 U	4.8 U	***4600***	70 U	11	6.3 U	**600**	3.2 U	**28**
SG-H16-1-15	15	SG-H16-1	H16	7/16/2018	4.8	3.1 U	1.4 U	1.8 U	4.8 U	***5500***	70 U	2.1 U	6.3 U	**510**	3.2 U	2.3 U
SG-H17-1-5	5	SG-H17-1	H17	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2800***	70 U	2.1 U	6.3 U	170	3.2 U	2.3 U
SG-H17-1-15	15	SG-H17-1	H17	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4500***	70 U	2.1 U	6.3 U	420	3.2 U	2.3 U
SG-H17-2-5	5	SG-H17-2	H17	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2700***	70 U	2.1 U	6.3 U	200	3.2 U	2.3 U
SG-H17-2-15	15	SG-H17-2	H17	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4000***	70 U	2.1 U	6.3 U	420	3.2 U	2.3 U
SG-H18-1-5	5	SG-H18-1	H18	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***13000***	70 U	2.2	6.3 U	460	3.2 U	2.3 U
SG-H18-1-15	15	SG-H18-1	H18	7/19/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***20000***	70 U	2.1 U	9	**2100**	3.2 U	2.3 U
SG-H18-2-5.5	5.5	SG-H18-2	H18	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7300***	70 U	2.1 U	22	**620**	3.2 U	5.4
SG-H18-2-14.5	14.5	SG-H18-2	H18	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***7600***	70 U	2.1 U	20	**690**	3.2 U	5.4
SG-H19-1-5	5	SG-H19-1	H19	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***26000***	70 U	2.1 U	6.3 U	**1400**	3.2 U	2.3 U
SG-H19-1-15	15	SG-H19-1	H19	7/20/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***29000***	70 U	2.1 U	9.8	**2400**	3.2 U	2.3 U
SG-H19-2-5	5	SG-H19-2	H19	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***9900***	70 U	2.8	6.3 U	300	3.2 U	2.3 U
SG-H19-2-15	15	SG-H19-2	H19	7/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***16000***	70 U	2.8	6.3 U	**1000**	3.2 U	2.3 U
SG-H20-1-5	5	SG-H20-1	H20	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	310	70 U	2.1 U	6.3 U	26	3.2 U	2.3 U
SG-H20-1-16	16	SG-H20-1	H20	7/23/2018	12	12	36	1.8 U	4.8 U	170	70 U	11	14	120	3.2 U	***510***
SG-H21-1-5	5	SG-H21-1	H21	8/15/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**540**	70 U	2.4	6.3 U	97	3.2 U	**13**
SG-H21-1-15.5	15.5	SG-H21-1	H21	8/15/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	410	70 U	2.1 U	6.3 U	87	3.2 U	**45**
SG-H21-2-5	5	SG-H21-2	H21	8/15/2018	49	180	25	24	4.8 U	120	70 U	77	19	23	3.2 U	***270***
SG-H22-1-5	5	SG-H22-1	H22	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2300***	70 U	2.1 U	6.3 U	160	3.2 U	2.3 U
SG-H22-1-7.5	7.5	SG-H22-1	H22	8/13/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1900**	70 U	2.1 U	6.3 U	160	3.2 U	2.3 U
SG-H22-2-5	5	SG-H22-2	H22	8/15/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4400***	70 U	2.1 U	6.3 U	210	3.2 U	2.3 U
SG-H23-1-5	5	SG-H23-1	H23	8/13/2018	380	1100	260	83	4.8 U	**1600**	170	780	150	320	3.2 U	***2200***
SG-H23-1-14.5	14.5	SG-H23-1	H23	8/13/2018	24	120	18	27	4.8 U	**1500**	70 U	290	48	**540**	3.2 U	***1500***
SG-H24-1-5	5	SG-H24-1	H24	8/7/2018	64	150	50	1.8 U	13	37	70 U	26	22	22	3.2 U	***270***
SG-H24-1-10.5	10.5	SG-H24-1	H24	8/7/2018	220	150	160	1.8 U	4.8 U	29	70 U	36	39	25	3.2 U	***410***
SG-H24-2-5	5	SG-H24-2	H24	8/7/2018	29	12	41	1.8 U	4.8 U	20	70 U	16	10	8	3.2 U	**65**

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	79-00-5	76-13-1	75-34-3	75-35-4	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-TCA	1,1,2-TCA	1,1,2-Trichloro-trifluoroethane	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,3-TCP	1,2,4-TCB	1,2,4-TMB	DBCP	EDB	1,2-Dichloro benzene
				Residential Screening Level[(a)] : µg/m^3	1000000	180	5200000	1800	73000	3300	0.14	380	63000	0.17	4.7	210000
				Commercial Screening Level[(b)] : µg/m^3	4400000	770	22000000	7700	310000	14000	1.6	1700	260000	2	20	880000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-H24-2-14.5	14.5	SG-H24-2	H24	8/7/2018	2.3 U	4.7 U	0.4 U	24	2.1 U	6.6 U	**3.3** U	4.7 U	24	**45** U	2.9 U	3.1 U
SG-H25-1-5	5	SG-H25-1	H25	8/9/2018	2.3 U	4.7 U	0.4 U	20	2.1 U	6.6 U	**3.3** U	4.7 U	290	**45** U	2.9 U	3.1 U
SG-H25-1-14	14	SG-H25-1	H25	8/9/2018	2.3 U	4.7 U	0.4 U	120	13	6.6 U	**3.3** U	4.7 U	18	**45** U	2.9 U	3.1 U
SG-H25-2-5	5	SG-H25-2	H25	8/9/2018	2.3 U	4.7 U	0.4 U	1700	7.6	6.6 U	**3.3** U	4.7 U	1400	**45** U	2.9 U	3.1 U
SG-H25-2-14	14	SG-H25-2	H25	8/9/2018	12	4.7 U	0.4 U	27	2.1 U	6.6 U	**3.3** U	4.7 U	55	**45** U	2.9 U	3.1 U
SG-H26-1-4.5	4.5	SG-H26-1	H26	8/9/2018	2.3 U	4.7 U	0.4 U	10	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-H26-1-15	15	SG-H26-1	H26	8/9/2018	31	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I10-1-4	4	SG-I10-1	I10	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	14	**45** U	2.9 U	3.1 U
SG-I10-1-15	15	SG-I10-1	I10	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	11	**45** U	2.9 U	3.1 U
SG-I11-1-5	5	SG-I11-1	I11	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	6.8	**45** U	2.9 U	3.1 U
SG-I11-1-15	15	SG-I11-1	I11	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4.6	**45** U	2.9 U	3.1 U
SG-I12-1-5.5	5.5	SG-I12-1	I12	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4.2	**45** U	2.9 U	3.1 U
SG-I12-1-13.5	13.5	SG-I12-1	I12	6/21/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	8.8	**45** U	2.9 U	3.1 U
SG-I13-1-5.5	5.5	SG-I13-1	I13	6/26/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-I13-1-15	15	SG-I13-1	I13	6/26/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-I14-1-5	5	SG-I14-1	I14	6/26/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-I14-1-15	15	SG-I14-1	I14	6/26/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8	**45** U	2.9 U	3.1 U
SG-I15-1-2	2	SG-I15-1	I15	7/17/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	66	**45** U	2.9 U	3.1 U
SG-I15-1-14.5	14.5	SG-I15-1	I15	7/17/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	4.4	**45** U	2.9 U	3.1 U
SG-I16-1-5	5	SG-I16-1	I16	7/17/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	3	**45** U	2.9 U	3.1 U
SG-I16-1-15	15	SG-I16-1	I16	7/17/2018	6.4	4.7 U	0.4 U	2.7 U	5.4	6.6	**3.3** U	4.7 U	2	**45** U	2.9 U	3.1 U
SG-I17-1-5	5	SG-I17-1	I17	7/23/2018	14	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I17-1-15	15	SG-I17-1	I17	7/23/2018	28	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I17-2-5	5	SG-I17-2	I17	7/23/2018	34	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I17-2-15	15	SG-I17-2	I17	7/23/2018	71	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I18-1-5	5	SG-I18-1	I18	7/23/2018	31	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I18-1-15	15	SG-I18-1	I18	7/23/2018	38	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I19-1-5.5	5.5	SG-I19-1	I19	8/3/2018	79	4.7 U	0.4 U	5.4	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I19-1-15	15	SG-I19-1	I19	8/3/2018	90	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I20-1-5	5	SG-I20-1	I20	8/3/2018	9.2	4.7 U	0.4 U	4.2	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I20-1-15	15	SG-I20-1	I20	8/3/2018	7.8	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I21-1-6	6	SG-I21-1	I21	8/3/2018	17	4.7 U	0.4 U	2.8	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I21-1-15	15	SG-I21-1	I21	8/3/2018	12	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I22-1-5	5	SG-I22-1	I22	8/15/2018	1800	4.7 U	0.4 U	710	12	6.6 U	**3.3** U	4.7 U	28	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : µg/m³	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : µg/m³	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
SG-H24-2-14.5	14.5	SG-H24-2	H24	8/7/2018	3.4 U	5.1 U	11	3.2 U	4.1 U	6.1 U	21	1.2 U	2.6 U	26	4.2 U	6.2 U
SG-H25-1-5	5	SG-H25-1	H25	8/9/2018	3.4 U	5.1 U	88	3.2 U	4.1 U	6.1 U	85	14	2.6 U	260	4.2 U	7.4
SG-H25-1-14	14	SG-H25-1	H25	8/9/2018	3.4 U	5.1 U	8.8	3.2 U	4.1 U	6.1 U	8.6	1.2 U	2.6 U	30	4.2 U	6.2 U
SG-H25-2-5	5	SG-H25-2	H25	8/9/2018	3.4 U	5.1 U	360	3.2 U	4.1 U	6.1 U	**310**	1.2 U	2.6 U	340	4.2 U	9.6
SG-H25-2-14	14	SG-H25-2	H25	8/9/2018	3.4 U	5.1 U	13	3.2 U	4.1 U	6.1 U	5.4	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H26-1-4.5	4.5	SG-H26-1	H26	8/9/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-H26-1-15	15	SG-H26-1	H26	8/9/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I10-1-4	4	SG-I10-1	I10	6/21/2018	3.4 U	5.1 U	2.4	3.2 U	4.1 U	6.1 U	2.2 U	9.6	2.6 U	3.6 U	6.8	6.2 U
SG-I10-1-15	15	SG-I10-1	I10	6/21/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.8	6.2 U
SG-I11-1-5	5	SG-I11-1	I11	6/21/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I11-1-15	15	SG-I11-1	I11	6/21/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I12-1-5.5	5.5	SG-I12-1	I12	6/21/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I12-1-13.5	13.5	SG-I12-1	I12	6/21/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I13-1-5.5	5.5	SG-I13-1	I13	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I13-1-15	15	SG-I13-1	I13	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I14-1-5	5	SG-I14-1	I14	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I14-1-15	15	SG-I14-1	I14	6/26/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I15-1-2	2	SG-I15-1	I15	7/17/2018	3.4 U	5.1 U	24	3.2 U	4.1 U	6.1 U	69	1.2 U	2.6 U	3.6 U	4.2 U	20
SG-I15-1-14.5	14.5	SG-I15-1	I15	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I16-1-5	5	SG-I16-1	I16	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I16-1-15	15	SG-I16-1	I16	7/17/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I17-1-5	5	SG-I17-1	I17	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I17-1-15	15	SG-I17-1	I17	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	14	6.2 U
SG-I17-2-5	5	SG-I17-2	I17	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I17-2-15	15	SG-I17-2	I17	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I18-1-5	5	SG-I18-1	I18	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I18-1-15	15	SG-I18-1	I18	7/23/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I19-1-5.5	5.5	SG-I19-1	I19	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I19-1-15	15	SG-I19-1	I19	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I20-1-5	5	SG-I20-1	I20	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I20-1-15	15	SG-I20-1	I20	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I21-1-6	6	SG-I21-1	I21	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I21-1-15	15	SG-I21-1	I21	8/3/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I22-1-5	5	SG-I22-1	I22	8/15/2018	3.4 U	5.1 U	10	3.2 U	4.1 U	6.1 U	6.8	1.2 U	2.6 U	4	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : $\mu g/m^3$	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : $\mu g/m^3$	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-H24-2-14.5	14.5	SG-H24-2	H24	8/7/2018	14	2.6 U	5.9 U	8 U	20	11	4.5 U	3.9 U	13	11
SG-H25-1-5	5	SG-H25-1	H25	8/9/2018	26	2.6 U	57	8 U	950	53	4.5 U	**250**	1000	51
SG-H25-1-14	14	SG-H25-1	H25	8/9/2018	210	2.6 U	11	8 U	24	11	4.5 U	38	69	7.8
SG-H25-2-5	5	SG-H25-2	H25	8/9/2018	240	2.6 U	240	8 U	270	560	4.5 U	**210**	230	280
SG-H25-2-14	14	SG-H25-2	H25	8/9/2018	5.5 U	2.6 U	7.6	8 U	9.4	8	4.5 U	35	37	12
SG-H26-1-4.5	4.5	SG-H26-1	H26	8/9/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-H26-1-15	15	SG-H26-1	H26	8/9/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I10-1-4	4	SG-I10-1	I10	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	14	5.6 U
SG-I10-1-15	15	SG-I10-1	I10	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I11-1-5	5	SG-I11-1	I11	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I11-1-15	15	SG-I11-1	I11	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I12-1-5.5	5.5	SG-I12-1	I12	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I12-1-13.5	13.5	SG-I12-1	I12	6/21/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	37	1.9 U	5.6 U
SG-I13-1-5.5	5.5	SG-I13-1	I13	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I13-1-15	15	SG-I13-1	I13	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I14-1-5	5	SG-I14-1	I14	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I14-1-15	15	SG-I14-1	I14	6/26/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I15-1-2	2	SG-I15-1	I15	7/17/2018	6.6	2.6 U	37	8 U	63	54	4.5 U	3.9 U	1.9 U	15
SG-I15-1-14.5	14.5	SG-I15-1	I15	7/17/2018	5.5 U	2.6 U	5.9 U	8 U	2.4	4	4.5 U	3.9 U	1.9 U	5.6 U
SG-I16-1-5	5	SG-I16-1	I16	7/17/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	2.2	4.5 U	3.9 U	1.9 U	5.6 U
SG-I16-1-15	15	SG-I16-1	I16	7/17/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I17-1-5	5	SG-I17-1	I17	7/23/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I17-1-15	15	SG-I17-1	I17	7/23/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I17-2-5	5	SG-I17-2	I17	7/23/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I17-2-15	15	SG-I17-2	I17	7/23/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I18-1-5	5	SG-I18-1	I18	7/23/2018	5.5 U	4	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I18-1-15	15	SG-I18-1	I18	7/23/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I19-1-5.5	5.5	SG-I19-1	I19	8/3/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I19-1-15	15	SG-I19-1	I19	8/3/2018	5.5 U	3.8	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I20-1-5	5	SG-I20-1	I20	8/3/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I20-1-15	15	SG-I20-1	I20	8/3/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I21-1-6	6	SG-I21-1	I21	8/3/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I21-1-15	15	SG-I21-1	I21	8/3/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I22-1-5	5	SG-I22-1	I22	8/15/2018	85	2.6 U	7.8	8 U	1.6 U	26	4.5 U	3.9 U	1.9 U	5.6 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : $\mu g/m^3$	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : $\mu g/m^3$	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-H24-2-14.5	14.5	SG-H24-2	H24	8/7/2018	20	15	23	1.8 U	4.8 U	27	70 U	6.4	6.3 U	4.5 U	3.2 U	2.3 U
SG-H25-1-5	5	SG-H25-1	H25	8/9/2018	1400	76	1200	1.8 U	78	300	70 U	33	6.3 U	12	3.2 U	**140**
SG-H25-1-14	14	SG-H25-1	H25	8/9/2018	44	13	55	1.8 U	4.8 U	**620**	70 U	17	22	290	3.2 U	***350***
SG-H25-2-5	5	SG-H25-2	H25	8/9/2018	430	650	230	1.8 U	4.8 U	410	110	150	18	51	3.2 U	***1200***
SG-H25-2-14	14	SG-H25-2	H25	8/9/2018	20	10	18	1.8 U	4.8 U	**750**	70 U	2.1 U	6.3 U	23	3.2 U	2.3 U
SG-H26-1-4.5	4.5	SG-H26-1	H26	8/9/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	390	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-H26-1-15	15	SG-H26-1	H26	8/9/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**530**	70 U	2.1 U	6.3 U	6.4	3.2 U	2.3 U
SG-I10-1-4	4	SG-I10-1	I10	6/21/2018	1.4 U	3.1 U	5	1.8 U	4.8 U	41	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I10-1-15	15	SG-I10-1	I10	6/21/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	72	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I11-1-5	5	SG-I11-1	I11	6/21/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	31	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I11-1-15	15	SG-I11-1	I11	6/21/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	33	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I12-1-5.5	5.5	SG-I12-1	I12	6/21/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	42	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I12-1-13.5	13.5	SG-I12-1	I12	6/21/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	64	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I13-1-5.5	5.5	SG-I13-1	I13	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I13-1-15	15	SG-I13-1	I13	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I14-1-5	5	SG-I14-1	I14	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I14-1-15	15	SG-I14-1	I14	6/26/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	3.7 U	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I15-1-2	2	SG-I15-1	I15	7/17/2018	55	27	68	1.8 U	4.8 U	200	70 U	5.4	6.3 U	15	3.2 U	2.3
SG-I15-1-14.5	14.5	SG-I15-1	I15	7/17/2018	2.8	3.1 U	3.2	1.8 U	4.8 U	240	70 U	2.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-I16-1-5	5	SG-I16-1	I16	7/17/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**680**	70 U	2.6	6.3 U	4.5 U	3.2 U	2.3 U
SG-I16-1-15	15	SG-I16-1	I16	7/17/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**690**	70 U	3	6.3 U	11	3.2 U	2.3 U
SG-I17-1-5	5	SG-I17-1	I17	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**530**	70 U	2.1 U	6.3 U	7.2	3.2 U	2.3 U
SG-I17-1-15	15	SG-I17-1	I17	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**740**	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I17-2-5	5	SG-I17-2	I17	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**820**	70 U	2.1 U	6.3 U	4.8	3.2 U	2.3 U
SG-I17-2-15	15	SG-I17-2	I17	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1400**	70 U	2.1 U	6.3 U	8.4	3.2 U	2.3 U
SG-I18-1-5	5	SG-I18-1	I18	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**1900**	70 U	3.2	6.3 U	17	3.2 U	2.3 U
SG-I18-1-15	15	SG-I18-1	I18	7/23/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***2200***	70 U	2.8	6.3 U	14	3.2 U	2.3 U
SG-I19-1-5.5	5.5	SG-I19-1	I19	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***3100***	70 U	2.1 U	6.3 U	61	3.2 U	2.3 U
SG-I19-1-15	15	SG-I19-1	I19	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	***4000***	70 U	2.1 U	6.3 U	65	3.2 U	2.3 U
SG-I20-1-5	5	SG-I20-1	I20	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	280	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I20-1-15	15	SG-I20-1	I20	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	290	70 U	2.1 U	6.3 U	5.2	3.2 U	2.3 U
SG-I21-1-6	6	SG-I21-1	I21	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	190	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I21-1-15	15	SG-I21-1	I21	8/3/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	150	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I22-1-5	5	SG-I22-1	I22	8/15/2018	3.8	17	1.4 U	1.8 U	4.8 U	**630**	70 U	14	9.8	92	3.2 U	**100**

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	**71-55-6**	**79-00-5**	**76-13-1**	**75-34-3**	**75-35-4**	**87-61-6**	**96-18-4**	**120-82-1**	**95-63-6**	**96-12-8**	**106-93-4**	**95-50-1**
				Analytical Method	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**
				Analyte	**1,1,1-TCA**	**1,1,2-TCA**	**1,1,2-Trichloro-trifluoroethane**	**1,1-DCA**	**1,1-DCE**	**1,2,3-TCB**	**1,2,3-TCP**	**1,2,4-TCB**	**1,2,4-TMB**	**DBCP**	**EDB**	**1,2-Dichloro benzene**
				Residential Screening Level[(a)] : µg/m^3	**1000000**	**180**	**5200000**	**1800**	**73000**	**3300**	**0.14**	**380**	**63000**	**0.17**	**4.7**	**210000**
				Commercial Screening Level[(b)] : µg/m^3	**4400000**	**770**	**22000000**	**7700**	**310000**	**14000**	**1.6**	**1700**	**260000**	**2**	**20**	**880000**
Sample ID	**Depth (ft-bgs)**	**Location**	**Grid Cell**	**Sample Date**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**
SG-I23-1-5	5	SG-I23-1	I23	8/15/2018	19	4.7 U	0.4 U	120	2.1 U	6.6 U	**3.3** U	4.7 U	330	**45** U	2.9 U	3.1 U
SG-I23-1-14	14	SG-I23-1	I23	8/15/2018	36	4.7 U	0.4 U	67	2.1 U	6.6 U	**3.3** U	4.7 U	61	**45** U	2.9 U	3.1 U
SG-I23-2-5	5	SG-I23-2	I23	8/6/2018	34	4.7 U	0.4 U	2.7 U	16	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I23-2-15	15	SG-I23-2	I23	8/6/2018	43	4.7 U	0.4 U	2.7 U	4	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I24-1-5.5	5.5	SG-I24-1	I24	8/10/2018	24	4.7 U	0.4 U	8.6	2.1 U	6.6 U	**3.3** U	4.7 U	3.2	**45** U	2.9 U	3.1 U
SG-I24-1-14	14	SG-I24-1	I24	8/10/2018	12	4.7 U	0.4 U	12	2.1 U	6.6 U	**3.3** U	4.7 U	1.8 U	**45** U	2.9 U	3.1 U
SG-I9-1-4.5	4.5	SG-I9-1	I9	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	55	**45** U	2.9 U	3.1 U
SG-I9-1-15	15	SG-I9-1	I9	6/18/2018	2.3 U	4.7 U	0.4 U	2.7 U	2.1 U	6.6 U	**3.3** U	4.7 U	36	**45** U	2.9 U	3.1 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	107-06-2	78-87-5	108-67-8	142-28-9	106-46-7	594-20-7	71-43-2	75-15-0	108-90-7	75-00-3	67-66-3	74-87-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,2-DCA	1,2-Dichloro propane	1,3,5-TMB	1,3-Dichloro propane	1,4-Dichloro benzene	2,2-Dichloro propane	Benzene	Carbon disulfide	Chloro benzene	Chloro ethane	Chloroform	Chloro methane
				Residential Screening Level[(a)] : $\mu g/m^3$	110	760	63000	83000	260	NE	97	730000	52000	10000000	120	94000
				Commercial Screening Level[(b)] : $\mu g/m^3$	470	3300	260000	350000	1100	NE	420	3100000	220000	44000000	530	390000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
SG-I23-1-5	5	SG-I23-1	I23	8/15/2018	3.4 U	5.1 U	72	3.2 U	4.1 U	6.1 U	41	1.2 U	2.6 U	720	4.2 U	6.2 U
SG-I23-1-14	14	SG-I23-1	I23	8/15/2018	3.4 U	5.1 U	18	3.2 U	4.1 U	6.1 U	22	1.2 U	2.6 U	360	4.2 U	6.2 U
SG-I23-2-5	5	SG-I23-2	I23	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I23-2-15	15	SG-I23-2	I23	8/6/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I24-1-5.5	5.5	SG-I24-1	I24	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I24-1-14	14	SG-I24-1	I24	8/10/2018	3.4 U	5.1 U	2.3 U	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I9-1-4.5	4.5	SG-I9-1	I9	6/18/2018	3.4 U	5.1 U	13	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U
SG-I9-1-15	15	SG-I9-1	I9	6/18/2018	3.4 U	5.1 U	8.8	3.2 U	4.1 U	6.1 U	2.2 U	1.2 U	2.6 U	3.6 U	4.2 U	6.2 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	156-59-2	75-71-8	100-41-4	87-68-3	98-82-8	7816-60-0	75-09-2	91-20-3	104-51-8	99-87-6
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	cis-1,2-DCE	Dichloro difluoro methane	Ethylbenzene	Hexachloro butadiene	Isopropyl benzene	m&p-Xylenes	Methylene Chloride	Naphthalene	n-Butyl benzene	p-Isopropyl toluene
				Residential Screening Level[(a)] : µg/m^3	8300	100000	1100	130	420000	100000	1000	83	210000	NE
				Commercial Screening Level[(b)] : µg/m^3	35000	440000	4900	560	1800000	440000	12000	360	880000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
SG-I23-1-5	5	SG-I23-1	I23	8/15/2018	71	2.6 U	130	8 U	76	170	4.5 U	**290**	170	130
SG-I23-1-14	14	SG-I23-1	I23	8/15/2018	46	2.6 U	26	8 U	43	44	4.5 U	**120**	70	36
SG-I23-2-5	5	SG-I23-2	I23	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I23-2-15	15	SG-I23-2	I23	8/6/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I24-1-5.5	5.5	SG-I24-1	I24	8/10/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I24-1-14	14	SG-I24-1	I24	8/10/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	1.9 U	4.5 U	3.9 U	1.9 U	5.6 U
SG-I9-1-4.5	4.5	SG-I9-1	I9	6/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	4.4	4.5 U	3.9 U	8	5.6 U
SG-I9-1-15	15	SG-I9-1	I9	6/18/2018	5.5 U	2.6 U	5.9 U	8 U	1.6 U	3.4	4.5 U	3.9 U	5	5.6 U

Table 1

Summary of Soil Gas Results - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	103-65-1	95-47-6	135-98-8	100-42-5	98-06-6	127-18-4	994-05-8	108-88-3	156-60-5	79-01-6	75-69-4	75-01-4
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	tert-Butyl benzene	PCE	TAME	Toluene	trans-1,2-DCE	TCE	Trichloro fluoro methane	Vinyl Chloride
				Residential Screening Level[(a)] : μg/m³	1000000	100000	420000	940000	420000	460	NE	310000	83000	480	1300000	9.5
				Commercial Screening Level[(b)] : μg/m³	4400000	440000	1800000	3900000	1800000	2000	NE	1300000	350000	3000	5300000	160
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³	μg/m³
SG-I23-1-5	5	SG-I23-1	I23	8/15/2018	110	240	100	12	4.8 U	110	70 U	66	11	38	3.2 U	**100**
SG-I23-1-14	14	SG-I23-1	I23	8/15/2018	42	51	62	1.8 U	4.8 U	270	70 U	23	6.3 U	27	3.2 U	**71**
SG-I23-2-5	5	SG-I23-2	I23	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	**690**	70 U	3	6.3 U	12	3.2 U	2.3 U
SG-I23-2-15	15	SG-I23-2	I23	8/6/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	390	70 U	3	6.3 U	4.5 U	3.2 U	2.3 U
SG-I24-1-5.5	5.5	SG-I24-1	I24	8/10/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	310	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I24-1-14	14	SG-I24-1	I24	8/10/2018	1.4 U	3.1 U	1.4 U	1.8 U	4.8 U	300	70 U	2.1 U	6.3 U	7.2	3.2 U	2.3 U
SG-I9-1-4.5	4.5	SG-I9-1	I9	6/18/2018	6	3.1 U	1.4 U	1.8 U	4.8 U	48	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U
SG-I9-1-15	15	SG-I9-1	I9	6/18/2018	4.2	3.1 U	1.4 U	1.8 U	4.8 U	62	70 U	2.1 U	6.3 U	4.5 U	3.2 U	2.3 U

Notes:

Data presented herein is a summary of all VOC soil gas data analyzed by EPA 260B, and includes all compounds with at least one detection above the laboratory method detection limit (MDL), and any compounds reported as non-detect whose MDLs are above the respective residential or commercial/industrial screening level.

EPA = U.S. Environmental Protection Agency
DTSC = Department of Toxic Substances Control
TCA = trichloroethane
DCA = dichloroethane
DCE = dichloroethene
TCB = trichlorobenzene
TCP = trichloropropane
TMB = trimethylbenzene
DBCP = 1,2-Dibromo-3-chloropropane
EDB = 1,2-Dibromoethane
TAME = tert-Amyl methyl ether
PCE = Tetrachloroethene
TCE = Trichloroethene

Screening levels are derived from the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 (April 2019 update, June 2020 revision), and the EPA Regional Screening Level THQ=1.0 (May 2020) for ambient air. A default attenuation factor of 0.0001 was applied to the ambient air screening levels.

(a) The residential screening level is the most stringent between the EPA RSL for residential ambient air and DTSC HERO Note 3 for residential ambient air.

(b) The commercial screening level is the most stringent between the EPA RSL for composite workers ambient air and the DTSC Hero Note 3 for commercial/industrial ambient air.

NE = Not Established
μg/m³ = micrograms per cubic meter
ft-bgs = feet below ground surface
U = analyte not detected above the MDL

BOLD Indicates the non-detect value exceeds one, or both of the compound-specific screening levels.
BOLD Indicates the reported concentration exceeds the compound-specific residential screening level.
BOLD Indicates the reported concentration exceeds the compound specific commercial screening level.

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Antimony	Arsenic [c]	Barium	Beryllium	Cadmium	Chromium [d]	Cobalt	Copper	Lead
				Residential Screening Level [a] : mg/kg	31	12	15000	16	71	120000	23	3100	80
				Commercial Screening Level [b] : mg/kg	470	12	220000	230	980	1800000	350	47000	320
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DB-C4-1-0	0	DB-C4-1	C4	7/12/2018	6.19	3.42	288	0.57	0.55	24.4	4.98	32.8	356
DB-C4-1-0.5	0.5	DB-C4-1	C4	7/12/2018	13.5	5.19	118	0.17 U	1.49	43.3	9.94	142	1050
DB-C4-1-2.5	2.5	DB-C4-1	C4	7/12/2018	10.7	3.91	149	0.17 U	0.57	22.3	7.25	64.8	355
DB-C4-1-5	5	DB-C4-1	C4	7/12/2018	6.67	9.17	250	0.17 U	2.66	54.2	9.52	87.9	1470
DB-C4-1-10	10	DB-C4-1	C4	7/12/2018	2.36 J	2.42	73	0.17 U	0.21 U	9.07	7	11.2	8.18
DB-D12-1-0	0	DB-D12-1	D12	7/10/2018	2.15 B1,J	9.78	147	0.17 U	1.97	71.1	13.1	213	1010
DB-D12-1-0.5	0.5	DB-D12-1	D12	7/10/2018	2.35 B1,J	14.1	143	0.17 U	2.09	45.3	12	64.6	437
DB-D12-1-2.5	2.5	DB-D12-1	D12	7/10/2018	6.34	5.09	78.8	0.17 U	0.47 B1,J	16.1	10.2	128	430
DB-D12-1-5	5	DB-D12-1	D12	7/10/2018	0.37 U	4.86	123	0.17 U	0.33 B1,J	18.9	11.9	17.2	4.75
DB-D26-1-0	0	DB-D26-1	D26	7/5/2018	0.37 U	4.12	78.6	0.17 U	0.51	12.4	7.7	23.2	33.1
DB-D26-1-0.5	0.5	DB-D26-1	D26	7/5/2018	0.37 U	6.12	95.1	0.17 U	0.4 J	13.8	7.63	35.4	52.1
DB-D26-1-2.5	2.5	DB-D26-1	D26	7/5/2018	0.37 U	6.97	166	0.17 U	1.09	20	12.6	22	4.12
DB-D26-1-5	5	DB-D26-1	D26	7/5/2018	0.37 U	6.12	196	0.17 U	0.96	24	13.4	27.5	4.88
DB-D7-1-0	0	DB-D7-1	D7	7/17/2018	2.21 J	2.93	88.7	0.17 U	1.48	13.8	6.91	18	120
DB-D7-1-0.5	0.5	DB-D7-1	D7	7/17/2018	46	19.1	278	0.17 U	7.99	125	14	235	3610
DB-D7-1-2.5	2.5	DB-D7-1	D7	7/17/2018	19.6	20.3	158	0.17 U	4.07	89.3	14.2	218	1790
DB-D7-1-5	5	DB-D7-1	D7	7/17/2018	10.9	19.4	108	0.17 U	14.9	80.3	13.7	156	825
DB-D7-1-10	10	DB-D7-1	D7	7/17/2018	2 B1,J	8.74	140	0.17 U	0.77	23.6	12.4	37.9	207
DB-E6-1-0	0	DB-E6-1	E6	7/17/2018	2.87 J	5.51	97.1	0.17 U	0.68	16.4	7.75	77.1	250
DB-E6-1-0.5	0.5	DB-E6-1	E6	7/17/2018	0.37 U	0.61 B1,J	7.21	0.17 U	0.21 U	1.02	0.64	1.86	4.11
DB-E6-1-2.5	2.5	DB-E6-1	E6	7/17/2018	1.95 J	5.14	91.6	0.17 U	1.06	28.4	10.8	174	555
DB-E6-1-5	5	DB-E6-1	E6	7/17/2018	0.91 J	2.24	87.5	0.17 U	0.46 J	13.6	7.62	14	51.2
DB-E6-1-10	10	DB-E6-1	E6	7/17/2018	0.37 U	4.94	89.9	0.17 U	0.59	14.1	8.82	15.3	67
DB-F26-1-0	0	DB-F26-1	F26	7/6/2018	8.43	6.73	299	0.17 U	4.7	196	17.9	497	205
DB-F26-1-0.5	0.5	DB-F26-1	F26	7/6/2018	8.68	7.26	298	0.17 U	3.17	81.7	12.2	514	240
DB-F26-1-2.5	2.5	DB-F26-1	F26	7/6/2018	0.63 B1,J	3.45	87.5	0.17 U	0.21 U	11.5	7.44	14.5	54.5
DB-F26-1-5	5	DB-F26-1	F26	7/6/2018	2.73 B1,J	0.59 J	78.8	0.17 U	0.21 U	10.2	7.19	12	39.2
DB-F4-1-0	0	DB-F4-1	F4	6/26/2018	1.97	0.36 U	56	0.17 U	1.96	419	7.91	34.1	44.6
DB-F4-1-0.5	0.5	DB-F4-1	F4	6/26/2018	0.37 U	1.33	46.3	0.17 U	0.48 J	51.4	5.26	15.7	28.9
DB-F4-1-2.5	2.5	DB-F4-1	F4	6/26/2018	6.17	9.54	89.3	0.17 U	1.81	53.8	9.37	68	619
DB-F4-1-5	5	DB-F4-1	F4	6/26/2018	0.37 U	3.59	55.8	0.17 U	0.59	13.2	4.97	23	149
DB-F4-1-10	10	DB-F4-1	F4	6/26/2018	0.37 U	6.03	31.8	0.17 U	0.21 U	5.23	3.38	4.99	17.1
DB-F8-1-0	0	DB-F8-1	F8	7/18/2018	6.65	7.59	108	0.17 U	0.89	29.8	14.1	83.3	333
DB-F8-1-0.5	0.5	DB-F8-1	F8	7/18/2018	1.09 J	3.22	81.6	0.17 U	0.31 J	21.3	6.13	19.8	173

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7439-97-6	7439-98-7	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-62-2	7440-66-6
				Analytical Method	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Residential Screening Level [(a)] : mg/kg	1	390	820	390	390	0.78	390	23000
				Commercial Screening Level [(b)] : mg/kg	4.4	5800	11000	5800	5800	12	5800	350000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DB-C4-1-0	0	DB-C4-1	C4	7/12/2018	0.05 J	0.13 U	6.11	6.91	0.13 U	0.76 J	19.3	399
DB-C4-1-0.5	0.5	DB-C4-1	C4	7/12/2018	0.14	2.1	16.5	0.72 U	0.13 U	0.42 U	27.9	279
DB-C4-1-2.5	2.5	DB-C4-1	C4	7/12/2018	0.05 J	3.4	9.35	0.72 U	0.13 U	**2.37** J	25.4	130
DB-C4-1-5	5	DB-C4-1	C4	7/12/2018	0.1 J	2.89	24.2	0.72 U	0.13 U	**1.2** J	44.8	1590
DB-C4-1-10	10	DB-C4-1	C4	7/12/2018	0.04 J	0.65 J	6.15	0.72 U	0.13 U	0.77 J	25.5	29.9
DB-D12-1-0	0	DB-D12-1	D12	7/10/2018	0.23	1.75	37.4	0.72 U	0.39 B1,J	0.42 U	61	475
DB-D12-1-0.5	0.5	DB-D12-1	D12	7/10/2018	0.1 J	1.74	24.8	0.72 U	0.32 B1,J	0.42 U	36.9	496
DB-D12-1-2.5	2.5	DB-D12-1	D12	7/10/2018	0.03 J	0.13 U	87.8	0.72 U	0.19 B1,J	0.42 U	104	86.6
DB-D12-1-5	5	DB-D12-1	D12	7/10/2018	0.02 U	0.57 B1,J	12.6	0.72 U	0.13 U	0.42 U	41	53.7
DB-D26-1-0	0	DB-D26-1	D26	7/5/2018	0.03 J	0.55 J	10.7	0.72 U	0.13 U	0.42 U	30.6	84.8
DB-D26-1-0.5	0.5	DB-D26-1	D26	7/5/2018	0.03 J	0.13 U	15.9	0.72 U	0.13 U	0.42 U	43.5	63.2
DB-D26-1-2.5	2.5	DB-D26-1	D26	7/5/2018	0.02 U	2.17	19.8	0.72 U	0.13 U	0.42 U	49.8	72.1
DB-D26-1-5	5	DB-D26-1	D26	7/5/2018	0.08 J	0.87 J	22.8	0.72 U	0.13 U	0.42 U	54	59.2
DB-D7-1-0	0	DB-D7-1	D7	7/17/2018	0.03 J	1.36	8.96	2.6 J,L	0.13 U	0.42 U	25.5	533
DB-D7-1-0.5	0.5	DB-D7-1	D7	7/17/2018	0.08 J	3.01	33.3	3.03 L	1.12	0.42 U	27.9	1530
DB-D7-1-2.5	2.5	DB-D7-1	D7	7/17/2018	0.13 J	6.21	58.4	7.65 L	1.02	0.42 U	24.3	1150
DB-D7-1-5	5	DB-D7-1	D7	7/17/2018	0.29	12	61.9	0.72 U	0.6	0.42 U	15.2	5420
DB-D7-1-10	10	DB-D7-1	D7	7/17/2018	0.03 J	0.36 J	15	0.72 U	0.2 J	0.42 U	44.8	134
DB-E6-1-0	0	DB-E6-1	E6	7/17/2018	0.14	1.73	12.6	6.67 L	0.31 J	0.42 U	29.8	123
DB-E6-1-0.5	0.5	DB-E6-1	E6	7/17/2018	0.18	0.13 U	0.78 J	0.72 U	0.13 U	0.42 U	2.52	8.38
DB-E6-1-2.5	2.5	DB-E6-1	E6	7/17/2018	0.14	3.12	68	3.76 L	0.18 J	0.42 U	105	236
DB-E6-1-5	5	DB-E6-1	E6	7/17/2018	0.03 J	1.19	8.5	0.72 U	0.15 J	0.42 U	31.2	113
DB-E6-1-10	10	DB-E6-1	E6	7/17/2018	0.03 J	0.34 J	10.5	0.72 U	0.18 J	0.42 U	35.1	132
DB-F26-1-0	0	DB-F26-1	F26	7/6/2018	0.03 J	6.36	23.6	17.8	0.13 U	0.42 U	184	180
DB-F26-1-0.5	0.5	DB-F26-1	F26	7/6/2018	0.06 J	7.61	35.7	6.82	0.13 U	0.42 U	66.1	177
DB-F26-1-2.5	2.5	DB-F26-1	F26	7/6/2018	0.07 J	0.13 U	6.69	1.4 J	0.13 U	**1.26** B1,J	33.8	102
DB-F26-1-5	5	DB-F26-1	F26	7/6/2018	0.07 J	0.13 U	6.33	2.53 J	0.13 U	0.42 U	33.2	59.1
DB-F4-1-0	0	DB-F4-1	F4	6/26/2018	0.04 J	1.6	7.26	0.72 U	0.84	0.42 U	203	34.6
DB-F4-1-0.5	0.5	DB-F4-1	F4	6/26/2018	0.04 J	0.73 J	5.3	0.72 U	0.23 J	0.42 U	60.6	38.6
DB-F4-1-2.5	2.5	DB-F4-1	F4	6/26/2018	0.1 J	10.4	48.7	0.72 U	0.3 J	0.42 U	28.9	290
DB-F4-1-5	5	DB-F4-1	F4	6/26/2018	0.04 J	0.34 J	7.28	0.72 U	0.13 U	0.42 U	21	196
DB-F4-1-10	10	DB-F4-1	F4	6/26/2018		0.64 J	3.47	0.72 U	0.13 U	0.42 U	12.4	30.1
DB-F8-1-0	0	DB-F8-1	F8	7/18/2018	0.07 J	0.13 U	12.9	7.4	0.13 U	0.78 J	38.8	232
DB-F8-1-0.5	0.5	DB-F8-1	F8	7/18/2018	0.05 J	0.23 J	7.35	3.87	0.13 U	0.42 U	26.7	146

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Antimony	Arsenic [c]	Barium	Beryllium	Cadmium	Chromium [d]	Cobalt	Copper	Lead
				Residential Screening Level [a] : mg/kg	31	12	15000	16	71	120000	23	3100	80
				Commercial Screening Level [b] : mg/kg	470	12	220000	230	980	1800000	350	47000	320
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DB-F8-1-2.5	2.5	DB-F8-1	F8	7/18/2018	5.74	4.08	120	0.17 U	1.6	151	8.43	66.2	*1380*
DB-F8-1-5.0	5	DB-F8-1	F8	7/18/2018	4.96	11.4	64.6	0.17 U	0.21 U	9.31	6.46	12.9	18.6
DB-G11-1-0	0	DB-G11-1	G11	7/19/2018	4.72	4.12	113	0.17 U	0.21 U	20.2	8.63	37.6	**172**
DB-G11-1-0.5	0.5	DB-G11-1	G11	7/19/2018	8.88	1.63	95.6	0.17 U	1.82	16.1	9.3	18	68.1
DB-G11-1-2.5	2.5	DB-G11-1	G11	7/19/2018	**64.4**	*12.4*	454	0.17 U	8.68	123	15.7	418	*4440*
DB-G11-1-5	5	DB-G11-1	G11	7/19/2018	2.63 J	1.9	93.8	0.17 U	0.21 U	12.2	7.55	12.5	27.8
DB-G11-1-10	10	DB-G11-1	G11	7/19/2018	2.3 J	0.36 U	44.4	0.17 U	0.21 U	5.74	4.49	6.37	4.97
DB-G15-1-0	0	DB-G15-1	G15	7/13/2018	3.51	2.45	117	0.17 U	0.45 J	61.8	8.7	40.4	**142**
DB-G15-1-0.5	0.5	DB-G15-1	G15	7/13/2018	4.25	0.36 U	101	0.17 U	0.26 J	44.6	7.85	26.7	**88.4**
DB-G15-1-2.5	2.5	DB-G15-1	G15	7/13/2018	2.29 B1,J	0.99 J	130	0.17 U	0.21 U	19	12.1	21	7.6
DB-G15-1-5	5	DB-G15-1	G15	7/13/2018	2.84 B1,J	1.15	116	0.17 U	0.21 U	17.9	11.2	16.4	7.33
DB-G18-1-0	0	DB-G18-1	G18	7/11/2018	7.54	2.03	167	0.17 U	0.54	22.8	12.6	25.9	25.3
DB-G18-1-0.5	0.5	DB-G18-1	G18	7/11/2018	5.25	2.05	129	0.17 U	0.36 J	17.3	10.5	18.3	11.4
DB-G18-1-2.5	2.5	DB-G18-1	G18	7/11/2018	5.28	1.81	172	0.17 U	0.21 U	22.8	14.2	21.4	4.58
DB-G18-1-5	5	DB-G18-1	G18	7/11/2018	4.09	0.36 U	83.8	0.17 U	0.21 U	12.4	8.14	8.9	1.49
DB-G21-1-0	0	DB-G21-1	G21	8/22/2018	0.37 U	4.76	104	0.17 U	0.26 J	14.8	10.1	14.4	6.88
DB-G21-1-0.5	0.5	DB-G21-1	G21	8/22/2018	0.37 U	3.15	113	0.17 U	0.3 J	13.4	10.1	12.4	3.51
DB-G21-1-2.5	2.5	DB-G21-1	G21	8/22/2018	0.37 U	6.54	109	0.17 U	0.31 J	13.6	10.5	11.4	1.83
DB-G21-1-5	5	DB-G21-1	G21	8/22/2018	0.37 U	6.85	117	0.17 U	0.38 J	15.6	11.7	12.8	2.11
DB-G25-1-0	0	DB-G25-1	G25	7/3/2018	4.86	3.61	263	0.17 U	1.19	30.4	6.54	74.6	**224**
DB-G25-1-0.5	0.5	DB-G25-1	G25	7/3/2018	3.03	2.4	288	0.53	0.45 J	44.8	4.5	27.4	47.5
DB-G25-1-2.5	2.5	DB-G25-1	G25	7/3/2018	2.79 J	0.86 J	84.5	0.17 U	0.31 J	38.9	6.48	12.8	15.6
DB-G25-1-5	5	DB-G25-1	G25	7/3/2018	6.3	0.74 J	116	0.17 U	0.69	81.3	7.54	73.4	**94.1**
DB-G25-1-10	10	DB-G25-1	G25	7/3/2018	7.78	*20.7*	98.1	0.17 U	0.21 U	14.2	7.58	31.9	43.9
DB-G28-1-0	0	DB-G28-1	G28	7/9/2018	0.46 J	5.21	93.3	0.17 U	0.66	23.9	11.9	73.2	**124**
DB-G28-1-0.5	0.5	DB-G28-1	G28	7/9/2018	3.74	4.18	73.9	0.17 U	0.21 U	15.6	6.28	40.4	**96.1**
DB-G28-1-2.5	2.5	DB-G28-1	G28	7/9/2018	0.97 J	6.02	68.4	0.17 U	0.21 U	11.8	12.5	111	**289**
DB-G28-1-5	5	DB-G28-1	G28	7/9/2018	0.41 J	2.25	51.8	0.17 U	0.46 J	46.8	10.2	76	43.5
DB-G28-1-10	10	DB-G28-1	G28	7/9/2018	6.87	3.66	36.6	0.17 U	0.21 U	7.21	4.75	45.2	**88.4**
SB-C15-1-0	0	SB-C15-1	C15	6/22/2018	2.11	0.36 U	51.1	0.17 U	0.21 U	4.38	4.51	4.49	1.6
SB-C15-1-0.5	0.5	SB-C15-1	C15	6/22/2018	0.37 U	0.36 U	44	0.17 U	0.21 U	3.88	4.39	5.32	2.58
SB-C15-1-2.5	2.5	SB-C15-1	C15	6/22/2018	1.46	0.76	44.4	0.17 U	0.21 U	5.08	4.34	5.77	1.97
SB-C15-1-5	5	SB-C15-1	C15	6/22/2018	2.43 B1,J	3.51	176	0.17 U	0.3	23.9	15.1	32	20.7
SB-C17-1-0	0	SB-C17-1	C17	6/25/2018	7.12	*15.9*	469	0.17 U	0.66	22.7	11.2	78.5	**234**

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7439-97-6	7439-98-7	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-62-2	7440-66-6
				Analytical Method	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Residential Screening Level [(a)] : mg/kg	1	390	820	390	390	0.78	390	23000
				Commercial Screening Level [(b)] : mg/kg	4.4	5800	11000	5800	5800	12	5800	350000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DB-F8-1-2.5	2.5	DB-F8-1	F8	7/18/2018	0.06 J	0.73 J	16.5	4.49	0.13 U	**1.92** J	27.4	390
DB-F8-1-5.0	5	DB-F8-1	F8	7/18/2018	0.08 J	0.13 U	6.33	1.09 J	0.13 U	0.42 U	25.8	44.1
DB-G11-1-0	0	DB-G11-1	G11	7/19/2018	0.06 J	1.15	12.2	3.36	0.13 U	**1.28** J	31.6	142
DB-G11-1-0.5	0.5	DB-G11-1	G11	7/19/2018	0.03 J	1.81	12	5.64	0.13 U	**8.05**	35.6	774
DB-G11-1-2.5	2.5	DB-G11-1	G11	7/19/2018	0.11 J	1.1	94	1.12 J	0.13 U	**1.55** J	60.3	2150
DB-G11-1-5	5	DB-G11-1	G11	7/19/2018	0.03 J	0.13 U	7.48	2.55 J	0.13 U	0.47 J	29.4	66.5
DB-G11-1-10	10	DB-G11-1	G11	7/19/2018	0.02 U	0.19 J	3.27	4.76	0.13 U	**0.84** J	17.8	31.2
DB-G15-1-0	0	DB-G15-1	G15	7/13/2018	0.04 J	1.92	14.5	0.72 U	0.13 U	**1.74** J	33.7	88
DB-G15-1-0.5	0.5	DB-G15-1	G15	7/13/2018	0.17	1.01	13	0.72 U	0.13 U	0.42 U	30.9	70.5
DB-G15-1-2.5	2.5	DB-G15-1	G15	7/13/2018	0.03 J	0.97 J	12.1	0.72 U	0.13 U	0.42 U	41.4	66.5
DB-G15-1-5	5	DB-G15-1	G15	7/13/2018	0.02 U	1.17	11.6	0.72 U	0.13 U	**0.88** J	38.3	62
DB-G18-1-0	0	DB-G18-1	G18	7/11/2018	0.1 J	0.13 U	13.7	11.3	0.13 U	**4.21**	48.2	82.7
DB-G18-1-0.5	0.5	DB-G18-1	G18	7/11/2018	0.02 U	0.13 U	11.3	2.17 J	0.13 U	**3.16**	43	55.6
DB-G18-1-2.5	2.5	DB-G18-1	G18	7/11/2018	0.02 U	0.13 U	15	11.3	0.16 J	**5.15**	54	65.5
DB-G18-1-5	5	DB-G18-1	G18	7/11/2018	0.02 U	0.13 U	7.65	2.75 J	0.14 J	**1.87** J	35.4	35.4
DB-G21-1-0	0	DB-G21-1	G21	8/22/2018	0.02 U	0.13 U	9.62	0.72 U	0.13 U	0.42 U	31.7	47.8
DB-G21-1-0.5	0.5	DB-G21-1	G21	8/22/2018	0.02 U	0.37 B1,J	9.1	0.72 U	0.13 U	0.42 U	32.8	48.3
DB-G21-1-2.5	2.5	DB-G21-1	G21	8/22/2018	0.02 U	0.25 B1,J	9.72	0.72 U	0.13 U	0.42 U	32.3	48.5
DB-G21-1-5	5	DB-G21-1	G21	8/22/2018	0.02 U	0.13 U	11.1	0.72 U	0.15 J	0.42 U	35.4	54.3
DB-G25-1-0	0	DB-G25-1	G25	7/3/2018	0.09 J	1.07	13.4	9.12	0.13 U	0.42 U	32	164
DB-G25-1-0.5	0.5	DB-G25-1	G25	7/3/2018	0.03 J	0.13 U	6.29	5.12	0.21 B1,J	0.57 J	16	55.8
DB-G25-1-2.5	2.5	DB-G25-1	G25	7/3/2018	0.68	0.13 U	6.63	3.18	0.13 U	0.42 U	26.6	41
DB-G25-1-5	5	DB-G25-1	G25	7/3/2018	0.05 J	0.13 U	15	8.31	0.13 U	0.42 U	33.8	64.9
DB-G25-1-10	10	DB-G25-1	G25	7/3/2018	0.12 J	0.63 J	10.5	4.34	0.13 U	0.42 U	38.5	144
DB-G28-1-0	0	DB-G28-1	G28	7/9/2018	0.12 J	1.07	20.3	8.53	0.13 U	0.42 U	50.6	85
DB-G28-1-0.5	0.5	DB-G28-1	G28	7/9/2018	0.06 J	0.13 U	30.4	10.7	0.13 U	**1.96** B1,J	59.7	59.7
DB-G28-1-2.5	2.5	DB-G28-1	G28	7/9/2018	0.07 J	0.13 U	208	4.54	0.13 U	0.42 U	283	51
DB-G28-1-5	5	DB-G28-1	G28	7/9/2018	0.05 J	0.13 U	158	13.9	0.13 U	0.42 U	**401**	27
DB-G28-1-10	10	DB-G28-1	G28	7/9/2018	0.04 J	0.39 J	48.2	3.01	0.13 U	0.42 U	66.8	39.9
SB-C15-1-0	0	SB-C15-1	C15	6/22/2018	0.02 U	0.13 U	2.38	0.72 U	0.13 U	**1**	14.9	36.4
SB-C15-1-0.5	0.5	SB-C15-1	C15	6/22/2018	0.02 U	0.13 U	3.28	0.84	0.13 U	**1.82**	14	32.1
SB-C15-1-2.5	2.5	SB-C15-1	C15	6/22/2018	0.02 U	0.13 U	3.73	0.72 U	0.13 U	0.42 U	14.6	38.8
SB-C15-1-5	5	SB-C15-1	C15	6/22/2018	0.05 J	0.13 U	16.8	4.22	0.13 U	**1.2**	54.5	115
SB-C17-1-0	0	SB-C17-1	C17	6/25/2018	0.04 J	0.13 U	19.6	4.82	0.13 U	**2.61** J	40.5	219

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Antimony	Arsenic [c]	Barium	Beryllium	Cadmium	Chromium [d]	Cobalt	Copper	Lead
				Residential Screening Level [a] : mg/kg	31	12	15000	16	71	120000	23	3100	80
				Commercial Screening Level [b] : mg/kg	470	12	220000	230	980	1800000	350	47000	320
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-C17-1-0.5	0.5	SB-C17-1	C17	6/25/2018	9.48	2.74	176	0.17 U	0.22 B1,J	27.4	17	36.6	***394***
SB-C17-1-2.5	2.5	SB-C17-1	C17	6/25/2018	3.65	4.75	241	0.17 U	0.23 B1,J	25.6	20	44.1	12.9
SB-C17-1-5	5	SB-C17-1	C17	6/25/2018	3.57	8.58	232	0.17 U	0.27 B1,J	21.1	15.2	55.3	61.2
SB-C2-1-0	0	SB-C2-1	C2	8/23/2018	0.37 U	7.18	118	0.17 U	1.1	33	8.62	59.2	***2350***
SB-C2-1-0.5	0.5	SB-C2-1	C2	8/23/2018	0.37 U	6.04	93.9	0.17 U	0.87	18.9	7.32	57	**284**
SB-C2-1-2.5	2.5	SB-C2-1	C2	8/23/2018	0.37 U	7.22	98.5	0.17 U	1.13	12	6.41	21.4	**124**
SB-C2-1-5	5	SB-C2-1	C2	8/23/2018	0.37 U	2.24	50.5	0.17 U	0.23 J	7.79	5.12	5.23	2.41
SB-C24-1-0	0	SB-C24-1	C24	7/2/2018	0.37 U	5.82	81.8	0.17 U	0.21 U	8.57	5.8	15	8.96
SB-C24-1-0.5	0.5	SB-C24-1	C24	7/2/2018	0.37 U	0.47 J	87.1	0.17 U	0.39 J	11.1	6.64	16.1	24.6
SB-C24-1-2.5	2.5	SB-C24-1	C24	7/2/2018	0.37 U	3.34	95	0.17 U	0.46 J	12.6	7.92	32	48.8
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	0.37 U	0.36 U	188	0.17 U	1.56	20.1	9.86	24	6.99
SB-C29-1-0	0	SB-C29-1	C29	7/19/2018	6.44	3.71	111	0.17 U	0.21 U	20.6	6.67	28.2	***585***
SB-C29-1-0.5	0.5	SB-C29-1	C29	7/19/2018	5.82	3.83	111	0.17 U	0.21 U	20.9	6.79	28.5	***646***
SB-C29-1-2.5	2.5	SB-C29-1	C29	7/19/2018	9.81	0.36 U	178	0.17 U	0.53	22	13	26.8	71.6
SB-C29-1-5	5	SB-C29-1	C29	7/19/2018	2.84 J	0.36 U	130	0.17 U	0.21 U	19.3	12.5	18.3	12.6
SB-D12-1-0	0	SB-D12-1	D12	7/10/2018	1.28 B1,J	5.12	108	0.17 U	0.79	17.6	8.74	24.3	***1030***
SB-D12-1-0.5	0.5	SB-D12-1	D12	7/10/2018	30.4	6.7	117	0.17 U	0.66	14.6	9.52	25.6	***328***
SB-D12-1-2.5	2.5	SB-D12-1	D12	7/10/2018	0.37 U	5.23	175	0.17 U	0.56	26.1	16.2	25.5	4.93
SB-D12-1-5	5	SB-D12-1	D12	7/10/2018	0.37 U	8.63	200	0.17 U	0.6	29.9	15.2	33.2	8.12
SB-D14-1-0	0	SB-D14-1	D14	6/22/2018	5.85	0.36 U	73	0.17 U	0.21 U	6.95	5.78	9.64	15.2
SB-D14-1-0.5	0.5	SB-D14-1	D14	6/22/2018	2.47	2.23	55.9	0.17 U	0.21 U	6.9	5.4	7.18	2.74
SB-D14-1-2.5	2.5	SB-D14-1	D14	6/22/2018	2.34	0.36 U	131	0.17 U	0.31	17.8	12	21	13.8
SB-D14-1-5	5	SB-D14-1	D14	6/22/2018	2.52	2.43	123	0.17 U	0.21 U	17	10.8	20.2	13.7
SB-D20-1-0	0	SB-D20-1	D20	6/25/2018	4.63	2.93	119	0.17 U	0.21 U	7.96	8.02	19.5	6.72
SB-D20-1-0.5	0.5	SB-D20-1	D20	6/25/2018	4.82	2.16	130	0.17 U	0.21 U	8.61	9.22	28.3	13.7
SB-D20-1-2.5A	2.5	SB-D20-1	D20	6/25/2018	5.5	4.37	159	0.17 U	0.21 U	23.1	14.3	39.6	22.7
SB-D20-1-5	5	SB-D20-1	D20	6/25/2018	3.95	5.23	158	0.17 U	0.21 U	24.5	16.1	28.9	5.75
SB-D22-1-0	0	SB-D22-1	D22	6/25/2018	5.25	2.87	134	0.17 U	0.23 B1,J	16.7	10.4	36.1	**88.9**
SB-D22-1-0.5	0.5	SB-D22-1	D22	6/25/2018	5.82	3.96	185	0.17 U	0.41 B1,J	23.2	15.4	30.9	10.6
SB-D22-1-2.5	2.5	SB-D22-1	D22	6/25/2018	4.37	3.05	169	0.17 U	0.21 U	24.2	15.1	31.7	7.4
SB-D22-1-5	5	SB-D22-1	D22	6/25/2018	6.67	3.19	188	0.17 U	0.21 U	27.9	15.7	37.2	30
SB-D24-1-0	0	SB-D24-1	D24	7/2/2018	0.37 U	3.91	110	0.17 U	0.21 U	9.59	**25.2**	42.8	12.2
SB-D24-1-0.5	0.5	SB-D24-1	D24	7/2/2018	0.37 U	3.65	131	0.17 U	0.9	19.8	9.72	1380	**116**
SB-D24-1-2.5	2.5	SB-D24-1	D24	7/2/2018	0.37 U	5.67	170	0.17 U	0.9	20.5	13.6	20.3	4.76

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7439-97-6	7439-98-7	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-62-2	7440-66-6
				Analytical Method	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Residential Screening Level [(a)] : mg/kg	1	390	820	390	390	0.78	390	23000
				Commercial Screening Level [(b)] : mg/kg	4.4	5800	11000	5800	5800	12	5800	350000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-C17-1-0.5	0.5	SB-C17-1	C17	6/25/2018	0.09 J	0.13 U	19.6	3.67	0.13 U	**3.41**	59.5	154
SB-C17-1-2.5	2.5	SB-C17-1	C17	6/25/2018	0.07 J	0.13 U	20.2	5.18	0.13 U	**5.56**	71.3	104
SB-C17-1-5	5	SB-C17-1	C17	6/25/2018	0.1 J	0.13 U	17	1.99 J	0.13 U	**4.78**	55.8	116
SB-C2-1-0	0	SB-C2-1	C2	8/23/2018	0.06 J	1.78	16.2	0.72 U	0.19 J	0.42 U	34.1	348
SB-C2-1-0.5	0.5	SB-C2-1	C2	8/23/2018	0.05 J	0.73 B1,J	13.8	0.72 U	0.13 U	0.42 U	29.4	229
SB-C2-1-2.5	2.5	SB-C2-1	C2	8/23/2018	0.03 J	3.14	20.8	0.72 U	0.13 U	0.42 U	23.9	149
SB-C2-1-5	5	SB-C2-1	C2	8/23/2018	0.02 U	0.42 B1,J	4.54	0.72 U	0.13 U	0.42 U	21.2	60.2
SB-C24-1-0	0	SB-C24-1	C24	7/2/2018	0.02 U	0.13 U	8.98	0.72 U	0.13 U	0.42 U	23.1	38.8
SB-C24-1-0.5	0.5	SB-C24-1	C24	7/2/2018	0.02 U	0.13 U	11.3	3.69	0.13 U	0.42 U	29.8	46.4
SB-C24-1-2.5	2.5	SB-C24-1	C24	7/2/2018	0.07 J	3.6	11.6	0.72 U	0.13 U	0.42 U	33.8	50
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	0.05 J	1.63	25.3	0.73 J	0.13 U	0.42 U	49	59
SB-C29-1-0	0	SB-C29-1	C29	7/19/2018	0.16	0.16 J	10.8	5.41	0.13 U	**2.13** J	25.5	136
SB-C29-1-0.5	0.5	SB-C29-1	C29	7/19/2018	0.94	0.59 J	10.7	3.67	0.13 U	**0.94** J	24.5	140
SB-C29-1-2.5	2.5	SB-C29-1	C29	7/19/2018	0.11 J	0.26 J	17	6.57	0.13 U	0.69 J	49.5	76.9
SB-C29-1-5	5	SB-C29-1	C29	7/19/2018	0.04 J	0.13 U	13.6	1.1 J	0.13 U	**3.14**	44.2	63.3
SB-D12-1-0	0	SB-D12-1	D12	7/10/2018	0.02 U	1.06	14.2	0.72 U	0.13 U	0.42 U	32.5	140
SB-D12-1-0.5	0.5	SB-D12-1	D12	7/10/2018	0.02 U	0.81 B1,J	15.2	0.72 U	0.17 B1,J	0.42 U	38.2	126
SB-D12-1-2.5	2.5	SB-D12-1	D12	7/10/2018	0.04 J	0.13 U	18.3	0.72 U	0.13 U	0.42 U	55.4	73.4
SB-D12-1-5	5	SB-D12-1	D12	7/10/2018	0.06 J	0.82 B1,J	18.9	0.72 U	0.13 U	0.42 U	62.1	72.3
SB-D14-1-0	0	SB-D14-1	D14	6/22/2018	0.03 J	0.13 U	6.17	0.72 U	0.13 U	**1.27**	22	48.6
SB-D14-1-0.5	0.5	SB-D14-1	D14	6/22/2018	0.03 J	0.13 U	3.94	1.39	0.13 U	**1.32**	17.4	41.4
SB-D14-1-2.5	2.5	SB-D14-1	D14	6/22/2018	0.05 J	0.13 U	12.6	1.06	0.13 U	**1.3**	41.7	68.1
SB-D14-1-5	5	SB-D14-1	D14	6/22/2018	0.06 J	0.13 U	13.5	2.06	0.13 U	**2.57**	38.1	62.9
SB-D20-1-0	0	SB-D20-1	D20	6/25/2018	0.03 J	0.13 U	9.64	1.53 J	0.13 U	**2.18** J	29.7	46.1
SB-D20-1-0.5	0.5	SB-D20-1	D20	6/25/2018	0.11 J	0.13 U	8.02	6.04	0.13 U	**2.25** J	29.7	48.8
SB-D20-1-2.5A	2.5	SB-D20-1	D20	6/25/2018	0.07 J	0.13 U	16	6.27	0.13 U	**3.52**	52.3	79.5
SB-D20-1-5	5	SB-D20-1	D20	6/25/2018	0.05 J	0.13 U	16.8	2.76 J	0.13 U	**2.48** J	50.6	72.4
SB-D22-1-0	0	SB-D22-1	D22	6/25/2018	0.05 J	0.13 U	17.6	2.98 J	0.13 U	**2.74** J	43	96.1
SB-D22-1-0.5	0.5	SB-D22-1	D22	6/25/2018	0.05 J	0.61 J	22.8	4.32	0.13 U	**1.28** J	65	103
SB-D22-1-2.5	2.5	SB-D22-1	D22	6/25/2018	0.06 J	0.13 U	17.7	3.94	0.13 U	**2.12** J	54.5	74.9
SB-D22-1-5	5	SB-D22-1	D22	6/25/2018	0.05 J	1.86	19.2	6.26	0.13 U	**3.98**	60.7	81
SB-D24-1-0	0	SB-D24-1	D24	7/2/2018	0.02 U	0.13 U	9.97	0.72 U	0.13 U	0.42 U	25.3	42.8
SB-D24-1-0.5	0.5	SB-D24-1	D24	7/2/2018	0.2	0.76 J	17.9	1.06 J	0.13 U	0.42 U	41.4	107
SB-D24-1-2.5	2.5	SB-D24-1	D24	7/2/2018	0.04 J	1.7	19.8	0.72 U	0.13 U	0.42 U	54	65.5

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Antimony	Arsenic [c]	Barium	Beryllium	Cadmium	Chromium [d]	Cobalt	Copper	Lead
				Residential Screening Level [a] : mg/kg	31	12	15000	16	71	120000	23	3100	80
				Commercial Screening Level [b] : mg/kg	470	12	220000	230	980	1800000	350	47000	320
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-D24-1-5	5	SB-D24-1	D24	7/2/2018	0.37 U	0.89 J	89.5	0.17 U	0.95	10.3	6.57	10	3.19
SB-D29-1-0	0	SB-D29-1	D29	7/13/2018	0.92 B1,J	5.44	96	0.17 U	0.21 U	17.4	7.28	40.8	**87.2**
SB-D29-1-0.5	0.5	SB-D29-1	D29	7/13/2018	2.88 B1,J	7.36	105	0.17 U	0.21 U	28.6	8.48	129	**166**
SB-D29-1-2.5	2.5	SB-D29-1	D29	7/13/2018	4.1	3.6	166	0.17 U	0.21 U	23.2	15.6	40.2	22.3
SB-D29-1-5	5	SB-D29-1	D29	7/13/2018	6.84	2.48	135	0.17 U	0.21 U	18.7	12.5	22.2	9.46
SB-D29-2-0	0	SB-D29-2	D29	7/19/2018	2.29 J	11.6	110	0.17 U	0.21 U	16.4	9.32	36.6	61.2
SB-D29-2-0.5	0.5	SB-D29-2	D29	7/19/2018	7.16	2.06	106	0.17 U	0.21 U	22.6	8.63	31.3	**100**
SB-D29-2-2.5	2.5	SB-D29-2	D29	7/19/2018	0.47 J	0.36 U	64.4	0.17 U	0.21 U	13	5.92	15.2	45.4
SB-D29-2-5	5	SB-D29-2	D29	7/19/2018	2 J	0.64 J	61.2	0.17 U	0.21 U	16.8	5.94	24.8	33.4
SB-D4-1-0	0	SB-D4-1	D4	6/18/2018	0.5 B1,J	0.36 U	64	0.17 U	1.7	305	7.14	29.5	35.3
SB-D4-1-0.5	0.5	SB-D4-1	D4	6/18/2018	0.37 U	2.32	74.5	0.17 U	0.4 J	12.2	6.42	12.4	10.7
SB-D4-1-2.5	2.5	SB-D4-1	D4	6/18/2018	0.84 B1,J	5.3	107	0.17 U	0.63	31.6	8.26	29.8	**143**
SB-D4-1-5	5	SB-D4-1	D4	6/18/2018	3.73	3.47	73.9	0.17 U	0.6	11.7	5.9	55.4	***326***
SB-D4-1-7.5	7.5	SB-D4-1	D4	6/18/2018	20.2	***16.3***	195	0.17 U	12.4	60.3	13.3	164	***1560***
SB-D4-1-15	15	SB-D4-1	D4	6/18/2018	0.96 J	1.54	68.6	0.17 U	0.21 U	9.38	6.01	8.89	5.26
SB-D5-1-0	0	SB-D5-1	D5	6/27/2018	0.4 B1,J	6.72	112	0.17 U	1.31	28	9.28	65.8	**181**
SB-D5-1-0.5	0.5	SB-D5-1	D5	6/27/2018	1.17 B1,J	7.7	121	0.17 U	0.94	19.7	7.81	62	**163**
SB-D5-1-2.5	2.5	SB-D5-1	D5	6/27/2018	9.69	***21.5***	577	0.17 U	4.4	371	**23.7**	402	***4620***
SB-D5-1-5	5	SB-D5-1	D5	6/27/2018	5.28	***19.1***	317	0.17 U	6.71	134	16.4	156	***22200***
SB-D5-1-10	10	SB-D5-1	D5	6/27/2018	0.37 U	1.72	107	0.17 U	0.44 J	16.9	9.72	11.9	4
SB-D6-1-0	0	SB-D6-1	D6	6/29/2018	**31.3**	***12.6***	205	0.17 U	4.61	148	15.1	250	***2790***
SB-D6-1-0.5	0.5	SB-D6-1	D6	6/29/2018	15.9	***13.7***	185	0.17 U	3.33	98.9	12.5	166	***1830***
SB-D6-1-2.5	2.5	SB-D6-1	D6	6/29/2018	12.6	***14.9***	410	0.17 U	3.35	78.1	13.1	161	***2890***
SB-D6-1-5	5	SB-D6-1	D6	6/29/2018	1.79 J	4.64	141	0.17 U	0.74	20.8	10.8	26.8	**217**
SB-D6-1-10	10	SB-D6-1	D6	6/29/2018	4.87	4	133	0.17 U	0.21 U	26.9	11.8	32.3	***378***
SB-D8-1-0	0	SB-D8-1	D8	6/21/2018	**174**	11.3	161	0.17 U	1.22	37.7	11.2	467	***3480***
SB-D8-1-0.5	0.5	SB-D8-1	D8	6/21/2018	5.35	4.85	68.1	0.17 U	0.21 U	11.1	6.67	63.8	**149**
SB-D8-1-2.5	2.5	SB-D8-1	D8	6/21/2018	**47.6**	4.25	151	0.17 U	0.21 U	25.8	15.4	76	***584***
SB-D8-1-5	5	SB-D8-1	D8	6/21/2018	0.37 U	4.38	160	0.17 U	0.21 U	24.1	15.9	31.4	11.3
SB-E11-1-0	0	SB-E11-1	E11	7/10/2018	0.73 B1,J	***13.8***	131	0.17 U	1.23	33.5	11.1	89.2	**269**
SB-E11-1-0.5	0.5	SB-E11-1	E11	7/10/2018	6.15	***14.2***	160	0.17 U	2.46	64.6	13.7	148	***936***
SB-E11-1-2.5	2.5	SB-E11-1	E11	7/10/2018	11.6	***13.6***	171	0.17 U	3.92	95.3	12.7	116	***1430***
SB-E11-1-5	5	SB-E11-1	E11	7/10/2018	5.38	8.17	138	0.17 U	6.63	33	14.6	128	***850***
SB-E11-1-10	10	SB-E11-1	E11	7/10/2018	0.37 U	5.39	68.8	0.17 U	0.34 J	11.6	7.19	7.53	3.87

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7439-97-6	7439-98-7	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-62-2	7440-66-6
				Analytical Method	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Residential Screening Level [(a)] : mg/kg	1	390	820	390	390	0.78	390	23000
				Commercial Screening Level [(b)] : mg/kg	4.4	5800	11000	5800	5800	12	5800	350000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-D24-1-5	5	SB-D24-1	D24	7/2/2018	0.03 J	0.31 J	13.2	0.72 U	0.13 U	0.42 U	30.1	33
SB-D29-1-0	0	SB-D29-1	D29	7/13/2018	0.06 J	2.06	10.5	0.72 U	0.13 U	**0.83** J	29.6	113
SB-D29-1-0.5	0.5	SB-D29-1	D29	7/13/2018	0.11 J	3.84	16.3	0.72 U	0.13 U	0.42 U	37.7	362
SB-D29-1-2.5	2.5	SB-D29-1	D29	7/13/2018	0.07 J	2.27	21	0.72 U	0.13 U	**2.99** J	61.4	133
SB-D29-1-5	5	SB-D29-1	D29	7/13/2018	0.03 J	0.54 J	11.8	0.72 U	0.13 U	0.42 U	43.9	64.9
SB-D29-2-0	0	SB-D29-2	D29	7/19/2018	0.06 J	0.2 J	12.6	4.14	0.13 U	0.42 U	36.2	106
SB-D29-2-0.5	0.5	SB-D29-2	D29	7/19/2018	0.05 J	0.28 J	12.6	7.01	0.13 U	0.42 U	37.7	149
SB-D29-2-2.5	2.5	SB-D29-2	D29	7/19/2018	0.06 J	0.13 U	12.8	0.72 U	0.13 U	**0.84** J	27.6	49.9
SB-D29-2-5	5	SB-D29-2	D29	7/19/2018	0.07 J	0.13 U	7.62	0.72 U	0.13 U	**0.86** J	23	44.8
SB-D4-1-0	0	SB-D4-1	D4	6/18/2018	0.02 U	1.86	6.88	0.72 U	0.92	0.42 U	149	69.6
SB-D4-1-0.5	0.5	SB-D4-1	D4	6/18/2018	0.04 J	0.57 J	6.06	0.72 U	0.13 U	0.42 U	19	36.3
SB-D4-1-2.5	2.5	SB-D4-1	D4	6/18/2018	0.06 J	0.6 J	11.3	0.72 U	0.13 U	0.42 U	33.9	156
SB-D4-1-5	5	SB-D4-1	D4	6/18/2018	0.03 J	0.45 J	7.71	0.72 U	0.13 U	0.42 U	24.1	155
SB-D4-1-7.5	7.5	SB-D4-1	D4	6/18/2018	0.14	2.76	35.6	1.28 J	0.42 J	0.42 U	45.3	6060
SB-D4-1-15	15	SB-D4-1	D4	6/18/2018	0.03 J	0.13 U	5.15	1.35 J	0.13 U	**1.26** J	25.9	125
SB-D5-1-0	0	SB-D5-1	D5	6/27/2018	0.22	0.13 U	14.5	2.35 J	0.16 J	0.42 U	31.6	200
SB-D5-1-0.5	0.5	SB-D5-1	D5	6/27/2018	0.19	0.13 U	15.4	2.49 J	0.2 J	0.42 U	35.3	215
SB-D5-1-2.5	2.5	SB-D5-1	D5	6/27/2018	0.04 J	15.9	109	0.72 U	0.84	0.42 U	19.3	4580
SB-D5-1-5	5	SB-D5-1	D5	6/27/2018	0.04 J	1.23	76.5	0.72 U	0.96	0.42 U	34.6	6030
SB-D5-1-10	10	SB-D5-1	D5	6/27/2018		1.32	10.6	0.72 U	0.13 U	0.42 U	37.3	46.7
SB-D6-1-0	0	SB-D6-1	D6	6/29/2018	0.1 J	0.65 B1,J	43	0.72 U	0.38 J	0.42 U	35	1400
SB-D6-1-0.5	0.5	SB-D6-1	D6	6/29/2018	0.08 J	0.13 U	30.2	0.72 U	0.2 J	0.42 U	34.1	969
SB-D6-1-2.5	2.5	SB-D6-1	D6	6/29/2018	0.07 J	0.13 U	32.4	0.72 U	0.48 J	0.42 U	49.1	1870
SB-D6-1-5	5	SB-D6-1	D6	6/29/2018	0.04 J	0.13 U	12.7	2.59 J	0.13 U	0.42 U	38.8	233
SB-D6-1-10	10	SB-D6-1	D6	6/29/2018	0.04 J	0.18 J	14.1	13.5	0.13 U	0.42 U	44.1	327
SB-D8-1-0	0	SB-D8-1	D8	6/21/2018	0.05 J	0.13 U	21.6	3.39	0.13 U	**2.25** B1,J	41.1	660
SB-D8-1-0.5	0.5	SB-D8-1	D8	6/21/2018	0.29	0.13 U	9.08	0.72 U	0.13 U	**2.18** B1,J	30.2	62.7
SB-D8-1-2.5	2.5	SB-D8-1	D8	6/21/2018	0.02 U	2.06	18.3	1.33 B1,J	0.13 U	**4.96**	54.1	96.7
SB-D8-1-5	5	SB-D8-1	D8	6/21/2018	0.02 U	0.78 B1,J	18.1	0.72 U	0.13 U	**4.45**	56.1	105 J
SB-E11-1-0	0	SB-E11-1	E11	7/10/2018	0.14	1.1	19.8	0.72 U	0.21 B1,J	0.42 U	45.1	227
SB-E11-1-0.5	0.5	SB-E11-1	E11	7/10/2018	0.09 J	3.48	39.2	0.72 U	0.4 B1,J	0.42 U	45.8	678
SB-E11-1-2.5	2.5	SB-E11-1	E11	7/10/2018	0.1 J	1.2	27.2	0.72 U	0.42 B1,J	0.42 U	42.2	1210
SB-E11-1-5	5	SB-E11-1	E11	7/10/2018	0.02 U	0.7 B1,J	22.2	0.72 U	0.35 B1,J	0.42 U	34.6	1970
SB-E11-1-10	10	SB-E11-1	E11	7/10/2018	0.03 J	0.85 J	6.68	0.72 U	0.13 U	0.42 U	32.3	33

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Antimony	Arsenic [c]	Barium	Beryllium	Cadmium	Chromium [d]	Cobalt	Copper	Lead
				Residential Screening Level [a] : mg/kg	31	12	15000	16	71	120000	23	3100	80
				Commercial Screening Level [b] : mg/kg	470	12	220000	230	980	1800000	350	47000	320
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-E13-1-0	0	SB-E13-1	E13	6/22/2018	5.82	4.03	164	0.17 U	0.95	70	10.1	55.8	**289**
SB-E13-1-0.5	0.5	SB-E13-1	E13	6/22/2018	12.5	8.62	152	0.17 U	1.48	49.9	10.4	78.8	***786***
SB-E13-1-2.5	2.5	SB-E13-1	E13	6/22/2018	1.37	3.85	93.2	0.17 U	0.21 U	14.1	7.46	30.9	77.4
SB-E13-1-5	5	SB-E13-1	E13	6/22/2018	6.64	3.84	146	0.17 U	0.21 U	20.5	12.9	20.5	5.84
SB-E17-1-0	0	SB-E17-1	E17	6/27/2018	5.16	3.68	76.6	0.17 U	0.72	28.2	7.19	45.8	***429***
SB-E17-1-0.5	0.5	SB-E17-1	E17	6/27/2018	7.06	2.05	96.7	0.17 U	0.21 U	19.6	8.26	140	**203**
SB-E17-1-2.5	2.5	SB-E17-1	E17	6/27/2018	3.96	6.7	230	0.17 U	0.21 U	26.6	18.1	40.8	5.12
SB-E17-1-5	5	SB-E17-1	E17	6/27/2018	4.23	2.93	150	0.17 U	0.21 U	23.5	15.1	22.7	3.66
SB-E19-1-0	0	SB-E19-1	E19	7/11/2018	7.72	3.1	121	0.17 U	0.21 U	22	9.02	99.5	**186**
SB-E19-1-0.5	0.5	SB-E19-1	E19	7/11/2018	0.37 U	6.97	186	0.17 U	0.74	27.6	17.4	27.5	5.25
SB-E19-1-2.5	2.5	SB-E19-1	E19	7/11/2018	0.37 U	8.67	142	0.17 U	0.53	26.1	15.2	23.9	4.87
SB-E19-1-5	5	SB-E19-1	E19	7/11/2018	0.37 U	6.05	155	0.17 U	0.49 J	25.6	16	24.4	4.7
SB-E22-1-0	0	SB-E22-1	E22	7/12/2018	2.36 J	0.36 U	110	0.17 U	0.21 U	10.7	7.94	19	23.6
SB-E22-1-0.5	0.5	SB-E22-1	E22	7/12/2018	3.8	0.36 U	175	0.17 U	0.21 U	24.4	15.3	28.8	8.39
SB-E22-1-2.5	2.5	SB-E22-1	E22	7/12/2018	2.32 J	1.6	149	0.17 U	0.21 U	22.4	13	26.5	13.1
SB-E22-1-5	5	SB-E22-1	E22	7/12/2018	0.37 U	1.05	183	0.17 U	0.21 U	31	15.9	36.2	9.64
SB-E26-1-0	0	SB-E26-1	E26	7/5/2018	0.37 U	6.56	93.1	0.17 U	0.4 J	16.5	7.55	29.7	53.7
SB-E26-1-0.5	0.5	SB-E26-1	E26	7/5/2018	0.37 U	9.12	156	0.17 U	1.1	20.4	12.7	27.6	41.1
SB-E26-1-2.5	2.5	SB-E26-1	E26	7/5/2018	0.37 U	8.76	158	0.17 U	0.83	20.6	13.5	23.3	4.16
SB-E26-1-5	5	SB-E26-1	E26	7/5/2018	0.37 U	3.89	102	0.17 U	0.62	15.9	8.62	14.2	3.81
SB-E4-1-0	0	SB-E4-1	E4	6/18/2018	0.37 U	3.82	118	0.17 U	0.96	91.3	10.6	45.7	**113**
SB-E4-1-0.5	0.5	SB-E4-1	E4	6/18/2018	1.88 B1,J	8.44	101	0.17 U	1.05	37.7	7.98	52.3	***409***
SB-E4-1-2.5	2.5	SB-E4-1	E4	6/18/2018	0.51 B1,J	8.4	96.4	0.17 U	0.92	24	6.71	31.2	**186**
SB-E4-1-7.5	7.5	SB-E4-1	E4	6/18/2018	0.37 U	***48.8***	140	0.17 U	1.52	20.7	7.68	29.7	**128**
SB-E4-1-15	15	SB-E4-1	E4	6/18/2018	0.37 U	***15.3***	63.4	0.17 U	0.4 J	8.97	6.37	6.11	2.1
SB-E7-1-0	0	SB-E7-1	E7	6/27/2018	1.27 B1,J	3.75	84.1	0.17 U	0.62	12.7	6.43	63.5	**262**
SB-E7-1-0.5	0.5	SB-E7-1	E7	6/27/2018	0.37 U	2.66	72.8	0.17 U	0.59	12	5.58	59.9	**200**
SB-E7-1-2.5	2.5	SB-E7-1	E7	6/27/2018	0.37 U	0.36 U	60.1	0.17 U	0.3 J	8.92	4.99	11.5	23.3
SB-E7-1-5	5	SB-E7-1	E7	6/27/2018	0.37 U	3.61	134	0.17 U	1.03	19.1	12.9	18.5	22.6
SB-F10-1-0	0	SB-F10-1	F10	6/21/2018	8.92	6.5	121	0.17 U	0.37 B1,J	23.2	10.3	105	***871***
SB-F10-1-0.5	0.5	SB-F10-1	F10	6/21/2018	12.6	6.35	116	0.17 U	0.91	61.1	9.62	69.5	***639***
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	**105**	***18.8***	374	0.17 U	8.36	180	18.2	580	***7220***
SB-F10-1-5	5	SB-F10-1	F10	6/21/2018	0.37 U	3.12	97.1	0.17 U	0.21 U	16.4	9.44	21.6	43.5
SB-F11-1-0	0	SB-F11-1	F11	6/21/2018	0.37 U	9.11	131	0.17 U	0.21 U	18.3	9.85	53.8	**104**

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7439-97-6	7439-98-7	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-62-2	7440-66-6
				Analytical Method	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Residential Screening Level [(a)] : mg/kg	1	390	820	390	390	0.78	390	23000
				Commercial Screening Level [(b)] : mg/kg	4.4	5800	11000	5800	5800	12	5800	350000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-E13-1-0	0	SB-E13-1	E13	6/22/2018	0.07 J	0.37	15.2	14.5	0.13 U	0.42 U	63.4	194
SB-E13-1-0.5	0.5	SB-E13-1	E13	6/22/2018	0.09 J	0.13 U	17.1	4.71	0.13 U	**1.8**	40.6	669
SB-E13-1-2.5	2.5	SB-E13-1	E13	6/22/2018	0.05 J	0.13 U	11.2	5.48	0.13 U	0.42 U	24.2	74.8
SB-E13-1-5	5	SB-E13-1	E13	6/22/2018	0.04 J	0.13 U	13.6	1.93	0.13 U	**2.68**	46.2	67.1
SB-E17-1-0	0	SB-E17-1	E17	6/27/2018	0.07 J	0.45 B1,J	11.5	1.57 J	0.13 U	0.42 U	28.4	144
SB-E17-1-0.5	0.5	SB-E17-1	E17	6/27/2018	0.07 J	0.72 B1,J	28.2	0.72 U	0.13 U	**3.79**	49.4	125
SB-E17-1-2.5	2.5	SB-E17-1	E17	6/27/2018	0.08 J	0.53 B1,J	19.1	0.72 U	0.13 U	**7.27**	68.1	87.1
SB-E17-1-5	5	SB-E17-1	E17	6/27/2018	0.04 J	0.51 B1,J	15.2	0.72 U	0.13 U	**5.65**	53.4	71
SB-E19-1-0	0	SB-E19-1	E19	7/11/2018	0.17	0.13 U	18.3	8.7	0.13 U	**1.38** J	44.2	89.2
SB-E19-1-0.5	0.5	SB-E19-1	E19	7/11/2018	0.04 J	0.85 B1,J	19.7	0.72 U	0.23 B1,J	0.42 U	59	82.5
SB-E19-1-2.5	2.5	SB-E19-1	E19	7/11/2018	0.04 J	0.79 B1,J	17.4	0.72 U	0.14 B1,J	0.42 U	52.3	69.8
SB-E19-1-5	5	SB-E19-1	E19	7/11/2018	0.04 J	0.97 B1,J	17.6	0.72 U	0.18 B1,J	0.42 U	51.9	73.6
SB-E22-1-0	0	SB-E22-1	E22	7/12/2018	0.03 J	0.9 J	13.5	0.72 U	0.13 U	**1.28** J	32.9	43.9
SB-E22-1-0.5	0.5	SB-E22-1	E22	7/12/2018	0.04 J	1.48	17.1	2.44 J	0.13 U	**1.84** J	53.8	70.4
SB-E22-1-2.5	2.5	SB-E22-1	E22	7/12/2018	0.05 J	1.86	15.5	0.72 U	0.13 U	0.62 J	46.4	57.3
SB-E22-1-5	5	SB-E22-1	E22	7/12/2018	0.06 J	1.84	21.9	0.72 U	0.13 U	**1.32** J	57.9	65.4
SB-E26-1-0	0	SB-E26-1	E26	7/5/2018	0.03 J	1.31	15.2	0.72 U	0.13 U	0.42 U	35.4	64.4
SB-E26-1-0.5	0.5	SB-E26-1	E26	7/5/2018	0.07 J	1.9	25.9	0.72 U	0.13 U	0.42 U	68.8	152
SB-E26-1-2.5	2.5	SB-E26-1	E26	7/5/2018	0.03 J	1.6	19.1	0.72 U	0.13 U	0.42 U	53.9	70.6
SB-E26-1-5	5	SB-E26-1	E26	7/5/2018	0.03 J	1.08	14.7	0.72 U	0.13 U	0.42 U	38.5	40
SB-E4-1-0	0	SB-E4-1	E4	6/18/2018	0.02 U	0.13 U	18	0.72 U	0.17 J	0.42 U	61.9	142
SB-E4-1-0.5	0.5	SB-E4-1	E4	6/18/2018	0.1 J	0.42 J	18.5	2.36 J	0.13 U	0.58 B1,J	35.7	290
SB-E4-1-2.5	2.5	SB-E4-1	E4	6/18/2018	0.05 J	0.25 J	12.7	0.81 J	0.13 U	0.42 U	27.5	252
SB-E4-1-7.5	7.5	SB-E4-1	E4	6/18/2018	0.05 J	2.31	26	0.85 J	0.13 U	0.42 U	38.9	114
SB-E4-1-15	15	SB-E4-1	E4	6/18/2018		1.2	5.76	0.72 U	0.15 J	0.42 U	27.8	28.4
SB-E7-1-0	0	SB-E7-1	E7	6/27/2018	0.06 J	0.34 J	13.2	0.72 U	0.13 U	0.42 U	28.7	126
SB-E7-1-0.5	0.5	SB-E7-1	E7	6/27/2018	0.08 J	0.65 J	13.4	0.72 U	0.13 U	0.42 U	29.7	116
SB-E7-1-2.5	2.5	SB-E7-1	E7	6/27/2018	0.05 J	0.68 J	6.25	0.72 U	0.13 U	0.42 U	22.6	40.6
SB-E7-1-5	5	SB-E7-1	E7	6/27/2018	0.05 J	1.02	14.2	0.72 U	0.15 J	0.42 U	44.4	177
SB-F10-1-0	0	SB-F10-1	F10	6/21/2018	0.12 J	0.64 B1,J	15.5	3.86	0.13 U	**2.88** B1,J	44.9	153
SB-F10-1-0.5	0.5	SB-F10-1	F10	6/21/2018	0.18	1.27	17.2	1.73 B1,J	0.13 U	**2.8** B1,J	36.5	369
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	0.04 J	13 U	67	0.72 U	0.13 U	**1.44** B1,J	34.9	3360
SB-F10-1-5	5	SB-F10-1	F10	6/21/2018	0.02 U	0.13 U	10.1	3.67	0.13 U	**3.51**	38.5	393
SB-F11-1-0	0	SB-F11-1	F11	6/21/2018	0.19	0.63 B1,J	13.5	1.72 B1,J	0.13 U	**4.46**	40.6	102

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Antimony	Arsenic [c]	Barium	Beryllium	Cadmium	Chromium [d]	Cobalt	Copper	Lead
				Residential Screening Level [a] : mg/kg	31	12	15000	16	71	120000	23	3100	80
				Commercial Screening Level [b] : mg/kg	470	12	220000	230	980	1800000	350	47000	320
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-F11-1-0.5	0.5	SB-F11-1	F11	6/21/2018	0.37 U	4.59	102	0.17 U	0.21 U	14.7	8.89	51.7	**132**
SB-F11-1-2.5	2.5	SB-F11-1	F11	6/21/2018	***669***	***33.3***	214	0.17 U	11.2	110	15.6	2550	***15100***
SB-F11-1-5	5	SB-F11-1	F11	6/21/2018	***595***	***30***	259	0.17 U	19.2	197	20.2	1630	***15200***
SB-F11-1-10	10	SB-F11-1	F11	6/21/2018	0.37 U	1.59	60.8	0.17 U	0.25 J	9.02	6.29	6.67	2.73
SB-F14-1-0	0	SB-F14-1	F14	6/22/2018	5.07	2.91	177	0.17 U	0.51	28.5	16.1	38.9	51.2
SB-F14-1-0.5	0.5	SB-F14-1	F14	6/22/2018	1.48	9.38	204	0.17 U	0.72	25	15.4	34.7	10.5
SB-F14-1-2.5	2.5	SB-F14-1	F14	6/22/2018	6.55	1.15	157	0.17 U	0.31	23.6	15.8	25.1	7.22
SB-F14-1-5	5	SB-F14-1	F14	6/22/2018	4.24	0.87	176	0.17 U	0.21 U	17.8	12.5	17.5	5.76
SB-F18-1-0	0	SB-F18-1	F18	6/28/2018	5.96	2.37	136	0.17 U	0.21 U	19.9	8.46	20.2	6.46
SB-F18-1-0.5	0.5	SB-F18-1	F18	6/28/2018	4.96	5.08	186	0.17 U	0.21 U	24.5	16.6	29.1	3.8
SB-F18-1-2.5	2.5	SB-F18-1	F18	6/28/2018	1.83 J	6.52	254	0.17 U	0.21 U	21.4	14.2	31.4	3.93
SB-F18-1-5	5	SB-F18-1	F18	6/28/2018	5.63	4.98	171	0.17 U	0.21 U	23.7	16.9	27	3.34
SB-F21-1-0	0	SB-F21-1	F21	8/23/2018	0.37 U	5.7	106	0.17 U	0.77	15.2	8.9	29.6	36.1
SB-F21-1-0.5	0.5	SB-F21-1	F21	8/23/2018	0.37 U	6.42	97.2	0.17 U	0.66	13.2	8.14	33.7	65.9
SB-F21-1-2.5	2.5	SB-F21-1	F21	8/23/2018	0.37 U	6.38	114	0.17 U	0.81	29.8	9.27	30.6	50.9
SB-F21-1-5	5	SB-F21-1	F21	8/23/2018	0.37 U	4.45	184	0.17 U	0.56	23	14.9	20.9	3.09
SB-F24-1-0	0	SB-F24-1	F24	7/9/2018	8.18	7.23	229	0.17 U	2.76	54.7	8.11	190	***529***
SB-F24-1-0.5	0.5	SB-F24-1	F24	7/9/2018	7.38	4.67	92.6	0.17 U	0.21 U	22	9.17	48	42.1
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	7.01	2.76	108	0.17 U	0.21 U	19.2	8.83	20	10.8
SB-F24-1-5	5	SB-F24-1	F24	7/9/2018	2.08 J	2.04	74.2	0.17 U	0.21 U	15.6	7.64	12	39.2
SB-F28-1-0	0	SB-F28-1	F28	7/2/2018	0.37 U	4.42	161	0.17 U	1.31	36.6	9.09	77.3	**180**
SB-F28-1-0.5	0.5	SB-F28-1	F28	7/2/2018	0.37 U	5.43	99.3	0.17 U	1.09	28.6	8.48	52	**96.3**
SB-F28-1-2.5	2.5	SB-F28-1	F28	7/2/2018	0.37 U	2.92	270	0.17 U	0.74	18.8	9.51	28	**198**
SB-F28-1-5	5	SB-F28-1	F28	7/2/2018	0.37 U	3.3	80.7	0.17 U	0.54	28.1	5.84	48.2	**92**
SB-F28-1-10	10	SB-F28-1	F28	7/2/2018	0.5 J	6.38	94.8	0.17 U	0.21 U	19.8	9.81	71.2	**106**
SB-F5-1-0	0	SB-F5-1	F5	6/19/2018	0.37 U	***15.8***	174	0.17 U	3.48	69.1	14.7	87.5	**118**
SB-F5-1-0.5	0.5	SB-F5-1	F5	6/19/2018	0.37 U	5.37	184	0.17 U	1.55	35.7	11.2	31.6	4.43
SB-F5-1-2.5	2.5	SB-F5-1	F5	6/19/2018	0.37 U	5.63	185	0.17 U	1.45	33.3	10.2	29.8	4.94
SB-F5-1-5	5	SB-F5-1	F5	6/19/2018	0.37 U	5.43	166	0.17 U	1.15	32.5	9.9	28.4	3.61
SB-F6-1-0	0	SB-F6-1	F6	6/19/2018	0.37 U	8.14	133	0.17 U	3.41	68.2	13.7	168	***353***
SB-F6-1-0.5	0.5	SB-F6-1	F6	6/19/2018	0.37 U	***17.8***	109	0.17 U	0.6	16.8	10.4	32.4	54.9
SB-F6-1-2.5	2.5	SB-F6-1	F6	6/19/2018	0.37 U	5.31	117	0.17 U	0.49 J	18.4	10.7	23.1	22.6
SB-F6-1-5	5	SB-F6-1	F6	6/19/2018	0.37 U	2.98	89.2	0.17 U	0.32 J	13.6	8.86	10.8	1.88
SB-G19-1-0	0	SB-G19-1	G19	7/11/2018	4.15	0.36 U	146	0.17 U	0.21 U	21.2	13.7	28.2	37.3

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7439-97-6	7439-98-7	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-62-2	7440-66-6
				Analytical Method	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Residential Screening Level [(a)] : mg/kg	1	390	820	390	390	0.78	390	23000
				Commercial Screening Level [(b)] : mg/kg	4.4	5800	11000	5800	5800	12	5800	350000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-F11-1-0.5	0.5	SB-F11-1	F11	6/21/2018	0.09 J	0.52 B1,J	11.6	1.47 B1,J	0.13 U	**3.02**	37.2	69.3
SB-F11-1-2.5	2.5	SB-F11-1	F11	6/21/2018	0.02 U	13.2 B1,J	99.4	0.72 U	0.13 U	0.68 B1,J	52.2	3490
SB-F11-1-5	5	SB-F11-1	F11	6/21/2018	0.02 U	13 U	90.8	0.72 U	0.13 U	0.58 B1,J	40.7	14200
SB-F11-1-10	10	SB-F11-1	F11	6/21/2018		0.68 J	6.09	0.72 U	0.13 U	0.42 U	22.6	29.3
SB-F14-1-0	0	SB-F14-1	F14	6/22/2018	0.06 J	0.13 U	20.9	6.53	0.13 U	**2.2**	53.5	109
SB-F14-1-0.5	0.5	SB-F14-1	F14	6/22/2018	0.1 J	2.47	17.9	3.74	0.13 U	**3.39**	65.6	66.1
SB-F14-1-2.5	2.5	SB-F14-1	F14	6/22/2018	0.04 J	0.13 U	16.3	1.05	0.13 U	**4.66**	50.2	77.8
SB-F14-1-5	5	SB-F14-1	F14	6/22/2018	0.05 J	0.13 U	13	3.93	0.13 U	**2.45**	39.9	59.6
SB-F18-1-0	0	SB-F18-1	F18	6/28/2018	0.06 J	0.34 B1,J	8.47	2.98 J	0.15 J	**3.83**	31.6	46.1
SB-F18-1-0.5	0.5	SB-F18-1	F18	6/28/2018	0.05 J	0.13 U	17.2	0.72 U	0.13 U	**6.74**	59.9	84.9
SB-F18-1-2.5	2.5	SB-F18-1	F18	6/28/2018	0.07 J	0.18 B1,J	15.6	4.32	0.13 U	**4.44**	65.4	62.6
SB-F18-1-5	5	SB-F18-1	F18	6/28/2018	0.05 J	0.94 B1,J	15.9	0.73 J	0.13 U	**6.47**	60.2	73.7
SB-F21-1-0	0	SB-F21-1	F21	8/23/2018	0.04 J	1.24	14	0.72 U	0.13 U	0.42 U	34.6	79.2
SB-F21-1-0.5	0.5	SB-F21-1	F21	8/23/2018	0.05 J	1.12	12	0.72 U	0.13 U	0.42 U	31.1	81.3
SB-F21-1-2.5	2.5	SB-F21-1	F21	8/23/2018	0.04 J	1.86	15	0.72 U	0.13 U	0.42 U	36.1	76.9
SB-F21-1-5	5	SB-F21-1	F21	8/23/2018	0.02 U	0.13 U	16.2	0.72 U	0.13 U	0.42 U	45	71.8
SB-F24-1-0	0	SB-F24-1	F24	7/9/2018	0.13 J	14.6	27.6	13.3	0.13 U	0.42 U	28.2	507
SB-F24-1-0.5	0.5	SB-F24-1	F24	7/9/2018	0.08 J	0.13 U	7.96	6.33	0.13 U	0.42 U	37.8	74.9
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	0.07 J	0.59 B1,J	8	2.47 B1,J	0.13 U	0.42 U	39.4	61.3
SB-F24-1-5	5	SB-F24-1	F24	7/9/2018	0.08 J	0.69 B1,J	6.2	7.34	0.13 U	0.44 B1,J	27.5	51.9
SB-F28-1-0	0	SB-F28-1	F28	7/2/2018	0.08 J	3.55	19.1	0.72 U	0.16 J	0.42 U	36.2	154
SB-F28-1-0.5	0.5	SB-F28-1	F28	7/2/2018	0.09 J	2.95	15.3	1.84 J	0.13 U	0.42 U	34.1	116
SB-F28-1-2.5	2.5	SB-F28-1	F28	7/2/2018	0.05 J	0.93 J	18.2	0.72 U	0.16 J	0.42 U	40.3	170
SB-F28-1-5	5	SB-F28-1	F28	7/2/2018	0.11 J	0.16 J	14.1	0.72 U	0.13 U	0.42 U	24.5	81.4
SB-F28-1-10	10	SB-F28-1	F28	7/2/2018	0.15	0.13 U	9.51	6.61	0.13 U	0.42 U	32.4	122
SB-F5-1-0	0	SB-F5-1	F5	6/19/2018	0.07 J	3.79	81.4	2.13 J	0.92	0.42 U	117	123
SB-F5-1-0.5	0.5	SB-F5-1	F5	6/19/2018	0.08 J	3.27	34.8	0.72 U	0.28 J	0.42 U	44	77.2
SB-F5-1-2.5	2.5	SB-F5-1	F5	6/19/2018	0.08 J	2.38	33.5	0.72 U	0.2 J	0.42 U	40	70.6
SB-F5-1-5	5	SB-F5-1	F5	6/19/2018	0.06 J	2.02	27.6	1.84 J	0.18 J	0.42 U	38.3	64.6
SB-F6-1-0	0	SB-F6-1	F6	6/19/2018	0.14	1.94	76.4	1.74 J	0.26 J	0.42 U	86.8	179
SB-F6-1-0.5	0.5	SB-F6-1	F6	6/19/2018	0.1 J	0.13 U	13.7	0.72 U	0.13 U	0.42 U	37.9	77.8
SB-F6-1-2.5	2.5	SB-F6-1	F6	6/19/2018	0.04 J	0.13 U	13.3	0.72 U	0.13 U	0.42 U	40.2	61.1
SB-F6-1-5	5	SB-F6-1	F6	6/19/2018	0.03 J	0.13 U	9.37	0.72 U	0.13 U	0.42 U	31.1	36
SB-G19-1-0	0	SB-G19-1	G19	7/11/2018	0.14	0.13 U	14.3	3.28	0.14 J	**4.39**	50.8	89.5

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Antimony	Arsenic [c]	Barium	Beryllium	Cadmium	Chromium [d]	Cobalt	Copper	Lead
				Residential Screening Level [a] : mg/kg	31	12	15000	16	71	120000	23	3100	80
				Commercial Screening Level [b] : mg/kg	470	12	220000	230	980	1800000	350	47000	320
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-G19-1-0.5	0.5	SB-G19-1	G19	7/11/2018	0.37 U	2.77	141	0.17 U	0.21 U	19.8	13.1	23.5	8.37
SB-G19-1-2.5	2.5	SB-G19-1	G19	7/11/2018	2.42 J	2.71	164	0.17 U	0.21 U	22.3	14.6	24	4.1
SB-G19-1-5	5	SB-G19-1	G19	7/11/2018	5.76	0.36 U	120	0.17 U	0.21 U	16.6	11.3	15.2	3.26
SB-G24-1-0	0	SB-G24-1	G24	7/2/2018	0.37 U	3.49	143	0.17 U	0.21 U	14.2	12.5	23.3	8.26
SB-G24-1-0.5	0.5	SB-G24-1	G24	7/2/2018	2.11 J	0.36 U	94.9	0.17 U	0.37 J	123	7.11	34.8	37.8
SB-G24-1-2.5	2.5	SB-G24-1	G24	7/2/2018	0.37 U	0.9 J	40.8	0.17 U	0.21 U	9.6	3.72	4.36	6.74
SB-G24-1-5	5	SB-G24-1	G24	7/2/2018	**88.4**	10.4	81.2	0.17 U	0.85	18.9	7.69	506	***1220***
SB-G24-1-10	10	SB-G24-1	G24	7/2/2018	1.25 J	1.52	50.7	0.17 U	0.21 U	10.4	4.89	29.6	51.3
DB-G27-1-0	0	SB-G27-1	G27	7/9/2018	4.56	4.41	104	0.17 U	1.03	24.7	8.63	26.8	**117**
DB-G27-1-0.5	0.5	SB-G27-1	G27	7/9/2018	2.61 J	1.32	135	0.17 U	0.21 U	25.8	12	23.7	**136**
DB-G27-1-2.5	2.5	SB-G27-1	G27	7/9/2018	7.6	3.32	137	0.17 U	0.21 U	19.4	13	26	25.6
DB-G27-1-5	5	SB-G27-1	G27	7/9/2018	5.78	4.43	112	0.17 U	0.61	26.8	7.68	655	***678***
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	7.07	2.72	152	0.17 U	0.21 U	21.3	8.42	31.5	**88.7**
SB-G4-1-0	0	SB-G4-1	G4	6/29/2018	0.37 U	2.36	135	0.17 U	0.93	21	10.7	33.3	46.6
SB-G4-1-0.5	0.5	SB-G4-1	G4	6/29/2018	0.37 U	3.6	116	0.17 U	0.9	19.1	9.88	21.1	43.4
SB-G4-1-2.5	2.5	SB-G4-1	G4	6/29/2018	0.37 U	4.01	114	0.17 U	0.79	19.1	10.1	17.1	54.6
SB-G4-1-5	5	SB-G4-1	G4	6/29/2018	0.37 U	8.44	185	0.17 U	2.21	27.5	18.5	176	**175**
SB-G4-1-10	10	SB-G4-1	G4	6/29/2018	1.83 J	7.33	115	0.17 U	1.17	24.8	9.6	32.4	**118**
SB-G8-1-0	0	SB-G8-1	G8	6/20/2018	2.26 B1,J	0.36 U	110	0.17 U	0.46 J	17.6	10.2	27.9	0.32 U
SB-G8-1-0.5	0.5	SB-G8-1	G8	6/20/2018	0.37 U	4.06	103	0.17 U	0.28 J	12.7	8.58	16	18.9
SB-G8-1-2.5	2.5	SB-G8-1	G8	6/20/2018	0.37 U	3.82	146	0.17 U	0.4 J	14.3	7.7	21.9	51.4
SB-G8-1-5	5	SB-G8-1	G8	6/20/2018	0.37 U	2.71	104	0.17 U	0.92	25.5	9.14	24.8	**123**
SB-G8-1-10	10	SB-G8-1	G8	6/20/2018	1.94 B1,J	1.55	56.9	0.17 U	0.21 U	7.03	5.27	6.79	2.62
SB-G9-1-0	0	SB-G9-1	G9	6/20/2018	0.37 U	3.6	108	0.17 U	0.68	17.7	8.96	39.1	**107**
SB-G9-1-0.5	0.5	SB-G9-1	G9	6/20/2018	0.37 U	***21.8***	122	0.17 U	0.72	17.4	12.1	45.6	**81.2**
SB-G9-1-2.5	2.5	SB-G9-1	G9	6/20/2018	0.37 U	5.46	112	0.17 U	0.3 J	15.8	9.94	23.8	21.4
SB-G9-1-5	5	SB-G9-1	G9	6/20/2018	0.37 U	1.02	84.7	0.17 U	0.32 J	11.8	7.46	11.7	11.5
SB-H10-1-0	0	SB-H10-1	H10	6/20/2018	0.37 U	3.5	102	0.17 U	0.47 J	24.3	8.65	44.8	**117**
SB-H10-1-0.5	0.5	SB-H10-1	H10	6/20/2018	0.37 U	4.15	106	0.17 U	0.58	28	8.84	37.4	**105**
SB-H10-1-2.5	2.5	SB-H10-1	H10	6/20/2018	6.89	1.98	113	0.17 U	3.75	25.7	9.05	30.4	**150**
SB-H10-1-5	5	SB-H10-1	H10	6/20/2018	3.99	1.91	63.2	0.17 U	0.23 J	8.55	6.47	6.72	2.92
SB-H12-1-0	0	SB-H12-1	H12	6/29/2018	2.57 J	4.6	136	0.17 U	0.84	55.8	11.9	43.3	**94**
SB-H12-1-0.5	0.5	SB-H12-1	H12	6/29/2018	3.73	***13.6***	147	0.17 U	1.26	23	10.4	111	**146**
SB-H12-1-2.5	2.5	SB-H12-1	H12	6/29/2018	6.17	3.94	111	0.17 U	0.49 J	15.2	10.3	18	17.8

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7439-97-6	7439-98-7	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-62-2	7440-66-6
				Analytical Method	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Residential Screening Level [(a)] : mg/kg	1	390	820	390	390	0.78	390	23000
				Commercial Screening Level [(b)] : mg/kg	4.4	5800	11000	5800	5800	12	5800	350000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-G19-1-0.5	0.5	SB-G19-1	G19	7/11/2018	0.04 J	0.13 U	12.9	10.9	0.13 U	**3.97**	48.2	61.3
SB-G19-1-2.5	2.5	SB-G19-1	G19	7/11/2018	0.03 J	0.13 U	15.2	4.99	0.13 U	**2.64** J	52	60.6
SB-G19-1-5	5	SB-G19-1	G19	7/11/2018	0.02 U	0.13 U	10.6	1.22 J	0.13 U	**1.73** J	43.5	46.6
SB-G24-1-0	0	SB-G24-1	G24	7/2/2018	0.02 U	0.58 J	8.69	0.89 J	0.13 U	0.42 U	29.6	51.1
SB-G24-1-0.5	0.5	SB-G24-1	G24	7/2/2018	0.05 J	0.93 J	8.12	0.72 U	0.13 U	0.42 U	27.4	48.7
SB-G24-1-2.5	2.5	SB-G24-1	G24	7/2/2018	0.03 J	0.13 U	3.39	0.72 U	0.13 U	0.42 U	16.6	18.5
SB-G24-1-5	5	SB-G24-1	G24	7/2/2018	0.12 J	0.64 J	55.3	4.22	0.25 J	0.42 U	87.8	196
SB-G24-1-10	10	SB-G24-1	G24	7/2/2018	0.04 J	0.13 U	7.93	5.38	0.13 U	0.42 U	22.2	113
DB-G27-1-0	0	SB-G27-1	G27	7/9/2018	0.11 J	0.13 U	10.2	1.81 B1,J	0.13 U	0.42 U	33.7	590
DB-G27-1-0.5	0.5	SB-G27-1	G27	7/9/2018	0.04 J	0.24 B1,J	13.2	4.31	0.13 U	0.42 U	44.5	159
DB-G27-1-2.5	2.5	SB-G27-1	G27	7/9/2018	0.04 J	0.13 U	14.3	7.49	0.13 U	0.42 U	45.1	131
DB-G27-1-5	5	SB-G27-1	G27	7/9/2018	**1.28**	1.32	37.2	8.73	0.13 U	0.42 U	27.8	400
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	**1.37**	0.13 U	10.9	1.41 B1,J	0.13 U	0.42 U	34	101
SB-G4-1-0	0	SB-G4-1	G4	6/29/2018	0.07 J	1.18	16.2	0.72 U	0.13 U	0.42 U	47.2	94.5
SB-G4-1-0.5	0.5	SB-G4-1	G4	6/29/2018	0.04 J	1.46	15.1	0.72 U	0.13 U	0.42 U	42.7	69.2
SB-G4-1-2.5	2.5	SB-G4-1	G4	6/29/2018	0.07 J	1.28	13.8	0.72 U	0.13 U	0.42 U	40.8	77.3
SB-G4-1-5	5	SB-G4-1	G4	6/29/2018	0.2	3.63	24.2	0.72 U	0.13 U	0.42 U	35.9	272
SB-G4-1-10	10	SB-G4-1	G4	6/29/2018	0.09 J	3.84	22.1	4.84	0.13 U	0.42 U	44.9	135
SB-G8-1-0	0	SB-G8-1	G8	6/20/2018	0.02 U	0.13 U	11.3	0.72 U	0.13 U	0.42 U	43.7	89.2
SB-G8-1-0.5	0.5	SB-G8-1	G8	6/20/2018	0.13 J	0.13 U	8.9	0.72 U	0.13 U	0.42 U	35.1	63.6
SB-G8-1-2.5	2.5	SB-G8-1	G8	6/20/2018	0.02 U	0.13 U	9.61	0.72 U	0.13 U	0.42 U	33.9	118
SB-G8-1-5	5	SB-G8-1	G8	6/20/2018	0.02 U	0.13 U	10.3	2.28 B1,J	0.13 U	0.42 U	35.8	295
SB-G8-1-10	10	SB-G8-1	G8	6/20/2018	0.04 J	0.13 U	4.6	2.13 B1,J	0.13 U	0.42 U	23.3	26.1
SB-G9-1-0	0	SB-G9-1	G9	6/20/2018	0.02 U	0.13 U	13	0.72 U	0.13 U	0.42 U	38.6	140
SB-G9-1-0.5	0.5	SB-G9-1	G9	6/20/2018	0.05 J	0.13 U	14.7	2.73 B1,J	0.13 U	0.42 U	44.3	120
SB-G9-1-2.5	2.5	SB-G9-1	G9	6/20/2018	0.02 U	0.13 U	10.8	0.72 U	0.13 U	0.42 U	39.7	55.9
SB-G9-1-5	5	SB-G9-1	G9	6/20/2018	0.02 U	0.13 U	7.97	0.72 U	0.13 U	0.42 U	31.1	92.6
SB-H10-1-0	0	SB-H10-1	H10	6/20/2018	0.04 J	0.13 U	13.5	0.72 U	0.13 U	0.42 U	38.4	82.1
SB-H10-1-0.5	0.5	SB-H10-1	H10	6/20/2018	0.04 J	0.13 U	13.4	0.72 U	0.13 U	0.42 U	40.7	87.7
SB-H10-1-2.5	2.5	SB-H10-1	H10	6/20/2018	0.04 J	0.7 J	12	0.72 U	0.13 U	0.42 U	35.7	79.7
SB-H10-1-5	5	SB-H10-1	H10	6/20/2018	0.14	0.23 J	5.68	0.72 U	0.13 U	0.42 U	23.2	30.5
SB-H12-1-0	0	SB-H12-1	H12	6/29/2018	0.06 J	0.4 B1,J	16	0.72 U	0.13 U	0.42 U	53.6	121
SB-H12-1-0.5	0.5	SB-H12-1	H12	6/29/2018	0.08 J	0.15 B1,J	17.8	0.72 U	0.13 U	0.42 U	38.9	192
SB-H12-1-2.5	2.5	SB-H12-1	H12	6/29/2018	0.04 J	0.13 U	10.3	0.98 J	0.13 U	0.42 U	36.8	55.6

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Antimony	Arsenic [c]	Barium	Beryllium	Cadmium	Chromium [d]	Cobalt	Copper	Lead
				Residential Screening Level [a] : mg/kg	31	12	15000	16	71	120000	23	3100	80
				Commercial Screening Level [b] : mg/kg	470	12	220000	230	980	1800000	350	47000	320
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-H12-1-5	5	SB-H12-1	H12	6/29/2018	2.5 J	1.8	62.1	0.17 U	0.22 J	6.91	5.77	6.15	3.41
SB-H15-1-0	0	SB-H15-1	H15	6/29/2018	8.26	3.06	84.6	0.17 U	0.35 J	12.5	7.1	17.5	43.1
SB-H15-1-0.5	0.5	SB-H15-1	H15	6/29/2018	3.19	3.7	91.6	0.17 U	0.61	13.3	6.66	25.1	54.8
SB-H15-1-2.5	2.5	SB-H15-1	H15	6/29/2018	0.37 U	5.67	122	0.17 U	0.44 J	16.2	8.62	19.7	21.8
SB-H15-1-5	5	SB-H15-1	H15	6/29/2018	0.37 U	2.25	134	0.17 U	0.58	17.9	10.6	17.2	5
SB-H18-1-0	0	SB-H18-1	H18	6/28/2018	5.26	3	135	0.17 U	0.21 U	28.4	11	91.9	**152**
SB-H18-1-0.5	0.5	SB-H18-1	H18	6/28/2018	3.1	3.77	119	0.17 U	0.21 U	26.2	11.6	43.3	40
SB-H18-1-2.5	2.5	SB-H18-1	H18	6/28/2018	2.42 J	1.92	98.4	0.17 U	0.21 U	12.8	9.06	11.5	2.55
SB-H18-1-5	5	SB-H18-1	H18	6/28/2018	2.75 J	0.67 J	102	0.17 U	0.21 U	13.3	9.44	10.7	0.91 B1,J
SB-H22-1-0	0	SB-H22-1	H22	8/22/2018	25.1	9.42	65.6	0.17 U	0.8	17.4	9.03	1620	***831***
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	18.5	5.18	49.2	0.17 U	0.5	11.2	6.62	358	***623***
SB-H22-1-2.5	2.5	SB-H22-1	H22	8/22/2018	13.5	9	65.7	0.17 U	0.84	24.4	9.36	609	***723***
SB-H22-1-5	5	SB-H22-1	H22	8/22/2018	***1030***	8.87	56.9	0.17 U	0.48 J	9.53	5.8	700	***5950***
SB-H23-1-0	0	SB-H23-1	H23	8/21/2018	0.73 J	7.27	86.8	0.17 U	0.7	24.6	8.22	88.8	**230**
SB-H23-1-0.5	0.5	SB-H23-1	H23	8/21/2018	0.37 U	5.57	85.2	0.17 U	0.67	20.4	7.38	71	**191**
SB-H23-1-2.5	2.5	SB-H23-1	H23	8/21/2018	0.8 J	5.05	56.6	0.17 U	0.44 J	14.8	6.02	80.1	**278**
SB-H23-1-5	5	SB-H23-1	H23	8/21/2018	**74.9**	6.88	57.8	0.17 U	0.58	16	6.49	389	***730***
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	3.28	3.67	59.3	0.17 U	0.51	34	6.33	323	***470***
SB-H24-1-0	0	SB-H24-1	H24	7/12/2018	4.89	0.95 J	102	0.17 U	0.47 J	62.3	7.02	46	71.8
SB-H24-1-0.5	0.5	SB-H24-1	H24	7/12/2018	2.89 J	8.29	144	0.17 U	1.36	43.2	13.9	1130	**193**
SB-H24-1-2.5	2.5	SB-H24-1	H24	7/12/2018	4.91	0.36 U	44.4	0.17 U	0.21 U	8.19	4.49	11.4	5.9
SB-H24-1-5	5	SB-H24-1	H24	7/12/2018	4.36	0.36 U	48.1	0.17 U	0.21 U	9.9	5.12	9.03	3.17
SB-H25-1-0	0	SB-H25-1	H25	7/3/2018	3.43	0.9 J	84.3	0.17 U	0.34 J	21.4	5.39	23.5	44.5
SB-H25-1-0.5	0.5	SB-H25-1	H25	7/3/2018	0.37 U	4.76	49.2	0.17 U	0.27 J	41.3	5	24.1	14.5
SB-H25-1-2.5	2.5	SB-H25-1	H25	7/3/2018	0.44 J	0.49 J	75.2	0.17 U	0.4 J	13.3	6.95	16	10.2
SB-H25-1-5	5	SB-H25-1	H25	7/3/2018	0.37 U	3.54	72	0.17 U	0.44 J	10.5	6.86	20.6	19.1
SB-H8-1-0	0	SB-H8-1	H8	6/20/2018	0.37 U	5	106	0.17 U	1.26	16.4	10.6	29.7	47.7
SB-H8-1-0.5	0.5	SB-H8-1	H8	6/20/2018	0.37 U	3	52.9	0.17 U	0.59	8.13	5.44	28.3	47
SB-H8-1-2.5	2.5	SB-H8-1	H8	6/20/2018	0.37 U	4.06	94.1	0.17 U	0.9	21.5	17.8	72.6	48.2
SB-H8-1-5	5	SB-H8-1	H8	6/20/2018	0.37 U	3.55	111	0.17 U	1.64	16.5	10	31.9	58.3
SB-I19-1-0	0	SB-I19-1	I19	6/28/2018	6.9	4.38	132	0.17 U	0.21 U	98.3	9.98	104	**143**
SB-I19-1-0.5	0.5	SB-I19-1	I19	6/28/2018	2.22 J	3.11	100	0.17 U	0.21 U	32	8.19	55.6	**90.7**
SB-I19-1-2.5	2.5	SB-I19-1	I19	6/28/2018	5.77	0.98 J	160	0.17 U	0.21 U	23.1	14	25.8	22.8
SB-I19-1-5	5	SB-I19-1	I19	6/28/2018	1.39 J	1.13	127	0.17 U	0.21 U	18.5	11.6	18.3	8.72

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7439-97-6	7439-98-7	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-62-2	7440-66-6
				Analytical Method	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Residential Screening Level [a] : mg/kg	1	390	820	390	390	0.78	390	23000
				Commercial Screening Level [b] : mg/kg	4.4	5800	11000	5800	5800	12	5800	350000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-H12-1-5	5	SB-H12-1	H12	6/29/2018	0.27	0.13 U	4.6	0.72 U	0.13 U	0.42 U	21.4	26.4
SB-H15-1-0	0	SB-H15-1	H15	6/29/2018	0.05 J	0.13 U	13.4	4.9	0.13 U	0.42 U	30.1	53
SB-H15-1-0.5	0.5	SB-H15-1	H15	6/29/2018	0.05 J	0.13 U	13.8	0.72 U	0.13 U	0.42 U	29.4	70.4
SB-H15-1-2.5	2.5	SB-H15-1	H15	6/29/2018	0.03 J	1.41	12.4	0.72 U	0.13 U	0.42 U	30.2	51.3
SB-H15-1-5	5	SB-H15-1	H15	6/29/2018	0.02 U	1.08	13.1	0.72 U	0.13 U	0.42 U	41	45
SB-H18-1-0	0	SB-H18-1	H18	6/28/2018	0.07 J	0.3 B1,J	21.7	0.72 U	0.13 U	**3.94**	58.1	110
SB-H18-1-0.5	0.5	SB-H18-1	H18	6/28/2018	0.26	0.13 U	12.6	0.72 U	0.13 U	**2.66** J	58	73.8
SB-H18-1-2.5	2.5	SB-H18-1	H18	6/28/2018	0.02 U	0.13 U	8.34	0.72 U	0.13 U	**5.4**	37.6	47.8
SB-H18-1-5	5	SB-H18-1	H18	6/28/2018	0.02 U	0.13 U	8.38	0.8 J	0.13 U	**4.53**	36.2	47.6
SB-H22-1-0	0	SB-H22-1	H22	8/22/2018	0.87	1.95	156	0.72 U	0.49 J	0.42 U	162	115
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	**1.3**	0.95 B1,J	110	0.72 U	0.13 U	0.42 U	131	71.5
SB-H22-1-2.5	2.5	SB-H22-1	H22	8/22/2018	0.12 J	0.85 B1,J	117	0.72 U	0.13 U	0.42 U	118	96.1
SB-H22-1-5	5	SB-H22-1	H22	8/22/2018	0.1 J	0.95 B1,J	74	0.72 U	0.37 J	0.42 U	90.9	143
SB-H23-1-0	0	SB-H23-1	H23	8/21/2018	0.09 J	0.78 J	27.7	0.72 U	0.13 U	0.42 U	50.5	156
SB-H23-1-0.5	0.5	SB-H23-1	H23	8/21/2018	0.1 J	0.29 J	21.6	0.72 U	0.14 J	0.42 U	43.4	148
SB-H23-1-2.5	2.5	SB-H23-1	H23	8/21/2018	0.07 J	1.1	29.9	0.72 U	0.13 U	0.42 U	67.8	52.8
SB-H23-1-5	5	SB-H23-1	H23	8/21/2018	0.13 J	1.19	74.4	0.72 U	0.13 U	0.42 U	89	92.9
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	0.38	0.33 B1,J	84	4.61	0.13 U	0.42 U	113	100
SB-H24-1-0	0	SB-H24-1	H24	7/12/2018	0.04 J	2.34	20.2	0.72 U	0.13 U	**0.93** J	27.9	61
SB-H24-1-0.5	0.5	SB-H24-1	H24	7/12/2018	0.08 J	5.23	24.2	0.72 U	0.13 U	0.42 U	49.2	116
SB-H24-1-2.5	2.5	SB-H24-1	H24	7/12/2018	0.02 U	2.04	3.88	0.72 U	0.13 U	0.42 U	17.4	41.3
SB-H24-1-5	5	SB-H24-1	H24	7/12/2018	0.03 J	0.69 J	5.61	0.72 U	0.13 U	0.42 U	21.9	40
SB-H25-1-0	0	SB-H25-1	H25	7/3/2018	0.03 J	0.13 U	6.84	4.97	0.13 U	0.42 U	23.1	52.4
SB-H25-1-0.5	0.5	SB-H25-1	H25	7/3/2018	0.03 J	0.13 U	6.18	1.37 B1,J	0.13 U	0.42 U	22.3	25.8
SB-H25-1-2.5	2.5	SB-H25-1	H25	7/3/2018	0.03 J	0.13 U	8.28	3.25	0.13 U	0.42 U	26.3	31.3
SB-H25-1-5	5	SB-H25-1	H25	7/3/2018	0.04 J	0.19 B1,J	7.48	2.39 B1,J	0.13 U	0.42 U	27.3	32.4
SB-H8-1-0	0	SB-H8-1	H8	6/20/2018	0.04 J	0.42 J	11.2	0.72 U	0.13 U	0.42 U	33.6	428
SB-H8-1-0.5	0.5	SB-H8-1	H8	6/20/2018	0.02 U	0.64 J	7.15	0.72 U	0.13 U	0.42 U	12.5	128
SB-H8-1-2.5	2.5	SB-H8-1	H8	6/20/2018	0.05 J	0.38 J	10.4	1.54 B1,J	0.13 U	0.42 U	23.9	136
SB-H8-1-5	5	SB-H8-1	H8	6/20/2018	0.04 J	0.13 U	12.6	0.72 U	0.13 U	0.42 U	34.9	621
SB-I19-1-0	0	SB-I19-1	I19	6/28/2018	0.07 J	0.13 U	15	5.67	0.13 U	**2.56** J	111	103
SB-I19-1-0.5	0.5	SB-I19-1	I19	6/28/2018	0.06 J	0.67 B1,J	14.9	3.61	0.13 U	**1.94** J	38	92.5
SB-I19-1-2.5	2.5	SB-I19-1	I19	6/28/2018	0.04 J	0.13 U	15	0.72 U	0.13 U	**6.91**	54.4	87.8
SB-I19-1-5	5	SB-I19-1	I19	6/28/2018	0.05 J	0.4 B1,J	12.2	0.72 U	0.14 J	**4.52**	46.6	65.1

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Antimony	Arsenic [c]	Barium	Beryllium	Cadmium	Chromium [d]	Cobalt	Copper	Lead
				Residential Screening Level [a] : mg/kg	31	12	15000	16	71	120000	23	3100	80
				Commercial Screening Level [b] : mg/kg	470	12	220000	230	980	1800000	350	47000	320
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-I21-1-0	0	SB-I21-1	I21	8/21/2018	0.37 U	3.65	59.5	0.17 U	0.53	12.6	6.42	12.2	33.9
SB-I21-1-0.5	0.5	SB-I21-1	I21	8/21/2018	0.37 U	2.62	44.8	0.17 U	0.23 J	8.39	4.53	7.65	27.4
SB-I21-1-2.5	2.5	SB-I21-1	I21	8/21/2018	3.4	8.09	113	0.17 U	0.81	22.3	10.7	415	***767***
SB-I21-1-5	5	SB-I21-1	I21	8/21/2018	**37.4**	3.71	46.8	0.17 U	0.56	81.3	6.6	410	***479***
SB-I21-1-10	10	SB-I21-1	I21	8/21/2018	0.37 U	0.96 B1,J	41.1	0.17 U	0.23 J	7.09	4.62	5.25	2.97

Table 2

Summary of Soil Results - Metals
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	7439-97-6	7439-98-7	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-62-2	7440-66-6
				Analytical Method	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				Residential Screening Level [(a)] : mg/kg	1	390	820	390	390	0.78	390	23000
				Commercial Screening Level [(b)] : mg/kg	4.4	5800	11000	5800	5800	12	5800	350000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-I21-1-0	0	SB-I21-1	I21	8/21/2018	0.02 U	0.8 J	7.62	0.72 U	0.13 U	0.42 U	32.4	50
SB-I21-1-0.5	0.5	SB-I21-1	I21	8/21/2018	0.02 U	0.27 J	4.62	0.72 U	0.13 U	0.42 U	21.2	34.7
SB-I21-1-2.5	2.5	SB-I21-1	I21	8/21/2018	0.48	1.3	94.7	0.72 U	0.13 U	0.42 U	105	90.1
SB-I21-1-5	5	SB-I21-1	I21	8/21/2018	0.04 J	0.71 J	101	0.72 U	0.13 U	0.42 U	110	1160
SB-I21-1-10	10	SB-I21-1	I21	8/21/2018	0.04 B1,J	0.13 U	3.66	0.72 U	0.13 U	0.42 U	23.9	23.1

Notes:

EPA = U.S. Environmental Protection Agency

DTSC = Department of Toxic Substances Control

Data presented herein is a summary of all metals analyzed by EPA Methods 6010B and 7471A.

Soil screening levels are derived from the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 (April 2019 update, June 2020 revision), and the EPA Regional Screening Level (RSL) THQ = 1.0 (May 2020).

[(a)] The residential screening level is the most stringent between the EPA RSL for residential soil and the DTSC HERO Note 3 for residential soil.

[(b)] The commercial screening level is the most stringent between the EPA RSL for composite worker soil and the DTSC HERO Note 3 for commercial/industrial soil.

[(c)] An arsenic screening level of 12 mg/kg is used instead of the RSL or HERO values. The 12 mg/kg screening level represents the upper bound of background arsenic data as noted in DTSC's comment letter dated February 21, 2019.

[(d)] Chromium data compared to EPA RSL for Chromium(III).

mg/kg = milligram per kilogram

ft bgs = feet below ground surface

U = not detected above the laboratory method detection limit (MDL).

J = Result is an estimate.

B1 = analyte was present in a sample and associated method blank greater than MDL and less than reporting detection limit.

BOLD Indicates the non-detect value exceeds one or both of the compound-specific screening levels.

BOLD Indicates the reported concentration exceeds the compound-specific residential screening level.

BOLD Indicates the reported concentration exceeds the compound specific commercial screening level.

Table 3

Summary of Soil Results - TCLP and STLC WET Results
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

					TCLP		STLC								
				CAS Number	7440-47-3	7439-92-1	7440-36-0	7440-43-9	7440-47-3	7440-50-8	7439-92-1	7440-02-0	7782-49-2	7440-62-2	7440-66-6
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Chromium	Lead	Antimony	Cadmium	Chromium	Copper	Lead	Nickel	Selenium	Vanadium	Zinc
				Threshold Limit [(a)] : mg/L	5.0	5.0	15	1.0	5.0	25	5.0	20	1.0	24	250
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
DB-C4-1-0	0	DB-C4-1	C4	7/12/2018	NA	0.09	NA	NA	NA	NA	**9.36**	NA	NA	NA	NA
DB-C4-1-0.5	0.5	DB-C4-1	C4	7/12/2018	NA	**9.9**	NA	NA	NA	NA	**171**	NA	NA	NA	NA
DB-C4-1-2.5	2.5	DB-C4-1	C4	7/12/2018	NA	**7.19**	NA	NA	NA	NA	**49.3**	NA	NA	NA	NA
DB-C4-1-5	5	DB-C4-1	C4	7/12/2018	NA	**12.3**	NA	NA	1.012	NA	**99**	NA	NA	NA	NA
DB-D12-1-0	0	DB-D12-1	D12	7/10/2018	NA	0.226	NA	NA	0.965	NA	**31.7**	NA	NA	NA	NA
DB-D12-1-0.5	0.5	DB-D12-1	D12	7/10/2018	NA	0.21	NA	NA	NA	NA	**17.4**	NA	NA	NA	NA
DB-D12-1-2.5	2.5	DB-D12-1	D12	7/10/2018	NA	0.062	NA	NA	NA	NA	**5.95**	NA	NA	NA	NA
DB-D26-1-0.5	0.5	DB-D26-1	D26	7/5/2018	NA	NA	NA	NA	NA	NA	0.781	NA	NA	NA	NA
DB-D7-1-0	0	DB-D7-1	D7	7/17/2018	NA	0.527	NA	NA	NA	NA	**8.62**	NA	NA	NA	NA
DB-D7-1-0.5	0.5	DB-D7-1	D7	7/17/2018	0.007 J	3.43	NA	NA	1.134	NA	**116**	NA	NA	NA	NA
DB-D7-1-2.5	2.5	DB-D7-1	D7	7/17/2018	NA	4.35	NA	NA	1.096	NA	**92.7**	NA	NA	NA	NA
DB-D7-1-5	5	DB-D7-1	D7	7/17/2018	NA	0.079	NA	0.204	0.883	NA	**15.7**	NA	NA	NA	154
DB-E6-1-0	0	DB-E6-1	E6	7/17/2018	NA	0.736	NA	NA	NA	NA	**14.8**	NA	NA	NA	NA
DB-E6-1-2.5	2.5	DB-E6-1	E6	7/17/2018	NA	**5.47**	NA	NA	NA	NA	**12.4**	NA	NA	NA	NA
DB-E6-1-5	5	DB-E6-1	E6	7/17/2018	NA	NA	NA	NA	NA	NA	3.61	NA	NA	NA	NA
DB-F26-1-0	0	DB-F26-1	F26	7/6/2018	0.002 U	0.025 J	NA	NA	2.04	1.296	1.481	NA	**1.025**	NA	NA
DB-F26-1-0.5	0.5	DB-F26-1	F26	7/6/2018	NA	0.065	NA	NA	1.097	0.823	3.44	NA	NA	NA	NA
DB-F26-1-2.5	2.5	DB-F26-1	F26	7/6/2018	NA	NA	NA	NA	NA	NA	0.374	NA	NA	NA	NA
DB-F4-1-0	0	DB-F4-1	F4	6/26/2018	0.002 U	NA	NA	NA	2.74	NA	NA	NA	NA	NA	NA
DB-F4-1-0.5	0.5	DB-F4-1	F4	6/26/2018	NA	NA	NA	NA	0.716	NA	NA	NA	NA	NA	NA
DB-F4-1-2.5	2.5	DB-F4-1	F4	6/26/2018	NA	**6.51**	NA	NA	1.963	NA	**125**	NA	NA	NA	NA
DB-F4-1-5	5	DB-F4-1	F4	6/26/2018	NA	0.618	NA	NA	NA	NA	**8.24**	NA	NA	NA	NA
DB-F8-1-0	0	DB-F8-1	F8	7/18/2018	NA	0.087	NA	NA	NA	NA	**23.6**	NA	NA	NA	NA
DB-F8-1-0.5	0.5	DB-F8-1	F8	7/18/2018	NA	0.503	NA	NA	NA	NA	**17.9**	NA	NA	NA	NA
DB-F8-1-2.5	2.5	DB-F8-1	F8	7/18/2018	0.002 U	1.291	NA	NA	1.366	NA	**57.4**	NA	NA	NA	NA
DB-G11-1-0	0	DB-G11-1	G11	7/19/2018	NA	0.25	NA	NA	NA	NA	**8.61**	NA	NA	NA	NA
DB-G11-1-0.5	0.5	DB-G11-1	G11	7/19/2018	NA	NA	NA	NA	NA	NA	4.37	NA	NA	NA	NA
DB-G11-1-2.5	2.5	DB-G11-1	G11	7/19/2018	0.005 J	**5.02**	NA	NA	0.617	9.95	**117**	NA	NA	NA	NA
DB-G15-1-0	0	DB-G15-1	G15	7/13/2018	NA	0.185	NA	NA	1.33	NA	**7.99**	NA	NA	NA	NA
DB-G15-1-0.5	0.5	DB-G15-1	G15	7/13/2018	NA	NA	NA	NA	NA	NA	**6.35**	NA	NA	NA	NA
DB-G18-1-0	0	DB-G18-1	G18	7/11/2018	NA	NA	NA	NA	NA	NA	NA	NA	0.12 U	NA	NA
DB-G18-1-2.5	2.5	DB-G18-1	G18	7/11/2018	NA	NA	NA	NA	NA	NA	NA	NA	0.12 U	NA	NA
DB-G25-1-0	0	DB-G25-1	G25	7/3/2018	NA	0.092	NA	NA	NA	NA	**5.79**	NA	NA	NA	NA
DB-G25-1-5	5	DB-G25-1	G25	7/3/2018	NA	NA	NA	NA	3.07	NA	**6.07**	NA	NA	NA	NA
DB-G27-1-0	0	SB-G27-1	G27	7/9/2018	NA	0.178	NA	NA	NA	NA	**31.6**	NA	NA	NA	NA
DB-G27-1-0.5	0.5	SB-G27-1	G27	7/9/2018	NA	0.014 J	NA	NA	NA	NA	1.505	NA	NA	NA	NA
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	NA	NA	NA	NA	NA	NA	**19.4**	NA	NA	NA	NA
DB-G27-1-5	5	SB-G27-1	G27	7/9/2018	NA	0.342	NA	NA	NA	**42.9**	**35.4**	NA	NA	NA	NA
DB-G28-1-0	0	DB-G28-1	G28	7/9/2018	NA	0.062	NA	NA	NA	NA	**6.63**	NA	NA	NA	NA
DB-G28-1-0.5	0.5	DB-G28-1	G28	7/9/2018	NA	NA	NA	NA	NA	NA	**7.24**	NA	0.12 U	NA	NA
DB-G28-1-10	10	DB-G28-1	G28	7/9/2018	NA	NA	NA	NA	NA	NA	3.6	NA	NA	NA	NA

Table 3

Summary of Soil Results - TCLP and STLC WET Results
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

					TCLP		STLC								
				CAS Number	7440-47-3	7439-92-1	7440-36-0	7440-43-9	7440-47-3	7440-50-8	7439-92-1	7440-02-0	7782-49-2	7440-62-2	7440-66-6
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Chromium	Lead	Antimony	Cadmium	Chromium	Copper	Lead	Nickel	Selenium	Vanadium	Zinc
				Threshold Limit [(a)] : mg/L	5.0	5.0	15	1.0	5.0	25	5.0	20	1.0	24	250
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
DB-G28-1-2.5	2.5	DB-G28-1	G28	7/9/2018	NA	0.27	NA	NA	NA	NA	**8.87**	1.724	NA	5.49	NA
DB-G28-1-5	5	DB-G28-1	G28	7/9/2018	NA	NA	NA	NA	NA	NA	NA	NA	0.12 U	10.2	NA
SB-C17-1-0	0	SB-C17-1	C17	6/25/2018	NA	0.181	NA	NA	NA	NA	**6.62**	NA	NA	NA	NA
SB-C17-1-0.5	0.5	SB-C17-1	C17	6/25/2018	NA	0.048 J	NA	NA	NA	NA	0.77	NA	NA	NA	NA
SB-C17-1-5	5	SB-C17-1	C17	6/25/2018	NA	NA	NA	NA	NA	NA	0.594	NA	NA	NA	NA
SB-C29-1-0	0	SB-C29-1	C29	7/19/2018	NA	1.526	NA	NA	NA	NA	**31.1**	NA	NA	NA	NA
SB-C29-1-0.5	0.5	SB-C29-1	C29	7/19/2018	NA	0.959	NA	NA	NA	NA	**29**	NA	NA	NA	NA
SB-C29-1-2.5	2.5	SB-C29-1	C29	7/19/2018	NA	NA	NA	NA	NA	NA	2.1	NA	NA	NA	NA
SB-D12-1-0	0	SB-D12-1	D12	7/10/2018	NA	1.38	NA	NA	NA	NA	**47.9**	NA	NA	NA	NA
SB-D12-1-0.5	0.5	SB-D12-1	D12	7/10/2018	NA	0.036 J	NA	NA	NA	NA	0.759	NA	NA	NA	NA
SB-D22-1-0	0	SB-D22-1	D22	6/25/2018	NA	NA	NA	NA	NA	NA	4.84	NA	NA	NA	NA
SB-D24-1-0.5	0.5	SB-D24-1	D24	7/2/2018	NA	0.054	NA	NA	NA	7.05	**6.25**	NA	NA	NA	NA
SB-D29-1-0	0	SB-D29-1	D29	7/13/2018	NA	NA	NA	NA	NA	NA	4.63	NA	NA	NA	NA
SB-D29-1-0.5	0.5	SB-D29-1	D29	7/13/2018	NA	0.168	NA	NA	NA	NA	**7.56**	NA	NA	NA	NA
SB-D29-2-0	0	SB-D29-2	D29	7/19/2018	NA	NA	NA	NA	NA	NA	2.17	NA	NA	NA	NA
SB-D29-2-0.5	0.5	SB-D29-2	D29	7/19/2018	NA	0.037 J	NA	NA	NA	NA	0.649	NA	NA	NA	NA
SB-D4-1-0	0	SB-D4-1	D4	6/18/2018	0.002 U	NA	NA	NA	1.456	NA	NA	NA	NA	NA	NA
SB-D4-1-2.5	2.5	SB-D4-1	D4	6/18/2018	NA	0.225	NA	NA	NA	NA	**6.64**	NA	NA	NA	NA
SB-D4-1-5	5	SB-D4-1	D4	6/18/2018	NA	0.357	NA	NA	NA	NA	**5.31**	NA	NA	NA	NA
SB-D4-1-7.5	7.5	SB-D4-1	D4	6/18/2018	NA	1.756	NA	0.03 U	1.206	NA	**36.5**	NA	NA	NA	**507**
SB-D5-1-0	0	SB-D5-1	D5	6/27/2018	NA	0.055	NA	NA	NA	NA	**12.1**	NA	NA	NA	NA
SB-D5-1-0.5	0.5	SB-D5-1	D5	6/27/2018	NA	0.047 J	NA	NA	NA	NA	**9.66**	NA	NA	NA	NA
SB-D5-1-2.5	2.5	SB-D5-1	D5	6/27/2018	0.004 J	**6**	NA	NA	1.318	**32.5**	**131**	NA	NA	NA	73.6
SB-D5-1-5	5	SB-D5-1	D5	6/27/2018	0.002 U	**22.1**	NA	NA	1.933	NA	**378**	NA	NA	NA	120
SB-D6-1-0	0	SB-D6-1	D6	6/29/2018	0.01 J	1.145	NA	NA	1.047	6.3	**77.6**	NA	NA	NA	NA
SB-D6-1-0.5	0.5	SB-D6-1	D6	6/29/2018	NA	1.521	NA	NA	0.817	NA	**65.6**	NA	NA	NA	NA
SB-D6-1-2.5	2.5	SB-D6-1	D6	6/29/2018	NA	**5.86**	NA	NA	0.453	NA	**123**	NA	NA	NA	NA
SB-D6-1-5	5	SB-D6-1	D6	6/29/2018	NA	0.936	NA	NA	NA	NA	**17.8**	NA	NA	NA	NA
SB-D8-1-0	0	SB-D8-1	D8	6/21/2018	NA	1.177	3.52	NA	NA	8.99	**154**	NA	NA	NA	NA
SB-D8-1-0.5	0.5	SB-D8-1	D8	6/21/2018	NA	0.047 B1,J	NA	NA	NA	NA	**6.94**	NA	NA	NA	NA
SB-D8-1-2.5	2.5	SB-D8-1	D8	6/21/2018	NA	0.059	NA	NA	NA	NA	4.72	NA	NA	NA	NA
SB-E11-1-0	0	SB-E11-1	E11	7/10/2018	NA	0.116	NA	NA	NA	NA	**15.8**	NA	NA	NA	NA
SB-E11-1-0.5	0.5	SB-E11-1	E11	7/10/2018	NA	0.649	NA	NA	0.576	NA	**49.5**	NA	NA	NA	NA
SB-E11-1-2.5	2.5	SB-E11-1	E11	7/10/2018	NA	1.669	NA	NA	1.543	NA	**62.7**	NA	NA	NA	NA
SB-E11-1-5	5	SB-E11-1	E11	7/10/2018	NA	2.44	NA	NA	NA	NA	**36.4**	NA	NA	NA	NA
SB-E13-1-0	0	SB-E13-1	E13	6/22/2018	NA	0.256	NA	NA	0.412	NA	**8.79**	NA	0.12 U	NA	NA
SB-E13-1-0.5	0.5	SB-E13-1	E13	6/22/2018	NA	0.298	NA	NA	NA	NA	**15.9**	NA	NA	NA	NA
SB-E13-1-2.5	2.5	SB-E13-1	E13	6/22/2018	NA	NA	NA	NA	NA	NA	4.01	NA	NA	NA	NA
SB-E17-1-0	0	SB-E17-1	E17	6/27/2018	NA	0.607	NA	NA	NA	NA	**15**	NA	NA	NA	NA
SB-E17-1-0.5	0.5	SB-E17-1	E17	6/27/2018	NA	0.317	NA	NA	NA	NA	**10.2** B	NA	NA	NA	NA
SB-E19-1-0	0	SB-E19-1	E19	7/11/2018	NA	0.024 J	NA	NA	NA	NA	**11.1**	NA	NA	NA	NA

Table 3

Summary of Soil Results - TCLP and STLC WET Results
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

					TCLP		STLC								
				CAS Number	7440-47-3	7439-92-1	7440-36-0	7440-43-9	7440-47-3	7440-50-8	7439-92-1	7440-02-0	7782-49-2	7440-62-2	7440-66-6
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Chromium	Lead	Antimony	Cadmium	Chromium	Copper	Lead	Nickel	Selenium	Vanadium	Zinc
				Threshold Limit [(a)] : mg/L	5.0	5.0	15	1.0	5.0	25	5.0	20	1.0	24	250
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SB-E26-1-0	0	SB-E26-1	E26	7/5/2018	NA	NA	NA	NA	NA	NA	2.36	NA	NA	NA	NA
SB-E4-1-0	0	SB-E4-1	E4	6/18/2018	NA	0.089	NA	NA	NA	NA	**5.42**	NA	NA	NA	NA
SB-E4-1-0.5	0.5	SB-E4-1	E4	6/18/2018	NA	0.82	NA	NA	NA	NA	**23.2**	NA	NA	NA	NA
SB-E4-1-2.5	2.5	SB-E4-1	E4	6/18/2018	NA	0.123	NA	NA	NA	NA	**14.3**	NA	NA	NA	NA
SB-E4-1-7.5	7.5	SB-E4-1	E4	6/18/2018	NA	0.071	NA	NA	NA	NA	**6.75**	NA	NA	NA	NA
SB-E7-1-0	0	SB-E7-1	E7	6/27/2018	NA	2.24	NA	NA	NA	NA	**178**	NA	NA	NA	NA
SB-E7-1-0.5	0.5	SB-E7-1	E7	6/27/2018	NA	1.43	NA	NA	NA	NA	**17.3**	NA	NA	NA	NA
SB-F10-1-0	0	SB-F10-1	F10	6/21/2018	NA	0.289	NA	NA	NA	NA	**23**	NA	NA	NA	NA
SB-F10-1-0.5	0.5	SB-F10-1	F10	6/21/2018	NA	3.55	NA	NA	1.441	NA	**71.9**	NA	NA	NA	NA
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	0.003 J	**19.6**	NA	NA	2.38	0.329	**301**	NA	NA	NA	103
SB-F11-1-0	0	SB-F11-1	F11	6/21/2018	NA	0.123	NA	NA	NA	NA	**5.29**	NA	NA	NA	NA
SB-F11-1-0.5	0.5	SB-F11-1	F11	6/21/2018	NA	1.365	NA	NA	NA	NA	**14.9**	NA	NA	NA	NA
SB-F11-1-2.5	2.5	SB-F11-1	F11	6/21/2018	0.056	**11.3**	2.56	0.675	1.938	**172**	**302**	NA	NA	NA	**365**
SB-F11-1-5	5	SB-F11-1	F11	6/21/2018	0.002 U	**13.1**	14.9	**1.012**	1.273	**66.7**	**609**	NA	NA	NA	**1340**
SB-F14-1-0	0	SB-F14-1	F14	6/22/2018	NA	NA	NA	NA	NA	NA	2.69	NA	NA	NA	NA
SB-F24-1-0	0	SB-F24-1	F24	7/9/2018	NA	0.124	NA	NA	0.707	NA	**16.6**	NA	0.47	NA	NA
SB-F28-1-0	0	SB-F28-1	F28	7/2/2018	NA	0.051	NA	NA	NA	NA	3.58	NA	NA	NA	NA
SB-F28-1-0.5	0.5	SB-F28-1	F28	7/2/2018	NA	NA	NA	NA	NA	NA	3.2	NA	NA	NA	NA
SB-F28-1-2.5	2.5	SB-F28-1	F28	7/2/2018	NA	0.045 J	NA	NA	NA	NA	2.21	NA	NA	NA	NA
SB-F28-1-5	5	SB-F28-1	F28	7/2/2018	NA	NA	NA	NA	NA	NA	3.69	NA	NA	NA	NA
SB-F5-1-0	0	SB-F5-1	F5	6/19/2018	NA	0.073	NA	NA	0.721	NA	4.76	NA	NA	NA	NA
SB-F6-1-0	0	SB-F6-1	F6	6/19/2018	NA	0.119	NA	NA	1.038	NA	**8.97**	NA	NA	NA	NA
SB-F6-1-0.5	0.5	SB-F6-1	F6	6/19/2018	NA	NA	NA	NA	NA	NA	**14.7**	NA	NA	NA	NA
SB-G19-1-0.5	0.5	SB-G19-1	G19	7/11/2018	NA	NA	NA	NA	NA	NA	NA	NA	0.12 U	NA	NA
SB-G24-1-0.5	0.5	SB-G24-1	G24	7/2/2018	0.004 J	NA	NA	NA	0.742	NA	NA	NA	NA	NA	NA
SB-G24-1-5	5	SB-G24-1	G24	7/2/2018	NA	**5.16**	NA	NA	NA	0.03 U	**45.9**	NA	NA	NA	NA
SB-G4-1-2.5	2.5	SB-G4-1	G4	6/29/2018	NA	NA	NA	NA	NA	NA	1.634	NA	NA	NA	NA
SB-G4-1-5	5	SB-G4-1	G4	6/29/2018	NA	0.105	NA	NA	NA	NA	4.59	NA	NA	NA	NA
SB-G8-1-2.5	2.5	SB-G8-1	G8	6/20/2018	NA	NA	NA	NA	NA	NA	4.4	NA	NA	NA	NA
SB-G8-1-5	5	SB-G8-1	G8	6/20/2018	NA	0.16	NA	NA	NA	NA	**6.18**	NA	NA	NA	NA
SB-G9-1-0	0	SB-G9-1	G9	6/20/2018	NA	0.082	NA	NA	NA	NA	**5.41**	NA	NA	NA	NA
SB-G9-1-0.5	0.5	SB-G9-1	G9	6/20/2018	NA	NA	NA	NA	NA	NA	4.54	NA	NA	NA	NA
SB-H10-1-0	0	SB-H10-1	H10	6/20/2018	NA	0.09	NA	NA	NA	NA	**10.1**	NA	NA	NA	NA
SB-H10-1-0.5	0.5	SB-H10-1	H10	6/20/2018	NA	0.075	NA	NA	NA	NA	**16.3**	NA	NA	NA	NA
SB-H10-1-2.5	2.5	SB-H10-1	H10	6/20/2018	NA	0.076	NA	NA	NA	NA	**13.1**	NA	NA	NA	NA
SB-H12-1-0	0	SB-H12-1	H12	6/29/2018	NA	NA	NA	NA	0.292 J	NA	**5.32**	NA	NA	NA	NA
SB-H12-1-0.5	0.5	SB-H12-1	H12	6/29/2018	NA	0.074	NA	NA	NA	NA	**10.5**	NA	NA	NA	NA
SB-H15-1-0.5	0.5	SB-H15-1	H15	6/29/2018	NA	NA	NA	NA	NA	NA	2.85	NA	NA	NA	NA
SB-H18-1-0	0	SB-H18-1	H18	6/28/2018	NA	**11.2**	NA	NA	NA	NA	**6.26**	NA	NA	NA	NA
SB-H23-1-0	0	SB-H23-1	H23	8/21/2018	NA	0.924	NA	NA	NA	NA	**17.4**	NA	NA	NA	NA
SB-H23-1-0.5	0.5	SB-H23-1	H23	8/21/2018	NA	0.746	NA	NA	NA	NA	**13.5**	NA	NA	NA	NA

Table 3

Summary of Soil Results - TCLP and STLC WET Results
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

					TCLP		STLC								
				CAS Number	7440-47-3	7439-92-1	7440-36-0	7440-43-9	7440-47-3	7440-50-8	7439-92-1	7440-02-0	7782-49-2	7440-62-2	7440-66-6
				Analytical Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
				Analyte	Chromium	Lead	Antimony	Cadmium	Chromium	Copper	Lead	Nickel	Selenium	Vanadium	Zinc
				Threshold Limit [(a)] : mg/L	5.0	5.0	15	1.0	5.0	25	5.0	20	1.0	24	250
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SB-H23-1-2.5	2.5	SB-H23-1	H23	8/21/2018	NA	4.55	NA	NA	NA	NA	**41.7**	NA	NA	NA	NA
SB-H23-1-5	5	SB-H23-1	H23	8/21/2018	NA	4.56	NA	NA	NA	4.29	**51.4**	NA	NA	NA	NA
SB-H24-1-0	0	SB-H24-1	H24	7/12/2018	NA	NA	NA	NA	0.401	NA	**5.52**	NA	NA	NA	NA
SB-H24-1-0.5	0.5	SB-H24-1	H24	7/12/2018	NA	0.037 J	NA	NA	NA	1.939	4.2	NA	NA	NA	NA
SB-H8-1-5	5	SB-H8-1	H8	6/20/2018	NA	NA	NA	NA	NA	NA	2.98	NA	NA	NA	NA
SB-I19-1-0	0	SB-I19-1	I19	6/28/2018	NA	0.455	NA	NA	1.211	NA	**7.03**	NA	NA	NA	NA
SB-I19-1-0.5	0.5	SB-I19-1	I19	6/28/2018	NA	NA	NA	NA	NA	NA	4.89	NA	NA	NA	NA
SB-I21-1-2.5	2.5	SB-I21-1	I21	8/21/2018	NA	0.128	NA	NA	NA	0.602	**13.4**	NA	NA	NA	NA
SB-I21-1-5	5	SB-I21-1	I21	8/21/2018	NA	1.27	NA	NA	3.4	3.83	**34.8**	NA	NA	NA	NA

Notes:
TCLP = toxicity characteristic leaching procedure
STLC = soluble threshold limit concentration
EPA = U.S. Environmental Protection Agency
[(a)] The threshold limit is the maximum concentration of contaminants for the toxicity characteristic as specified in Code of Federal Regulations Title 40, Chapter 261 Section 24, Table 1 for TCLP analysis, or the STLC level as presented in California Code of Regulations Title 22, Chapter 11, Article 3.
NA = not analyzed
U = Analyte was not detected above method detection limit (MDL).
J = Reported value is estimated.
B = Analyte was present in an associated method blank.
B1 = Analyte was present in the sample and associated method blank greater than the method detection limit (MDL) but less than the reporting detection limit.
BOLD Indicates the reported concentration exceeds the compound-specific threshold limit.

Table 4

Soil Results Summary - Total Petroleum Hydrocarbons (TPH)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				Analytical Method	**EPA 8015M**	**EPA 8015M**	**EPA 8015M**
				Analyte Name	**TPH GRO (C8 to C10)**	**TPH DRO (C10 to C28)**	**TPH MO (C28 to C40)**
				Residential Screening Level [(a)] : mg/kg	**82**	**96**	**2400**
				Commercial Screening Level [(b)] : mg/kg	**420**	**440**	**18000**
Sample ID	**Depth (ft-bgs)**	**Location**	**Grid Cell**	**Sample Date**	**mg/kg**	**mg/kg**	**mg/kg**
DB-C4-1-0	0	DB-C4-1	C4	7/12/2018	10 U	23	43
DB-C4-1-0.5	0.5	DB-C4-1	C4	7/12/2018	**100** U	**220**	200 U
DB-C4-1-2.5	2.5	DB-C4-1	C4	7/12/2018	20 U	**140**	110
DB-C4-1-5	5	DB-C4-1	C4	7/12/2018	**100** U	***7100***	390
DB-C4-1-9	9	DB-C4-1	C4	7/12/2018	10 U	10 U	20 U
DB-C4-1-10	10	DB-C4-1	C4	7/12/2018	10 U	10 U	20 U
DB-C4-1-15	15	DB-C4-1	C4	7/12/2018	10 U	10 U	20 U
DB-C4-1-20	20	DB-C4-1	C4	7/12/2018	10 U	10 U	20 U
DB-C4-1-25	25	DB-C4-1	C4	7/12/2018	10 U	10 U	20 U
DB-C4-1-30	30	DB-C4-1	C4	7/12/2018	50 U	***1000***	100 U
DB-C4-1-35	35	DB-C4-1	C4	7/12/2018	**500** U	***15000***	1000 U
DB-C4-1-40	40	DB-C4-1	C4	7/12/2018	10 U	**190**	20 U
DB-C4-1-45	45	DB-C4-1	C4	7/12/2018	**200** U	***5400***	400 U
DB-C4-1-50	50	DB-C4-1	C4	7/12/2018	50 U	***1600***	100 U
DB-C4-1-55	55	DB-C4-1	C4	7/12/2018	**100** U	***3000***	200 U
DB-C4-1-60	60	DB-C4-1	C4	7/12/2018	**200** U	***6100***	400 U
DB-C4-1-65	65	DB-C4-1	C4	7/12/2018	10 U	**99**	20 U
DB-C4-1-70	70	DB-C4-1	C4	7/12/2018	10 U	19	20 U
DB-C4-1-75	75	DB-C4-1	C4	7/12/2018	10 U	10 U	20 U
DB-D12-1-0	0	DB-D12-1	D12	7/10/2018	**100** U	**250**	380
DB-D12-1-0.5	0.5	DB-D12-1	D12	7/10/2018	**100** U	**100** U	200 U
DB-D12-1-2.5	2.5	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-5	5	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-10	10	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-15	15	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-20	20	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-25	25	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-30	30	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-35	35	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-40	40	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-45	45	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-50	50	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-55	55	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-60	60	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-65	65	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-70	70	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D12-1-75	75	DB-D12-1	D12	7/10/2018	10 U	10 U	20 U
DB-D26-1-0	0	DB-D26-1	D26	7/5/2018	50 U	50 U	100 U
DB-D26-1-0.5	0.5	DB-D26-1	D26	7/5/2018	20 U	28	40 U
DB-D26-1-2.5	2.5	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-5	5	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-10	10	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-15	15	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-20	20	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-25	25	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-30	30	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-35	35	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-45	45	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-50	50	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-55	55	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-60	60	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-65	65	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-70	70	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D26-1-75	75	DB-D26-1	D26	7/5/2018	10 U	10 U	20 U
DB-D7-1-0	0	DB-D7-1	D7	7/17/2018	**200** U	***710***	740
DB-D7-1-0.5	0.5	DB-D7-1	D7	7/17/2018	**200** U	***660***	620
DB-D7-1-2.5	2.5	DB-D7-1	D7	7/17/2018	**100** U	***1400***	810
DB-D7-1-5	5	DB-D7-1	D7	7/17/2018	**200** U	***590***	890
DB-D7-1-10	10	DB-D7-1	D7	7/17/2018	10 U	18	20 U
DB-D7-1-15	15	DB-D7-1	D7	7/17/2018	10 U	10 U	20 U
DB-D7-1-20	20	DB-D7-1	D7	7/17/2018	10 U	10 U	20 U
DB-D7-1-25	25	DB-D7-1	D7	7/17/2018	10 U	10 U	20 U
DB-D7-1-30	30	DB-D7-1	D7	7/17/2018	10 U	**270**	20 U
DB-D7-1-33	33	DB-D7-1	D7	7/17/2018	**320** U	***5500***	640 U
DB-D7-1-35	35	DB-D7-1	D7	7/17/2018	**1000** U	**20000** S	2000 U
DB-D7-1-40	40	DB-D7-1	D7	7/17/2018	**100** U	**1700** S	200 U
DB-D7-1-45	45	DB-D7-1	D7	7/17/2018	10 U	**100**	20 U
DB-D7-1-50	50	DB-D7-1	D7	7/17/2018	10 U	78	20 U
DB-D7-1-55	55	DB-D7-1	D7	7/17/2018	10 U	10 U	20 U
DB-D7-1-60	60	DB-D7-1	D7	7/17/2018	10 U	40	20 U

Table 4

Soil Results Summary - Total Petroleum Hydrocarbons (TPH)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				Analytical Method	**EPA 8015M**	**EPA 8015M**	**EPA 8015M**
				Analyte Name	**TPH GRO (C8 to C10)**	**TPH DRO (C10 to C28)**	**TPH MO (C28 to C40)**
				Residential Screening Level [(a)] : mg/kg	**82**	**96**	**2400**
				Commercial Screening Level [(b)] : mg/kg	**420**	**440**	**18000**
Sample ID	**Depth (ft-bgs)**	**Location**	**Grid Cell**	**Sample Date**	**mg/kg**	**mg/kg**	**mg/kg**
DB-D7-1-65	65	DB-D7-1	D7	7/17/2018	10 U	10 U	20 U
DB-D7-1-70B	70	DB-D7-1	D7	7/17/2018	10 U	10 U	20 U
DB-D7-1-75	75	DB-D7-1	D7	7/17/2018	10 U	10 U	20 U
DB-E6-1-0	0	DB-E6-1	E6	7/17/2018	10 U	**120**	44
DB-E6-1-0.5	0.5	DB-E6-1	E6	7/17/2018	10 U	***720***	110
DB-E6-1-2	2	DB-E6-1	E6	7/17/2018	**250** U	***6100***	500 U
DB-E6-1-2.5	2.5	DB-E6-1	E6	7/17/2018	**100** U	***3300***	200 U
DB-E6-1-5	5	DB-E6-1	E6	7/17/2018	**200** U	***5900***	400 U
DB-E6-1-10	10	DB-E6-1	E6	7/17/2018	**100** U	***4000***	250
DB-E6-1-15	15	DB-E6-1	E6	7/17/2018	**100** U	***1600***	200 U
DB-E6-1-20	20	DB-E6-1	E6	7/17/2018	10 U	***660***	36
DB-E6-1-25	25	DB-E6-1	E6	7/17/2018	**2000** U	***2900***	**4000** U
DB-E6-1-30	30	DB-E6-1	E6	7/18/2018	10 U	10 U	20 U
DB-E6-1-35	35	DB-E6-1	E6	7/18/2018	**200** U	***5800***	400 U
DB-E6-1-40	40	DB-E6-1	E6	7/18/2018	10 U	30	20 U
DB-E6-1-45	45	DB-E6-1	E6	7/18/2018	10 U	10 U	20 U
DB-E6-1-50	50	DB-E6-1	E6	7/18/2018	10 U	10 U	20 U
DB-E6-1-55	55	DB-E6-1	E6	7/18/2018	10 U	10 U	20 U
DB-E6-1-60	60	DB-E6-1	E6	7/18/2018	10 U	10 U	20 U
DB-E6-1-65	65	DB-E6-1	E6	7/18/2018	10 U	10 U	20 U
DB-E6-1-70	70	DB-E6-1	E6	7/18/2018	10 U	10 U	20 U
DB-E6-1-75	75	DB-E6-1	E6	7/18/2018	10 U	10 U	20 U
DB-F26-1-0	0	DB-F26-1	F26	7/6/2018	**100** U	**310**	300
DB-F26-1-0.5	0.5	DB-F26-1	F26	7/6/2018	**200** U	**330**	550
DB-F26-1-2.5	2.5	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-5	5	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-15	15	DB-F26-1	F26	7/6/2018	50 U	**210**	220
DB-F26-1-20	20	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-25	25	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-30	30	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-35	35	DB-F26-1	F26	7/6/2018	10 U	11	20 U
DB-F26-1-40	40	DB-F26-1	F26	7/6/2018	10 U	19	20 U
DB-F26-1-45	45	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-50	50	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-55	55	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-60	60	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-65	65	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-70	70	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F26-1-75	75	DB-F26-1	F26	7/6/2018	10 U	10 U	20 U
DB-F4-1-0	0	DB-F4-1	F4	6/26/2018	10 U	**110**	230
DB-F4-1-0.5	0.5	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-2.5	2.5	DB-F4-1	F4	6/26/2018	50 U	**97**	120
DB-F4-1-5	5	DB-F4-1	F4	6/26/2018	10 U	22	20 U
DB-F4-1-10	10	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-15	15	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-20	20	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-25	25	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-30	30	DB-F4-1	F4	6/26/2018	10 U	**370**	20 U
DB-F4-1-35	35	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-40	40	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-45	45	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-50	50	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-55	55	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-60	60	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-65	65	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-70	70	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-75	75	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F4-1-80	80	DB-F4-1	F4	6/26/2018	10 U	10 U	20 U
DB-F8-1-0	0	DB-F8-1	F8	7/18/2018	**320** U	***18000***	**5700**
DB-F8-1-0.5	0.5	DB-F8-1	F8	7/18/2018	**320** U	***14000***	**4100**
DB-F8-1-2.5	2.5	DB-F8-1	F8	7/18/2018	50 U	***1600***	360
DB-F8-1-5.0	5	DB-F8-1	F8	7/18/2018	10 U	14	20 U
DB-F8-1-10	10	DB-F8-1	F8	7/18/2018	10 U	21	20 U
DB-F8-1-15	15	DB-F8-1	F8	7/18/2018	10 U	28	20 U
DB-F8-1-20	20	DB-F8-1	F8	7/18/2018	10 U	10 U	20 U
DB-F8-1-25	25	DB-F8-1	F8	7/18/2018	10 U	29	20 U
DB-F8-1-30	30	DB-F8-1	F8	7/18/2018	10 U	10 U	20 U
DB-F8-1-33	33	DB-F8-1	F8	7/18/2018	10 U	10 U	20 U
DB-F8-1-35	35	DB-F8-1	F8	7/18/2018	50 U	***1000***	120
DB-F8-1-40	40	DB-F8-1	F8	7/18/2018	10 U	**340**	50

Table 4

Soil Results Summary - Total Petroleum Hydrocarbons (TPH)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				Analytical Method	EPA 8015M	EPA 8015M	EPA 8015M
				Analyte Name	TPH GRO (C8 to C10)	TPH DRO (C10 to C28)	TPH MO (C28 to C40)
				Residential Screening Level [(a)] : mg/kg	82	96	2400
				Commercial Screening Level [(b)] : mg/kg	420	440	18000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg
DB-F8-1-45	45	DB-F8-1	F8	7/18/2018	10 U	**120**	68
DB-F8-1-50	50	DB-F8-1	F8	7/18/2018	10 U	22	20 U
DB-F8-1-55	55	DB-F8-1	F8	7/18/2018	10 U	26	20 U
DB-F8-1-60	60	DB-F8-1	F8	7/18/2018	10 U	13	20 U
DB-F8-1-65	65	DB-F8-1	F8	7/18/2018	10 U	10 U	20 U
DB-F8-1-70	70	DB-F8-1	F8	7/18/2018	10 U	10 U	20 U
DB-F8-1-75	75	DB-F8-1	F8	7/18/2018	10 U	10 U	20 U
DB-G11-1-0	0	DB-G11-1	G11	7/19/2018	20 U	20 U	40 U
DB-G11-1-0.5	0.5	DB-G11-1	G11	7/19/2018	10 U	21	20 U
DB-G11-1-2.5	2.5	DB-G11-1	G11	7/19/2018	50 U	**350**	220
DB-G11-1-5	5	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-10	10	DB-G11-1	G11	7/19/2018	**200** U	***4600***	400 U
DB-G11-1-15	15	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-20	20	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-25	25	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-30	30	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-35	35	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-40	40	DB-G11-1	G11	7/19/2018	10 U	14	20 U
DB-G11-1-45	45	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-50	50	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-55	55	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-60	60	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-65	65	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G11-1-75	75	DB-G11-1	G11	7/19/2018	10 U	10 U	20 U
DB-G15-1-0	0	DB-G15-1	G15	7/13/2018	**200** U	**200** U	460
DB-G15-1-0.5	0.5	DB-G15-1	G15	7/13/2018	10 U	20	20 U
DB-G15-1-2.5	2.5	DB-G15-1	G15	7/13/2018	50 U	***990***	510
DB-G15-1-5	5	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-10	10	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-15	15	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-20	20	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-25	25	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-27.5	27.5	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-30	30	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-35	35	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-40	40	DB-G15-1	G15	7/13/2018	10 U	28	20 U
DB-G15-1-45	45	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-50	50	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-55	55	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-60	60	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-65	65	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-70	70	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G15-1-75	75	DB-G15-1	G15	7/13/2018	10 U	10 U	20 U
DB-G18-1-0	0	DB-G18-1	G18	7/11/2018	10 U	32	20 U
DB-G18-1-0.5	0.5	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-2.5	2.5	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-5	5	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-10	10	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-15	15	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-20	20	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-25	25	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-30	30	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-35	35	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-40	40	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-45	45	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-50	50	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-55	55	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-65	65	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G18-1-70	70	DB-G18-1	G18	7/11/2018	10 U	10 U	20 U
DB-G21-1-0	0	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-0.5	0.5	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-2.5	2.5	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-5	5	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-10	10	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-15	15	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-20	20	DB-G21-1	G21	8/22/2018	**500** U	***10000***	**4900**
DB-G21-1-25	25	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-30	30	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-40	40	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-45	45	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U

Table 4

Soil Results Summary - Total Petroleum Hydrocarbons (TPH)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				Analytical Method	EPA 8015M	EPA 8015M	EPA 8015M
				Analyte Name	TPH GRO (C8 to C10)	TPH DRO (C10 to C28)	TPH MO (C28 to C40)
				Residential Screening Level [(a)] : mg/kg	82	96	2400
				Commercial Screening Level [(b)] : mg/kg	420	440	18000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg
DB-G21-1-50	50	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-55	55	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G21-1-60	60	DB-G21-1	G21	8/22/2018	10 U	10 U	20 U
DB-G25-1-0	0	DB-G25-1	G25	7/3/2018	**200** U	***460***	970
DB-G25-1-0.5	0.5	DB-G25-1	G25	7/3/2018	**250** U	***1000***	900
DB-G25-1-2.5	2.5	DB-G25-1	G25	7/3/2018	**200** U	***4900***	660
DB-G25-1-5	5	DB-G25-1	G25	7/3/2018	**200** U	***4800***	400 U
DB-G25-1-9.3	9.3	DB-G25-1	G25	7/3/2018	10 U	***13000***	710
DB-G25-1-10	10	DB-G25-1	G25	7/3/2018	**100** U	***790***	200 U
DB-G25-1-15	15	DB-G25-1	G25	7/3/2018	10 U	26	20 U
DB-G25-1-20	20	DB-G25-1	G25	7/3/2018	10 U	61	20 U
DB-G25-1-25	25	DB-G25-1	G25	7/3/2018	10 U	10 U	20 U
DB-G25-1-30	30	DB-G25-1	G25	7/3/2018	10 U	90	20 U
DB-G25-1-35	35	DB-G25-1	G25	7/3/2018	10 U	90	20 U
DB-G25-1-40	40	DB-G25-1	G25	7/3/2018	10 U	10 U	20 U
DB-G25-1-45	45	DB-G25-1	G25	7/3/2018	10 U	12	20 U
DB-G25-1-50	50	DB-G25-1	G25	7/3/2018	10 U	10 U	20 U
DB-G25-1-55	55	DB-G25-1	G25	7/3/2018	10 U	10 U	20 U
DB-G25-1-60	60	DB-G25-1	G25	7/3/2018	10 U	10 U	20 U
DB-G25-1-65	65	DB-G25-1	G25	7/3/2018	10 U	10 U	20 U
DB-G25-1-70	70	DB-G25-1	G25	7/3/2018	10 U	10 U	20 U
DB-G25-1-75	75	DB-G25-1	G25	7/3/2018	10 U	10 U	20 U
DB-G25-1-80	80	DB-G25-1	G25	7/3/2018	10 U	10 U	20 U
DB-G28-1-0	0	DB-G28-1	G28	7/9/2018	50 U	**110**	100 U
DB-G28-1-0.5	0.5	DB-G28-1	G28	7/9/2018	20 U	**210**	80
DB-G28-1-2.5	2.5	DB-G28-1	G28	7/9/2018	**200** U	***470***	400 U
DB-G28-1-5	5	DB-G28-1	G28	7/9/2018	20 U	**120**	62
DB-G28-1-10	10	DB-G28-1	G28	7/9/2018	**250** U	***4300***	1700
SB-C15-1-0	0	SB-C15-1	C15	6/22/2018	50 U	50 U	120
SB-C15-1-0.5	0.5	SB-C15-1	C15	6/22/2018	50 U	50 U	100 U
SB-C15-1-2.5	2.5	SB-C15-1	C15	6/22/2018	50 U	50 U	120
SB-C15-1-5	5	SB-C15-1	C15	6/22/2018	10 U	**170**	53
SB-C15-1-10	10	SB-C15-1	C15	6/22/2018	10 U	20	20 U
SB-C15-1-15	15	SB-C15-1	C15	6/22/2018	10 U	10 U	20 U
SB-C15-1-20	20	SB-C15-1	C15	6/22/2018	10 U	10 U	20 U
SB-C15-1-30	30	SB-C15-1	C15	6/22/2018	10 U	10 U	20 U
SB-C17-1-0	0	SB-C17-1	C17	6/25/2018	**250** U	***590***	580
SB-C17-1-0.5	0.5	SB-C17-1	C17	6/25/2018	10 U	10 U	20 U
SB-C17-1-2.5	2.5	SB-C17-1	C17	6/25/2018	10 U	10 U	20 U
SB-C17-1-5	5	SB-C17-1	C17	6/25/2018	10 U	23	20 U
SB-C17-1-10	10	SB-C17-1	C17	6/25/2018	10 U	10 U	20 U
SB-C17-1-15	15	SB-C17-1	C17	6/25/2018	10 U	10 U	20 U
SB-C17-1-20	20	SB-C17-1	C17	6/25/2018	10 U	22	20 U
SB-C17-1-30	30	SB-C17-1	C17	6/25/2018	10 U	10 U	20 U
SB-C2-1-0	0	SB-C2-1	C2	8/23/2018	**100** U	**420**	250
SB-C2-1-0.5	0.5	SB-C2-1	C2	8/23/2018	**100** U	***450***	230
SB-C2-1-2.5	2.5	SB-C2-1	C2	8/23/2018	50 U	**310**	210
SB-C2-1-5	5	SB-C2-1	C2	8/23/2018	10 U	10 U	20 U
SB-C2-1-10	10	SB-C2-1	C2	8/23/2018	75	***14000***	85
SB-C2-1-15	15	SB-C2-1	C2	8/23/2018	32	***6300***	77
SB-C2-1-20	20	SB-C2-1	C2	8/23/2018	10 U	**100**	20 U
SB-C24-1-0	0	SB-C24-1	C24	7/2/2018	**250** U	**390**	650
SB-C24-1-0.5	0.5	SB-C24-1	C24	7/2/2018	50 U	***1600***	560
SB-C24-1-2.5	2.5	SB-C24-1	C24	7/2/2018	50 U	***3600***	780
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	**200** U	***5100***	1600
SB-C24-1-10	10	SB-C24-1	C24	7/2/2018	10 U	10 U	20 U
SB-C24-1-15	15	SB-C24-1	C24	7/2/2018	10 U	12	20 U
SB-C24-1-20	20	SB-C24-1	C24	7/2/2018	10 U	10 U	20 U
SB-C24-1-30	30	SB-C24-1	C24	7/2/2018	**200** U	***6000***	400 U
SB-C29-1-0	0	SB-C29-1	C29	7/19/2018	20 U	22	40 U
SB-C29-1-0.5	0.5	SB-C29-1	C29	7/19/2018	50 U	50 U	100 U
SB-C29-1-2.5	2.5	SB-C29-1	C29	7/19/2018	10 U	10 U	20 U
SB-C29-1-5	5	SB-C29-1	C29	7/19/2018	10 U	10 U	20 U
SB-C29-1-10	10	SB-C29-1	C29	7/19/2018	10 U	10 U	20 U
SB-C29-1-15	15	SB-C29-1	C29	7/19/2018	10 U	10 U	20 U
SB-C29-1-20	20	SB-C29-1	C29	7/19/2018	10 U	10 U	20 U
SB-C29-1-25	25	SB-C29-1	C29	7/19/2018	10 U	10 U	20 U
SB-D12-1-0	0	SB-D12-1	D12	7/10/2018	**250** U	**250** U	720
SB-D12-1-0.5	0.5	SB-D12-1	D12	7/10/2018	10 U	10 U	20 U
SB-D12-1-2.5	2.5	SB-D12-1	D12	7/10/2018	10 U	10 U	20 U

Table 4

Soil Results Summary - Total Petroleum Hydrocarbons (TPH)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				Analytical Method	EPA 8015M	EPA 8015M	EPA 8015M
				Analyte Name	TPH GRO (C8 to C10)	TPH DRO (C10 to C28)	TPH MO (C28 to C40)
				Residential Screening Level [(a)] : mg/kg	82	96	2400
				Commercial Screening Level [(b)] : mg/kg	420	440	18000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg
SB-D12-1-5	5	SB-D12-1	D12	7/10/2018	10 U	10 U	20 U
SB-D12-1-10	10	SB-D12-1	D12	7/10/2018	10 U	10 U	20 U
SB-D12-1-15	15	SB-D12-1	D12	7/10/2018	10 U	10 U	20 U
SB-D12-1-20	20	SB-D12-1	D12	7/10/2018	10 U	10 U	20 U
SB-D12-1-30	30	SB-D12-1	D12	7/10/2018	**100** U	***3300***	200 U
SB-D14-1-0	0	SB-D14-1	D14	6/22/2018	**200** U	**200** U	400 U
SB-D14-1-0.5	0.5	SB-D14-1	D14	6/22/2018	50 U	50 U	100 U
SB-D14-1-2.5	2.5	SB-D14-1	D14	6/22/2018	10 U	10 U	20 U
SB-D14-1-5	5	SB-D14-1	D14	6/22/2018	10 U	10 U	20 U
SB-D14-1-10	10	SB-D14-1	D14	6/22/2018	20 U	20 U	40 U
SB-D14-1-15	15	SB-D14-1	D14	6/22/2018	10 U	10 U	20 U
SB-D14-1-20	20	SB-D14-1	D14	6/22/2018	10 U	10 U	20 U
SB-D14-1-30	30	SB-D14-1	D14	6/22/2018	10 U	10 U	20 U
SB-D20-1-0	0	SB-D20-1	D20	6/25/2018	**250** U	**250** U	500 U
SB-D20-1-0.5	0.5	SB-D20-1	D20	6/25/2018	20 U	83	40 U
SB-D20-1-5	5	SB-D20-1	D20	6/25/2018	10 U	23	20 U
SB-D20-1-10	10	SB-D20-1	D20	6/25/2018	10 U	14	20 U
SB-D20-1-15	15	SB-D20-1	D20	6/25/2018	10 U	49	20 U
SB-D20-1-20	20	SB-D20-1	D20	6/25/2018	10 U	10 U	20 U
SB-D20-1-2.5A	2.5	SB-D20-1	D20	6/25/2018	20 U	**390**	100
SB-D22-1-0	0	SB-D22-1	D22	6/25/2018	**200** U	**250**	610
SB-D22-1-0.5	0.5	SB-D22-1	D22	6/25/2018	10 U	13	27
SB-D22-1-2.5	2.5	SB-D22-1	D22	6/25/2018	10 U	10 U	20 U
SB-D22-1-5	5	SB-D22-1	D22	6/25/2018	10 U	36	39
SB-D22-1-10	10	SB-D22-1	D22	6/25/2018	10 U	10 U	20 U
SB-D22-1-15	15	SB-D22-1	D22	6/25/2018	10 U	17	20 U
SB-D22-1-20	20	SB-D22-1	D22	6/25/2018	10 U	10 U	20 U
SB-D24-1-0	0	SB-D24-1	D24	7/2/2018	10 U	10 U	20 U
SB-D24-1-0.5	0.5	SB-D24-1	D24	7/2/2018	50 U	86	100 U
SB-D24-1-2.5	2.5	SB-D24-1	D24	7/2/2018	10 U	10 U	20 U
SB-D24-1-5	5	SB-D24-1	D24	7/2/2018	10 U	10 U	20 U
SB-D24-1-10	10	SB-D24-1	D24	7/2/2018	10 U	10 U	20 U
SB-D24-1-15	15	SB-D24-1	D24	7/2/2018	10 U	10 U	20 U
SB-D24-1-20	20	SB-D24-1	D24	7/2/2018	10 U	10 U	20 U
SB-D24-1-30	30	SB-D24-1	D24	7/2/2018	10 U	10 U	20 U
SB-D29-1-0	0	SB-D29-1	D29	7/13/2018	50 U	50 U	100 U
SB-D29-1-0.5	0.5	SB-D29-1	D29	7/13/2018	50 U	50 U	100 U
SB-D29-1-2.5	2.5	SB-D29-1	D29	7/13/2018	**500** U	***2000***	1400
SB-D29-1-5	5	SB-D29-1	D29	7/13/2018	20 U	39	44
SB-D29-1-10	10	SB-D29-1	D29	7/13/2018	10 U	10 U	20 U
SB-D29-1-15	15	SB-D29-1	D29	7/13/2018	10 U	10 U	20 U
SB-D29-1-20	20	SB-D29-1	D29	7/13/2018	10 U	10 U	20 U
SB-D29-1-27.5	27.5	SB-D29-1	D29	7/13/2018	10 U	10 U	20 U
SB-D29-2-0	0	SB-D29-2	D29	7/19/2018	10 U	11	20 U
SB-D29-2-0.5	0.5	SB-D29-2	D29	7/19/2018	10 U	10 U	20 U
SB-D29-2-2.5	2.5	SB-D29-2	D29	7/19/2018	50 U	**280**	260
SB-D29-2-5	5	SB-D29-2	D29	7/19/2018	10 U	***620***	20 U
SB-D29-2-10	10	SB-D29-2	D29	7/19/2018	50 U	***1800***	100 U
SB-D29-2-15	15	SB-D29-2	D29	7/19/2018	10 U	10 U	20 U
SB-D29-2-20	20	SB-D29-2	D29	7/19/2018	10 U	10 U	20 U
SB-D29-2-30	30	SB-D29-2	D29	7/19/2018	**100** U	***1400***	200 U
SB-D4-1-0	0	SB-D4-1	D4	6/18/2018	20 U	**160**	290
SB-D4-1-0.5	0.5	SB-D4-1	D4	6/18/2018	20 U	**180**	260
SB-D4-1-2.5	2.5	SB-D4-1	D4	6/18/2018	50 U	91	110
SB-D4-1-5	5	SB-D4-1	D4	6/18/2018	10 U	89	100
SB-D4-1-7.5	7.5	SB-D4-1	D4	6/18/2018	20 U	90	140
SB-D4-1-15	15	SB-D4-1	D4	6/18/2018	10 U	10 U	20 U
SB-D4-1-20	20	SB-D4-1	D4	6/18/2018	10 U	10 U	20 U
SB-D4-1-25	25	SB-D4-1	D4	6/18/2018	10 U	10 U	20 U
SB-D4-1-30	30	SB-D4-1	D4	6/18/2018	**500** U	***10000***	1000 U
SB-D5-1-0	0	SB-D5-1	D5	6/27/2018	50 U	***660***	830
SB-D5-1-0.5	0.5	SB-D5-1	D5	6/27/2018	50 U	**360**	420
SB-D5-1-2.5	2.5	SB-D5-1	D5	6/27/2018	***1000***	***2200***	210
SB-D5-1-5	5	SB-D5-1	D5	6/27/2018	10 U	80	83
SB-D5-1-10	10	SB-D5-1	D5	6/27/2018	10 U	10 U	20 U
SB-D5-1-15	15	SB-D5-1	D5	6/27/2018	10 U	10 U	20 U
SB-D5-1-20	20	SB-D5-1	D5	6/27/2018	10 U	10 U	20 U
SB-D5-1-30	30	SB-D5-1	D5	6/27/2018	**200** U	***3400***	400 U
SB-D6-1-0	0	SB-D6-1	D6	6/29/2018	50 U	**220**	230
SB-D6-1-0.5	0.5	SB-D6-1	D6	6/29/2018	50 U	**150**	100 U

Table 4

Soil Results Summary - Total Petroleum Hydrocarbons (TPH)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				Analytical Method	EPA 8015M	EPA 8015M	EPA 8015M
				Analyte Name	TPH GRO (C8 to C10)	TPH DRO (C10 to C28)	TPH MO (C28 to C40)
				Residential Screening Level [(a)] : mg/kg	82	96	2400
				Commercial Screening Level [(b)] : mg/kg	420	440	18000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg
SB-D6-1-2.5	2.5	SB-D6-1	D6	6/29/2018	250 U	6200	2300
SB-D6-1-5	5	SB-D6-1	D6	6/29/2018	250 U	7700	2400
SB-D6-1-10	10	SB-D6-1	D6	6/29/2018	50 U	820	230
SB-D6-1-15	15	SB-D6-1	D6	6/29/2018	10 U	10 U	20 U
SB-D6-1-20	20	SB-D6-1	D6	6/29/2018	10 U	28	20 U
SB-D6-1-32	32	SB-D6-1	D6	6/29/2018	500 U	7200	1000 U
SB-D8-1-0	0	SB-D8-1	D8	6/21/2018	10 U	57	57
SB-D8-1-0.5	0.5	SB-D8-1	D8	6/21/2018	10 U	10 U	20 U
SB-D8-1-2.5	2.5	SB-D8-1	D8	6/21/2018	10 U	10 U	20 U
SB-D8-1-5	5	SB-D8-1	D8	6/21/2018	10 U	10 U	20 U
SB-D8-1-10	10	SB-D8-1	D8	6/21/2018	10 U	10 U	20 U
SB-D8-1-15	15	SB-D8-1	D8	6/21/2018	10 U	10 U	20 U
SB-D8-1-20	20	SB-D8-1	D8	6/21/2018	10 U	10 U	20 U
SB-D8-1-30	30	SB-D8-1	D8	6/21/2018	200 U	7100	400 U
SB-E11-1-0	0	SB-E11-1	E11	7/10/2018	100 U	160	200 U
SB-E11-1-0.5	0.5	SB-E11-1	E11	7/10/2018	100 U	820	460
SB-E11-1-2.5	2.5	SB-E11-1	E11	7/10/2018	100 U	1100	720
SB-E11-1-5	5	SB-E11-1	E11	7/10/2018	10 U	15	20 U
SB-E11-1-10	10	SB-E11-1	E11	7/10/2018	10 U	10 U	20 U
SB-E11-1-15	15	SB-E11-1	E11	7/10/2018	10 U	10 U	20 U
SB-E11-1-20	20	SB-E11-1	E11	7/10/2018	10 U	10 U	20 U
SB-E11-1-25	25	SB-E11-1	E11	7/10/2018	10 U	10 U	20 U
SB-E11-1-30	30	SB-E11-1	E11	7/10/2018	10 U	10 U	20 U
SB-E13-1-0	0	SB-E13-1	E13	6/22/2018	100 U	100 U	200 U
SB-E13-1-0.5	0.5	SB-E13-1	E13	6/22/2018	100 U	100 U	200 U
SB-E13-1-2.5	2.5	SB-E13-1	E13	6/22/2018	200 U	200 U	400 U
SB-E13-1-5	5	SB-E13-1	E13	6/22/2018	10 U	10 U	20 U
SB-E13-1-10	10	SB-E13-1	E13	6/22/2018	100 U	100 U	200 U
SB-E13-1-15	15	SB-E13-1	E13	6/22/2018	10 U	10 U	20 U
SB-E13-1-20	20	SB-E13-1	E13	6/22/2018	10 U	10 U	20 U
SB-E13-1-28	28	SB-E13-1	E13	6/22/2018	10 U	10 U	20 U
SB-E17-1-0	0	SB-E17-1	E17	6/27/2018	50 U	120	100 U
SB-E17-1-0.5	0.5	SB-E17-1	E17	6/27/2018	200 U	1100	400 U
SB-E17-1-2.5	2.5	SB-E17-1	E17	6/27/2018	10 U	10 U	20 U
SB-E17-1-5	5	SB-E17-1	E17	6/27/2018	10 U	10 U	20 U
SB-E17-1-10	10	SB-E17-1	E17	6/27/2018	10 U	10 U	20 U
SB-E17-1-15	15	SB-E17-1	E17	6/27/2018	10 U	10 U	20 U
SB-E17-1-20	20	SB-E17-1	E17	6/27/2018	10 U	10 U	20 U
SB-E17-1-30	30	SB-E17-1	E17	6/27/2018	10 U	10 U	20 U
SB-E19-1-0	0	SB-E19-1	E19	7/11/2018	50 U	77	100 U
SB-E19-1-0.5	0.5	SB-E19-1	E19	7/11/2018	10 U	10 U	20 U
SB-E19-1-2.5	2.5	SB-E19-1	E19	7/11/2018	10 U	10 U	20 U
SB-E19-1-5	5	SB-E19-1	E19	7/11/2018	10 U	10 U	20 U
SB-E19-1-10	10	SB-E19-1	E19	7/11/2018	10 U	10 U	20 U
SB-E19-1-15	15	SB-E19-1	E19	7/11/2018	10 U	10 U	20 U
SB-E19-1-20	20	SB-E19-1	E19	7/11/2018	10 U	10 U	20 U
SB-E19-1-25	25	SB-E19-1	E19	7/11/2018	10 U	10 U	20 U
SB-E22-1-0	0	SB-E22-1	E22	7/12/2018	250 U	470	500 U
SB-E22-1-0.5	0.5	SB-E22-1	E22	7/12/2018	10 U	10 U	20 U
SB-E22-1-2.5	2.5	SB-E22-1	E22	7/12/2018	10 U	10 U	20 U
SB-E22-1-5	5	SB-E22-1	E22	7/12/2018	10 U	10 U	20 U
SB-E22-1-10	10	SB-E22-1	E22	7/12/2018	10 U	10 U	20 U
SB-E22-1-15	15	SB-E22-1	E22	7/12/2018	10 U	10 U	20 U
SB-E22-1-20	20	SB-E22-1	E22	7/12/2018	10 U	10 U	20 U
SB-E26-1-0	0	SB-E26-1	E26	7/5/2018	500 U	1200	1600
SB-E26-1-0.5	0.5	SB-E26-1	E26	7/5/2018	50 U	50 U	100 U
SB-E26-1-2.5	2.5	SB-E26-1	E26	7/5/2018	10 U	10 U	20 U
SB-E26-1-5	5	SB-E26-1	E26	7/5/2018	10 U	27	23
SB-E26-1-10	10	SB-E26-1	E26	7/5/2018	10 U	10 U	20 U
SB-E26-1-15	15	SB-E26-1	E26	7/5/2018	10 U	10 U	20 U
SB-E26-1-20	20	SB-E26-1	E26	7/5/2018	20 U	56	40 U
SB-E26-1-25	25	SB-E26-1	E26	7/5/2018	10 U	10 U	20 U
SB-E4-1-0	0	SB-E4-1	E4	6/18/2018	100 U	100 U	200 U
SB-E4-1-0.5	0.5	SB-E4-1	E4	6/18/2018	100 U	100 U	200 U
SB-E4-1-2.5	2.5	SB-E4-1	E4	6/18/2018	100 U	590	770
SB-E4-1-7.5	7.5	SB-E4-1	E4	6/18/2018	20 U	20 U	40 U
SB-E4-1-10	10	SB-E4-1	E4	6/18/2018	10 U	10 U	20 U
SB-E4-1-15	15	SB-E4-1	E4	6/18/2018	10 U	10 U	20 U
SB-E4-1-20	20	SB-E4-1	E4	6/18/2018	10 U	10 U	20 U
SB-E4-1-25	25	SB-E4-1	E4	6/18/2018	10 U	10 U	20 U

Table 4

Soil Results Summary - Total Petroleum Hydrocarbons (TPH)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				Analytical Method	EPA 8015M	EPA 8015M	EPA 8015M
				Analyte Name	TPH GRO (C8 to C10)	TPH DRO (C10 to C28)	TPH MO (C28 to C40)
				Residential Screening Level [(a)] : mg/kg	82	96	2400
				Commercial Screening Level [(b)] : mg/kg	420	440	18000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg
SB-E4-1-30	30	SB-E4-1	E4	6/18/2018	10 U	10 U	20 U
SB-E7-1-0	0	SB-E7-1	E7	6/27/2018	20 U	***630***	230
SB-E7-1-0.5	0.5	SB-E7-1	E7	6/27/2018	20 U	**320**	99
SB-E7-1-2.5	2.5	SB-E7-1	E7	6/27/2018	10 U	**160**	61
SB-E7-1-5	5	SB-E7-1	E7	6/27/2018	10 U	10 U	20 U
SB-E7-1-10	10	SB-E7-1	E7	6/27/2018	10 U	10 U	20 U
SB-E7-1-15	15	SB-E7-1	E7	6/27/2018	10 U	10 U	20 U
SB-E7-1-20	20	SB-E7-1	E7	6/27/2018	10 U	10 U	20 U
SB-E7-1-30	30	SB-E7-1	E7	6/27/2018	10 U	10 U	20 U
SB-E7-1-31.3	31.3	SB-E7-1	E7	6/27/2018	**1000** U	***26000***	2000 U
SB-F10-1-0	0	SB-F10-1	F10	6/21/2018	50 U	**310**	370
SB-F10-1-0.5	0.5	SB-F10-1	F10	6/21/2018	**200** U	***1200***	560
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	**1000** U	***25000***	**3700**
SB-F10-1-5	5	SB-F10-1	F10	6/21/2018	10 U	10 U	20 U
SB-F10-1-10	10	SB-F10-1	F10	6/21/2018	10 U	10 U	20 U
SB-F10-1-15	15	SB-F10-1	F10	6/21/2018	10 U	10 U	20 U
SB-F10-1-20	20	SB-F10-1	F10	6/21/2018	10 U	10 U	20 U
SB-F11-1-0	0	SB-F11-1	F11	6/21/2018	20 U	28	40 U
SB-F11-1-0.5	0.5	SB-F11-1	F11	6/21/2018	50 U	50 U	100 U
SB-F11-1-2.5	2.5	SB-F11-1	F11	6/21/2018	50 U	**100**	110
SB-F11-1-5	5	SB-F11-1	F11	6/21/2018	20 U	**110**	89
SB-F11-1-10	10	SB-F11-1	F11	6/21/2018	10 U	10 U	20 U
SB-F11-1-15	15	SB-F11-1	F11	6/21/2018	10 U	10 U	20 U
SB-F11-1-20	20	SB-F11-1	F11	6/21/2018	10 U	10 U	20 U
SB-F11-1-23	23	SB-F11-1	F11	6/21/2018	10 U	10 U	20 U
SB-F14-1-0	0	SB-F14-1	F14	6/22/2018	50 U	50 U	100 U
SB-F14-1-0.5	0.5	SB-F14-1	F14	6/22/2018	10 U	10 U	20 U
SB-F14-1-2.5	2.5	SB-F14-1	F14	6/22/2018	10 U	10 U	20 U
SB-F14-1-5	5	SB-F14-1	F14	6/22/2018	10 U	10 U	20 U
SB-F14-1-10	10	SB-F14-1	F14	6/22/2018	10 U	10 U	20 U
SB-F14-1-15	15	SB-F14-1	F14	6/22/2018	10 U	10 U	20 U
SB-F14-1-20	20	SB-F14-1	F14	6/22/2018	10 U	10 U	20 U
SB-F14-1-25	25	SB-F14-1	F14	6/22/2018	10 U	10 U	20 U
SB-F18-1-0	0	SB-F18-1	F18	6/28/2018	10 U	13	20 U
SB-F18-1-0.5	0.5	SB-F18-1	F18	6/28/2018	10 U	10 U	20 U
SB-F18-1-2.5	2.5	SB-F18-1	F18	6/28/2018	10 U	10 U	20 U
SB-F18-1-5	5	SB-F18-1	F18	6/28/2018	10 U	10 U	20 U
SB-F18-1-10	10	SB-F18-1	F18	6/28/2018	10 U	10 U	20 U
SB-F18-1-15	15	SB-F18-1	F18	6/28/2018	10 U	10 U	20 U
SB-F18-1-20	20	SB-F18-1	F18	6/28/2018	10 U	10 U	20 U
SB-F18-1-30	30	SB-F18-1	F18	6/28/2018	10 U	10 U	20 U
SB-F21-1-0	0	SB-F21-1	F21	8/23/2018	10 U	13	20 U
SB-F21-1-0.5	0.5	SB-F21-1	F21	8/23/2018	10 U	10 U	20 U
SB-F21-1-2.5	2.5	SB-F21-1	F21	8/23/2018	10 U	10 U	20 U
SB-F21-1-5	5	SB-F21-1	F21	8/23/2018	10 U	10 U	20 U
SB-F21-1-10	10	SB-F21-1	F21	8/23/2018	10 U	10 U	20 U
SB-F21-1-15	15	SB-F21-1	F21	8/23/2018	10 U	10 U	20 U
SB-F21-1-20	20	SB-F21-1	F21	8/23/2018	10 U	10 U	20 U
SB-F24-1-0	0	SB-F24-1	F24	7/9/2018	**500** U	***670***	1400
SB-F24-1-0.5	0.5	SB-F24-1	F24	7/9/2018	10 U	**340**	170
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	**100** U	***2900***	890
SB-F24-1-5	5	SB-F24-1	F24	7/9/2018	**500** U	***1300***	1000 U
SB-F24-1-10	10	SB-F24-1	F24	7/9/2018	10 U	10 U	20 U
SB-F24-1-15	15	SB-F24-1	F24	7/9/2018	10 U	10 U	20 U
SB-F24-1-20	20	SB-F24-1	F24	7/9/2018	10 U	10 U	20 U
SB-F28-1-0	0	SB-F28-1	F28	7/2/2018	50 U	92	160
SB-F28-1-0.5	0.5	SB-F28-1	F28	7/2/2018	20 U	44	53
SB-F28-1-2.5	2.5	SB-F28-1	F28	7/2/2018	10 U	10 U	20 U
SB-F28-1-5	5	SB-F28-1	F28	7/2/2018	**100** U	***1200***	700
SB-F28-1-10	10	SB-F28-1	F28	7/2/2018	10 U	13	20 U
SB-F28-1-15	15	SB-F28-1	F28	7/2/2018	10 U	10 U	20 U
SB-F28-1-20	20	SB-F28-1	F28	7/2/2018	10 U	10 U	20 U
SB-F28-1-27.5	27.5	SB-F28-1	F28	7/2/2018	10 U	10 U	20 U
SB-F5-1-0	0	SB-F5-1	F5	6/19/2018	10 U	31	51
SB-F5-1-0.5	0.5	SB-F5-1	F5	6/19/2018	10 U	10 U	20 U
SB-F5-1-2.5	2.5	SB-F5-1	F5	6/19/2018	10 U	10 U	20 U
SB-F5-1-5	5	SB-F5-1	F5	6/19/2018	10 U	10 U	20 U
SB-F5-1-10	10	SB-F5-1	F5	6/19/2018	10 U	10 U	20 U
SB-F5-1-15	15	SB-F5-1	F5	6/19/2018	10 U	10 U	20 U
SB-F5-1-20	20	SB-F5-1	F5	6/19/2018	10 U	10 U	20 U

Table 4

Soil Results Summary - Total Petroleum Hydrocarbons (TPH)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				Analytical Method	EPA 8015M	EPA 8015M	EPA 8015M
				Analyte Name	TPH GRO (C8 to C10)	TPH DRO (C10 to C28)	TPH MO (C28 to C40)
				Residential Screening Level [(a)] : mg/kg	82	96	2400
				Commercial Screening Level [(b)] : mg/kg	420	440	18000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg
SB-F5-1-25	25	SB-F5-1	F5	6/19/2018	**200** U	***500***	400 U
SB-F5-1-30	30	SB-F5-1	F5	6/19/2018	50 U	***2100***	190
SB-F6-1-0	0	SB-F6-1	F6	6/19/2018	**100** U	***610***	420
SB-F6-1-0.5	0.5	SB-F6-1	F6	6/19/2018	10 U	28	21
SB-F6-1-2.5	2.5	SB-F6-1	F6	6/19/2018	10 U	30	25
SB-F6-1-5	5	SB-F6-1	F6	6/19/2018	10 U	10 U	20 U
SB-F6-1-10	10	SB-F6-1	F6	6/19/2018	10 U	10 U	20 U
SB-F6-1-15	15	SB-F6-1	F6	6/19/2018	10 U	10 U	20 U
SB-F6-1-20	20	SB-F6-1	F6	6/19/2018	**1000** U	***33000***	2000 U
SB-F6-1-25	25	SB-F6-1	F6	6/19/2018	10 U	10 U	20 U
SB-G19-1-0	0	SB-G19-1	G19	7/11/2018	10 U	60	20 U
SB-G19-1-0.5	0.5	SB-G19-1	G19	7/11/2018	10 U	10 U	20 U
SB-G19-1-2.5	2.5	SB-G19-1	G19	7/11/2018	10 U	10 U	20 U
SB-G19-1-5	5	SB-G19-1	G19	7/11/2018	10 U	10 U	20 U
SB-G19-1-10	10	SB-G19-1	G19	7/11/2018	10 U	10 U	20 U
SB-G19-1-15	15	SB-G19-1	G19	7/11/2018	10 U	10 U	20 U
SB-G19-1-20	20	SB-G19-1	G19	7/11/2018	10 U	10 U	20 U
SB-G19-1-25	25	SB-G19-1	G19	7/11/2018	10 U	10 U	20 U
SB-G24-1-0	0	SB-G24-1	G24	7/2/2018	10 U	22	61
SB-G24-1-0.5	0.5	SB-G24-1	G24	7/2/2018	**100** U	**170**	410
SB-G24-1-2.5	2.5	SB-G24-1	G24	7/2/2018	10 U	10 U	20 U
SB-G24-1-5	5	SB-G24-1	G24	7/2/2018	**500** U	***6100***	1800
SB-G24-1-10	10	SB-G24-1	G24	7/2/2018	20 U	***700***	260
SB-G24-1-15	15	SB-G24-1	G24	7/2/2018	10 U	14	20 U
SB-G24-1-20	20	SB-G24-1	G24	7/2/2018	10 U	10 U	20 U
SB-G24-1-27.5	27.5	SB-G24-1	G24	7/2/2018	10 U	10 U	20 U
DB-G27-1-0	0	SB-G27-1	G27	7/9/2018	50 U	50 U	100 U
DB-G27-1-0.5	0.5	SB-G27-1	G27	7/9/2018	10 U	10 U	20 U
DB-G27-1-2.5	2.5	SB-G27-1	G27	7/9/2018	10 U	10 U	20 U
DB-G27-1-5	5	SB-G27-1	G27	7/9/2018	10 U	10 U	20 U
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	**200** U	***7000***	1100
DB-G27-1-15	15	SB-G27-1	G27	7/9/2018	10 U	10 U	20 U
DB-G27-1-20	20	SB-G27-1	G27	7/9/2018	10 U	10 U	20 U
SB-G4-1-0	0	SB-G4-1	G4	6/29/2018	10 U	29	21
SB-G4-1-0.5	0.5	SB-G4-1	G4	6/29/2018	10 U	10 U	20 U
SB-G4-1-2.5	2.5	SB-G4-1	G4	6/29/2018	10 U	10 U	20 U
SB-G4-1-5	5	SB-G4-1	G4	6/29/2018	50 U	53	100 U
SB-G4-1-10	10	SB-G4-1	G4	6/29/2018	10 U	12	20 U
SB-G4-1-15	15	SB-G4-1	G4	6/29/2018	10 U	10 U	20 U
SB-G4-1-20	20	SB-G4-1	G4	6/29/2018	10 U	10 U	20 U
SB-G4-1-25	25	SB-G4-1	G4	6/29/2018	10 U	10 U	20 U
SB-G6-1-0	0	SB-G6-1	G6	8/24/2018	20 U	**160**	150
SB-G6-1-0.5	0.5	SB-G6-1	G6	8/24/2018	40 U	**260**	200
SB-G6-1-2.5	2.5	SB-G6-1	G6	8/24/2018	10 U	33	20 U
SB-G6-1-5	5	SB-G6-1	G6	8/24/2018	10 U	10 U	20 U
SB-G6-1-10	10	SB-G6-1	G6	8/24/2018	10 U	10 U	20 U
SB-G6-1-15	15	SB-G6-1	G6	8/24/2018	10 U	10 U	20 U
SB-G6-1-20	20	SB-G6-1	G6	8/24/2018	10 U	10 U	20 U
SB-G8-1-0	0	SB-G8-1	G8	6/20/2018	50 U	**100**	100 U
SB-G8-1-0.5	0.5	SB-G8-1	G8	6/20/2018	10 U	10 U	20 U
SB-G8-1-2.5	2.5	SB-G8-1	G8	6/20/2018	10 U	20	20 U
SB-G8-1-5	5	SB-G8-1	G8	6/20/2018	**200** U	***6200***	450
SB-G8-1-10	10	SB-G8-1	G8	6/20/2018	**200** U	***3700***	610
SB-G8-1-15	15	SB-G8-1	G8	6/20/2018	10 U	10 U	20 U
SB-G8-1-20	20	SB-G8-1	G8	6/20/2018	10 U	10 U	20 U
SB-G9-1-0	0	SB-G9-1	G9	6/20/2018	**100** U	**100** U	200 U
SB-G9-1-0.5	0.5	SB-G9-1	G9	6/20/2018	10 U	10 U	20 U
SB-G9-1-2.5	2.5	SB-G9-1	G9	6/20/2018	20 U	53	62
SB-G9-1-5	5	SB-G9-1	G9	6/20/2018	10 U	10 U	20 U
SB-G9-1-10	10	SB-G9-1	G9	6/20/2018	10 U	93	20 U
SB-G9-1-15	15	SB-G9-1	G9	6/20/2018	10 U	10 U	20 U
SB-G9-1-20	20	SB-G9-1	G9	6/20/2018	10 U	10 U	20 U
SB-H10-1-0	0	SB-H10-1	H10	6/20/2018	50 U	**210**	230
SB-H10-1-0.5	0.5	SB-H10-1	H10	6/20/2018	50 U	**150**	230
SB-H10-1-2.5	2.5	SB-H10-1	H10	6/20/2018	20 U	78	170
SB-H10-1-5	5	SB-H10-1	H10	6/20/2018	10 U	10 U	20 U
SB-H10-1-10	10	SB-H10-1	H10	6/20/2018	10 U	10 U	20 U
SB-H10-1-15	15	SB-H10-1	H10	6/20/2018	10 U	10 U	20 U
SB-H10-1-20	20	SB-H10-1	H10	6/20/2018	10 U	10 U	20 U
SB-H10-1-25	25	SB-H10-1	H10	6/20/2018	10 U	10 U	20 U

Table 4

Soil Results Summary - Total Petroleum Hydrocarbons (TPH)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				Analytical Method	EPA 8015M	EPA 8015M	EPA 8015M
				Analyte Name	TPH GRO (C8 to C10)	TPH DRO (C10 to C28)	TPH MO (C28 to C40)
				Residential Screening Level [(a)] : mg/kg	82	96	2400
				Commercial Screening Level [(b)] : mg/kg	420	440	18000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	mg/kg	mg/kg	mg/kg
SB-H12-1-0	0	SB-H12-1	H12	6/29/2018	50 U	55	100 U
SB-H12-1-0.5	0.5	SB-H12-1	H12	6/29/2018	**100** U	**270**	250
SB-H12-1-2.5	2.5	SB-H12-1	H12	6/29/2018	10 U	10 U	20 U
SB-H12-1-5	5	SB-H12-1	H12	6/29/2018	10 U	10 U	20 U
SB-H12-1-10	10	SB-H12-1	H12	6/29/2018	10 U	10 U	20 U
SB-H12-1-15	15	SB-H12-1	H12	6/29/2018	10 U	10 U	20 U
SB-H12-1-20	20	SB-H12-1	H12	6/29/2018	10 U	10 U	20 U
SB-H12-1-25	25	SB-H12-1	H12	6/29/2018	10 U	10 U	20 U
SB-H15-1-0	0	SB-H15-1	H15	6/29/2018	**250** U	**250** U	500 U
SB-H15-1-0.5	0.5	SB-H15-1	H15	6/29/2018	**250** U	**250** U	500 U
SB-H15-1-2.5	2.5	SB-H15-1	H15	6/29/2018	**100** U	***650***	590
SB-H15-1-5	5	SB-H15-1	H15	6/29/2018	**250** U	***5900***	**5100**
SB-H15-1-10	10	SB-H15-1	H15	6/29/2018	10 U	22	20 U
SB-H15-1-15	15	SB-H15-1	H15	6/29/2018	10 U	10 U	20 U
SB-H15-1-20	20	SB-H15-1	H15	6/29/2018	10 U	10 U	20 U
SB-H18-1-0	0	SB-H18-1	H18	6/28/2018	**100** U	**170**	210
SB-H18-1-0.5	0.5	SB-H18-1	H18	6/28/2018	50 U	**320**	470
SB-H18-1-2.5	2.5	SB-H18-1	H18	6/28/2018	10 U	10 U	20 U
SB-H18-1-5	5	SB-H18-1	H18	6/28/2018	10 U	10 U	20 U
SB-H18-1-10	10	SB-H18-1	H18	6/28/2018	10 U	10 U	20 U
SB-H18-1-15	15	SB-H18-1	H18	6/28/2018	10 U	10 U	20 U
SB-H18-1-20	20	SB-H18-1	H18	6/28/2018	10 U	10 U	20 U
SB-H18-1-22.5	22.5	SB-H18-1	H18	6/28/2018	10 U	10 U	20 U
SB-H22-1-0	0	SB-H22-1	H22	8/22/2018	**200** U	***1000***	690
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	**200** U	***580***	450
SB-H22-1-2.5	2.5	SB-H22-1	H22	8/22/2018	**200** U	***1100***	540
SB-H22-1-5	5	SB-H22-1	H22	8/22/2018	**200** U	***700***	580
SB-H22-1-10	10	SB-H22-1	H22	8/22/2018	**500** U	***18000***	**3200**
SB-H22-1-15	15	SB-H22-1	H22	8/22/2018	10 U	20	20 U
SB-H23-1-0	0	SB-H23-1	H23	8/21/2018	**100** U	***4500***	1300
SB-H23-1-0.5	0.5	SB-H23-1	H23	8/21/2018	**100** U	***7900***	1900
SB-H23-1-2.5	2.5	SB-H23-1	H23	8/21/2018	**100** U	***860***	470
SB-H23-1-5	5	SB-H23-1	H23	8/21/2018	**500** U	***2100***	1600
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	**100** U	***3300***	730
SB-H23-1-15	15	SB-H23-1	H23	8/21/2018	10 U	10 U	20 U
SB-H23-1-20	20	SB-H23-1	H23	8/21/2018	10 U	10 U	20 U
SB-H24-1-0	0	SB-H24-1	H24	7/12/2018	**250** U	***610***	960
SB-H24-1-0.5	0.5	SB-H24-1	H24	7/12/2018	**250** U	***6500***	**3100**
SB-H24-1-2.5	2.5	SB-H24-1	H24	7/12/2018	50 U	***3000***	1100
SB-H24-1-5	5	SB-H24-1	H24	7/12/2018	**200** U	***12000***	**3000**
SB-H24-1-7.5	7.5	SB-H24-1	H24	7/12/2018	**250** U	***7300***	1900
SB-H24-1-10	10	SB-H24-1	H24	7/12/2018	**500** U	***8600***	1400
SB-H24-1-15	15	SB-H24-1	H24	7/12/2018	**500** U	***16000***	**5300**
SB-H24-1-20	20	SB-H24-1	H24	7/12/2018	20 U	***830***	210
SB-H24-1-25	25	SB-H24-1	H24	7/12/2018	10 U	10 U	20 U
SB-H25-1-0	0	SB-H25-1	H25	7/3/2018	50 U	**340**	450
SB-H25-1-0.5	0.5	SB-H25-1	H25	7/3/2018	**100** U	***2000***	1700
SB-H25-1-2.5	2.5	SB-H25-1	H25	7/3/2018	10 U	23	20 U
SB-H25-1-5	5	SB-H25-1	H25	7/3/2018	50 U	**320**	200
SB-H25-1-7.5	7.5	SB-H25-1	H25	7/3/2018	**500** U	***14000***	**4700**
SB-H25-1-10	10	SB-H25-1	H25	7/3/2018	**500** U	***20000***	**6500**
SB-H25-1-15	15	SB-H25-1	H25	7/3/2018	10 U	24	20 U
SB-H25-1-20	20	SB-H25-1	H25	7/3/2018	10 U	**390**	120
SB-H8-1-0	0	SB-H8-1	H8	6/20/2018	10 U	**110**	69
SB-H8-1-0.5	0.5	SB-H8-1	H8	6/20/2018	10 U	21	29
SB-H8-1-2.5	2.5	SB-H8-1	H8	6/20/2018	10 U	36	50
SB-H8-1-5	5	SB-H8-1	H8	6/20/2018	20 U	***810***	500
SB-H8-1-10	10	SB-H8-1	H8	6/20/2018	10 U	10 U	20 U
SB-H8-1-15	15	SB-H8-1	H8	6/20/2018	10 U	10 U	20 U
SB-H8-1-20	20	SB-H8-1	H8	6/20/2018	10 U	10 U	20 U
SB-I19-1-0	0	SB-I19-1	I19	6/28/2018	**200** U	**200** U	400 U
SB-I19-1-0.5	0.5	SB-I19-1	I19	6/28/2018	**100** U	**220**	320
SB-I19-1-2.5	2.5	SB-I19-1	I19	6/28/2018	10 U	10 U	20 U
SB-I19-1-5	5	SB-I19-1	I19	6/28/2018	10 U	10 U	20 U
SB-I19-1-10	10	SB-I19-1	I19	6/28/2018	10 U	10 U	20 U
SB-I19-1-15	15	SB-I19-1	I19	6/28/2018	10 U	10 U	20 U
SB-I19-1-25	25	SB-I19-1	I19	6/28/2018	10 U	10 U	20 U
SB-I21-1-0	0	SB-I21-1	I21	8/21/2018	10 U	22	29
SB-I21-1-0.5	0.5	SB-I21-1	I21	8/21/2018	10 U	40	34
SB-I21-1-2.5	2.5	SB-I21-1	I21	8/21/2018	**100** U	***2100***	1500

Table 4

Soil Results Summary - Total Petroleum Hydrocarbons (TPH)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				Analytical Method	EPA 8015M	EPA 8015M	EPA 8015M
				Analyte Name	TPH GRO (C8 to C10)	TPH DRO (C10 to C28)	TPH MO (C28 to C40)
				Residential Screening Level [(a)] : mg/kg	82	96	2400
				Commercial Screening Level [(b)] : mg/kg	420	440	18000
Sample ID	**Depth (ft-bgs)**	**Location**	**Grid Cell**	**Sample Date**	**mg/kg**	**mg/kg**	**mg/kg**
SB-I21-1-5	5	SB-I21-1	I21	8/21/2018	**200** U	***4500***	2200
SB-I21-1-10	10	SB-I21-1	I21	8/21/2018	10 U	10 U	10 U
SB-I21-1-15	15	SB-I21-1	I21	8/21/2018	50 U	***500***	610
SB-I21-1-20	20	SB-I21-1	I21	8/21/2018	50 U	***3000***	2400

Notes:

EPA = U.S. Environmental Protection Agency

DTSC = Department of Toxic Substances Control

TPH GRO = total petroleum hydrocarbons as gasoline range organics

TPH DRO = total petroleum hydrocarbons as diesel range organics

TPH MO = total petroleum hydrocarbons as motor oil range organics

Data presented herein is a summary of all petroleum hydrocarbons analyzed by EPA Method 8015M.

Soil screening levels are derived from the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 (April 2019 update, June 2020 revision), and the EPA Regional Screening Level (RSL) THQ = 1.0 (May 2020).

[(a)] The residential screening level is the most stringent between the EPA RSL for residential soil and the DTSC HERO Note 3 for residential soil.

[(b)] The commercial screening level is the most stringent between the EPA RSL for composite worker soil and the DTSC HERO Note 3 for commercial/industrial soil.

mg/kg = milligrams per kilogram

ft bgs = feet below ground surface.

U = not detected above the laboratory method detection limit (MDL).

S = The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.

BOLD Indicates the non-detect value exceeds one or both of the compound-specific screening levels.

BOLD Indicates the reported concentration exceeds the compound-specific residential screening level.

BOLD Indicates the reported concentration exceeds the compound specific commercial screening level.

Table 5

Soil Results Summary - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	75-34-3	75-35-4	563-58-6	96-18-4	95-63-6	96-12-8	541-73-1	108-67-8	78-93-3	594-20-7
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,3-Dichlorobenzene	1,3,5-Trimethylbenzene	2-Butanone (MEK)	2,2-Dichloropropane
				Residential Screening Level [(a)] : µg/kg	1700000	3600	83000	NE	1.5	300000	4.3	NE	270000	27000000	NE
				Commercial Screening Level [(b)] : µg/kg	7200000	16000	350000	NE	21	1800000	57	NE	1500000	190000000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-C2-1-12	12	SB-C2-1	C2	8/23/2018	4.0545 U	6.2169 U	4.8654 U	5.6763 U	**5.406** U	21 J	**5.406** U	5.6763 U	6.2169 U	19.4616 U	5.1357 U
DB-C4-1-9	9	DB-C4-1	C4	7/12/2018	0.129 U	0.1978 U	0.1548 U	0.1806 U	0.172 U	0.2408 U	0.172 U	0.1806 U	0.1978 U	5.5 J	0.1634 U
DB-C4-1-30	30	DB-C4-1	C4	7/12/2018	10.7145 U	16.4289 U	12.8574 U	15.0003 U	**14.286** U	20.0004 U	**14.286** U	15.0003 U	16.4289 U	51.4296 U	13.5717 U
SB-C15-1-30	30	SB-C15-1	C15	6/22/2018	0.1395 U	0.2139 U	0.1674 U	0.1953 U	0.186 U	0.2604 U	0.186 U	0.1953 U	0.2139 U	1.7 J	0.1767 U
SB-C17-1-29	29	SB-C17-1	C17	6/25/2018	0.102 U	0.32 J	0.1224 U	0.1428 U	0.136 U	0.1904 U	0.136 U	0.1428 U	0.1564 U	1.2 J	0.1292 U
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	18.21 U	27.922 U	21.852 U	25.494 U	**24.28** U	33.992 U	**24.28** U	25.494 U	27.922 U	87.408 U	23.066 U
SB-C29-1-25	25	SB-C29-1	C29	7/19/2018	0.1215 U	0.1863 U	0.1458 U	0.1701 U	0.162 U	0.2268 U	0.162 U	0.1701 U	0.1863 U	1.8 J	0.1539 U
DB-D12-1-30	30	DB-D12-1	D12	7/10/2018	0.183 U	0.2806 U	0.2196 U	0.2562 U	0.244 U	0.3416 U	0.244 U	0.2562 U	0.2806 U	0.8784 U	0.2318 U
SB-D12-1-30	30	SB-D12-1	D12	7/10/2018	0.75 U	1.15 U	0.9 U	1.05 U	1 U	4.9 J,D2	1 U	1.05 U	1.15 U	3.6 U	0.95 U
SB-D14-1-30	30	SB-D14-1	D14	6/22/2018	0.1365 U	0.2093 U	0.1638 U	0.1911 U	0.182 U	0.2548 U	0.182 U	0.1911 U	0.2093 U	2 J	0.1729 U
SB-D20-1-28.5	28.5	SB-D20-1	D20	6/25/2018	0.1155 U	0.1771 U	0.1386 U	0.1617 U	0.154 U	0.2156 U	0.154 U	0.1617 U	0.1771 U	1.2 J	0.1463 U
SB-D22-1-27	27	SB-D22-1	D22	6/25/2018	0.096 U	0.27 J	0.1152 U	0.1344 U	0.128 U	0.1792 U	0.128 U	0.1344 U	0.1472 U	1.2 J	0.1216 U
SB-D24-1-30	30	SB-D24-1	D24	7/2/2018	0.1185 U	0.1817 U	0.1422 U	0.1659 U	0.158 U	0.2212 U	0.158 U	0.1659 U	0.1817 U	3.8 J	0.1501 U
DB-D26-1-70	70	DB-D26-1	D26	7/5/2018	0.0615 U	0.0943 U	0.0738 U	0.0861 U	0.082 U	0.1148 U	0.082 U	0.0861 U	0.0943 U	0.7 J	0.0779 U
SB-D29-1-27.5	27.5	SB-D29-1	D29	7/13/2018	0.144 U	0.2208 U	0.1728 U	0.2016 U	0.192 U	0.2688 U	0.192 U	0.2016 U	0.2208 U	2.2 J	0.1824 U
SB-D29-2-30	30	SB-D29-2	D29	7/19/2018	20.835 U	31.947 U	25.002 U	29.169 U	**27.78** U	78 J	**27.78** U	29.169 U	31.947 U	100.008 U	26.391 U
SB-D4-1-32	32	SB-D4-1	D4	6/18/2018	6.579 U	10.0878 U	7.8948 U	9.2106 U	**8.772** U	12.2808 U	**8.772** U	9.2106 U	10.0878 U	31.5792 U	8.3334 U
SB-D5-1-30	30	SB-D5-1	D5	6/27/2018	7.3815 U	11.3183 U	8.8578 U	10.3341 U	**9.842** U	13.7788 U	**9.842** U	10.3341 U	11.3183 U	35.4312 U	9.3499 U
SB-D6-1-32	32	SB-D6-1	D6	6/29/2018	15.96 U	24.472 U	19.152 U	22.344 U	**21.28** U	29.792 U	**21.28** U	22.344 U	24.472 U	76.608 U	20.216 U
DB-D7-1-33	33	DB-D7-1	D7	7/17/2018	15 U	23 U	18 U	21 U	**20** U	28 U	**20** U	21 U	23 U	72 U	19 U
SB-D8-1-31	31	SB-D8-1	D8	6/21/2018	6.465 U	9.913 U	7.758 U	9.051 U	**8.62** U	12.068 U	**8.62** U	9.051 U	9.913 U	31.032 U	8.189 U
SB-E11-1-30	30	SB-E11-1	E11	7/10/2018	0.153 U	0.2346 U	0.1836 U	0.2142 U	0.204 U	0.2856 U	0.204 U	0.2142 U	0.2346 U	0.7344 U	0.1938 U
SB-E13-1-28	28	SB-E13-1	E13	6/22/2018	0.102 U	0.1564 U	0.1224 U	0.1428 U	0.136 U	0.1904 U	0.136 U	0.1428 U	0.1564 U	2.4 J	0.1292 U
SB-E17-1-30	30	SB-E17-1	E17	6/27/2018	0.105 U	0.161 U	0.126 U	0.147 U	0.14 U	0.196 U	0.14 U	0.147 U	0.161 U	9.5 J	0.133 U
SB-E19-1-25	25	SB-E19-1	E19	7/11/2018	0.1245 U	0.1909 U	0.1494 U	0.1743 U	0.166 U	0.2324 U	0.166 U	0.1743 U	0.1909 U	1.3 J	0.1577 U
SB-E22-1-15	15	SB-E22-1	E22	7/12/2018	0.141 U	0.2162 U	0.1692 U	0.1974 U	0.188 U	0.2632 U	0.188 U	0.1974 U	0.2162 U	1.8 J	0.1786 U
SB-E26-1-25	25	SB-E26-1	E26	7/5/2018	0.153 U	0.2346 U	0.1836 U	0.2142 U	0.204 U	0.2856 U	0.204 U	0.2142 U	0.2346 U	2 J	0.1938 U
SB-E4-1-32.5	32.5	SB-E4-1	E4	6/18/2018	25.425 U	38.985 U	30.51 U	35.595 U	**33.9** U	47.46 U	**33.9** U	35.595 U	38.985 U	122.04 U	32.205 U
DB-E6-1-2	2	DB-E6-1	E6	7/17/2018	6.8175 U	10.4535 U	8.181 U	9.5445 U	**9.09** U	460	**9.09** U	9.5445 U	120 J	32.724 U	8.6355 U
SB-E7-1-31.3	31.3	SB-E7-1	E7	6/27/2018	7.3095 U	11.2079 U	8.7714 U	10.2333 U	**9.746** U	13.6444 U	**9.746** U	10.2333 U	11.2079 U	35.0856 U	9.2587 U
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	7.5 U	11.5 U	11 J	10.5 U	**10** U	74 J	**10** U	10.5 U	38 J	65 J	9.5 U
SB-F11-1-23	23	SB-F11-1	F11	6/21/2018	0.1035 U	0.1587 U	0.1242 U	0.1449 U	0.138 U	0.1932 U	0.138 U	0.1449 U	0.1587 U	1.2 J	0.1311 U
SB-F14-1-25	25	SB-F14-1	F14	6/22/2018	0.15 U	0.23 U	0.18 U	0.21 U	0.2 U	0.28 U	0.2 U	0.21 U	0.23 U	1.5 J	0.19 U
SB-F18-1-30	30	SB-F18-1	F18	6/28/2018	0.129 U	0.1978 U	0.1548 U	0.1806 U	0.172 U	0.2408 U	0.172 U	0.1806 U	0.1978 U	2.2 J	0.1634 U
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	910	150 J	9.1836 U	10.7142 U	**10.204** U	370	**10.204** U	10.7142 U	140 J	36.7344 U	9.6938 U
DB-F26-1-30	30	DB-F26-1	F26	7/6/2018	0.0477 U	0.07314 U	0.23 J	0.06678 U	0.0636 U	0.08904 U	0.0636 U	0.06678 U	0.07314 U	0.73 J	0.06042 U
SB-F28-1-27.5	27.5	SB-F28-1	F28	7/2/2018	0.1185 U	0.1817 U	0.1422 U	0.1659 U	0.158 U	0.2212 U	0.158 U	0.1659 U	0.1817 U	1.9 J	0.1501 U
DB-F4-1-30	30	DB-F4-1	F4	6/26/2018	0.1275 U	0.1955 U	0.153 U	0.1785 U	0.17 U	0.238 U	0.17 U	0.1785 U	0.1955 U	2.6 J	0.1615 U
SB-F5-1-23	23	SB-F5-1	F5	6/19/2018	0.114 U	0.1748 U	0.1368 U	0.1596 U	0.152 U	2.1 J	0.152 U	0.1596 U	0.89 J	2.9 J	0.1444 U
SB-F6-1-22	22	SB-F6-1	F6	6/19/2018	10.563 U	16.1966 U	12.6756 U	14.7882 U	**14.084** U	380	**14.084** U	14.7882 U	100 J	50.7024 U	13.3798 U
DB-F8-1-33	33	DB-F8-1	F8	7/18/2018	0.1335 U	0.2047 U	0.1602 U	0.1869 U	0.178 U	0.2492 U	0.178 U	0.1869 U	0.2047 U	3 J	0.1691 U
DB-G11-1-10	10	DB-G11-1	G11	7/19/2018	0.144 U	0.2208 U	0.1728 U	0.2016 U	0.192 U	0.48 J	0.192 U	0.2016 U	0.2208 U	8.4 J	0.1824 U
DB-G15-1-27.5	27.5	DB-G15-1	G15	7/13/2018	0.1155 U	0.1771 U	0.1386 U	0.1617 U	0.154 U	0.2156 U	0.154 U	0.1617 U	0.1771 U	2.3 J	0.1463 U
DB-G18-1-30	30	DB-G18-1	G18	7/11/2018	0.111 U	0.1702 U	0.1332 U	0.1554 U	0.148 U	0.2072 U	0.148 U	0.1554 U	0.1702 U	1.9 J	0.1406 U
SB-G19-1-25	25	SB-G19-1	G19	7/11/2018	0.1395 U	0.2139 U	0.1674 U	0.1953 U	0.186 U	0.2604 U	0.186 U	0.1953 U	0.2139 U	2.1	0.1767 U
DB-G21-1-20	20	DB-G21-1	G21	8/22/2018	0.75 U	1.15 U	0.9 U	1.05 U	1 U	1.4 U	1 U	1.05 U	1.15 U	3.6 U	0.95 U
SB-G24-1-27.5	27.5	SB-G24-1	G24	7/2/2018	0.147 U	0.2254 U	0.1764 U	0.2058 U	0.196 U	0.2744 U	0.196 U	0.2058 U	0.2254 U	2.1 J	0.1862 U

Table 5

Soil Results Summary - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	99-87-6	67-64-1	71-43-2	74-83-9	156-59-2	1476-11-5	100-41-4	637-92-3	98-82-8	1330-20-7P/M	75-09-2	1634-04-4	91-20-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	4-Isopropyltoluene	Acetone	Benzene	Bromomethane	cis-1,2-Dichloroethene	cis-1,4-dichloro-2-butene	Ethylbenzene	Ethyl-tertbutylether (ETBE)	Isopropyl benzene	m&p-Xylene [c]	Methylene chloride	Methyl-t-butyl Ether (MTBE)	Naphthalene
				Residential Screening Level [a] : µg/kg	NE	61000000	330	6800	18000	7.4	5800	NE	1900000	550000	2200	47000	2000
				Commercial Screening Level [b] : µg/kg	NE	670000000	1400	30000	84000	32	25000	NE	9900000	2400000	26000	210000	6500
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-C2-1-12	12	SB-C2-1	C2	8/23/2018	310	1351.5 U	4.8654 U	5.9466 U	5.406 U	5.406 U	17 J	11.3526 U	290	12 J	5.6763 U	4.5951 U	4.3248 U
DB-C4-1-9	9	DB-C4-1	C4	7/12/2018	0.2322 U	48 J	2 J	0.1892 U	0.172 U	0.172 U	0.1978 U	0.3612 U	0.215 U	0.3268 U	0.1806 U	0.1462 U	0.1376 U
DB-C4-1-30	30	DB-C4-1	C4	7/12/2018	19.2861 U	3571.5 U	12.8574 U	15.7146 U	14.286 U	**14.286** U	16.4289 U	30.0006 U	440	27.1434 U	15.0003 U	12.1431 U	11.4288 U
SB-C15-1-30	30	SB-C15-1	C15	6/22/2018	0.2511 U	46.5 U	0.1674 U	0.2046 U	0.186 U	0.186 U	0.2139 U	0.3906 U	0.2325 U	0.3534 U	0.1953 U	0.1581 U	0.1488 U
SB-C17-1-29	29	SB-C17-1	C17	6/25/2018	0.1836 U	34 U	0.74 J	0.1496 U	0.136 U	0.136 U	0.1564 U	0.2856 U	0.17 U	0.2584 U	0.1428 U	0.1156 U	0.1088 U
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	32.778 U	6070 U	21.852 U	26.708 U	24.28 U	**24.28** U	27.922 U	50.988 U	49 J,D2	46.132 U	25.494 U	20.638 U	290 J,D2
SB-C29-1-25	25	SB-C29-1	C29	7/19/2018	0.2187 U	42 J	1.4 J	0.1782 U	0.162 U	0.162 U	0.1863 U	0.3402 U	0.2025 U	0.3078 U	0.1701 U	0.1377 U	0.24 J
DB-D12-1-30	30	DB-D12-1	D12	7/10/2018	0.3294 U	61 U	0.23	0.2684 U	0.244 U	0.244 U	0.2806 U	0.5124 U	0.305 U	0.4636 U	0.2562 U	0.2074 U	0.1952 U
SB-D12-1-30	30	SB-D12-1	D12	7/10/2018	1.35 U	250 U	0.9 U	1.1 U	1 U	1 U	1.25 U	2.1 U	7.3 J,D2	5.6 J,D2	1.1 U	1.25 U	1.4 U
SB-D14-1-30	30	SB-D14-1	D14	6/22/2018	0.2457 U	45.5 U	0.18 J	0.2002 U	0.182 U	0.182 U	0.2093 U	0.3822 U	0.2275 U	0.3458 U	0.21 J	0.1547 U	0.1456 U
SB-D20-1-28.5	28.5	SB-D20-1	D20	6/25/2018	0.2079 U	38.5 U	1.2 J	0.1694 U	0.154 U	0.154 U	0.1771 U	0.3234 U	0.1925 U	0.2926 U	0.1617 U	0.1309 U	0.1232 U
SB-D22-1-27	27	SB-D22-1	D22	6/25/2018	0.1728 U	32 U	0.51 J	0.1408 U	0.128 U	0.128 U	0.1472 U	0.2688 U	0.16 U	0.2432 U	0.1344 U	0.1088 U	0.1024 U
SB-D24-1-30	30	SB-D24-1	D24	7/2/2018	0.2133 U	97	0.48 J	0.1738 U	0.158 U	0.158 U	0.1817 U	0.3318 U	0.1975 U	0.3002 U	0.63 J	0.1343 U	0.1264 U
DB-D26-1-70	70	DB-D26-1	D26	7/5/2018	0.1107 U	20.5 U	0.09 J	0.0902 U	0.082 U	0.082 U	0.0943 U	0.1722 U	0.1025 U	0.1558 U	0.0861 U	0.0697 U	0.0656 U
SB-D29-1-27.5	27.5	SB-D29-1	D29	7/13/2018	0.2592 U	74 J	0.32 J	0.2112 U	0.192 U	0.192 U	0.2208 U	0.4032 U	0.24 U	0.3648 U	0.45 J	0.1632 U	0.1536 U
SB-D29-2-30	30	SB-D29-2	D29	7/19/2018	37.503 U	6945 U	25.002 U	30.558 U	27.78 U	**27.78** U	31.947 U	58.338 U	190 J	52.782 U	29.169 U	23.613 U	22.224 U
SB-D4-1-32	32	SB-D4-1	D4	6/18/2018	11.8422 U	2193 U	18 J	9.6492 U	8.772 U	**8.772** U	10.0878 U	18.4212 U	1500	16.6668 U	9.2106 U	8 J	7.0176 U
SB-D5-1-30	30	SB-D5-1	D5	6/27/2018	13.2867 U	2460.5 U	8.8578 U	10.8262 U	9.842 U	**9.842** U	11.3183 U	20.6682 U	100 J	18.6998 U	10.3341 U	8.3657 U	7.8736 U
SB-D6-1-32	32	SB-D6-1	D6	6/29/2018	28.728 U	5320 U	19.152 U	23.408 U	21.28 U	**21.28** U	24.472 U	44.688 U	650	40.432 U	22.344 U	18.088 U	17.024 U
DB-D7-1-33	33	DB-D7-1	D7	7/17/2018	47 J	5000 U	18 U	22 U	20 U	**20** U	25 U	42 U	690	21 U	22 U	25 U	28 U
SB-D8-1-31	31	SB-D8-1	D8	6/21/2018	11.637 U	2155 U	7.758 U	9.482 U	8.62 U	**8.62** U	9.913 U	18.102 U	240	16.378 U	9.051 U	7.327 U	6.896 U
SB-E11-1-30	30	SB-E11-1	E11	7/10/2018	0.2754 U	51 U	0.1836 U	0.2244 U	0.204 U	0.204 U	0.2346 U	0.4284 U	0.255 U	0.3876 U	0.2142 U	0.1734 U	0.1632 U
SB-E13-1-28	28	SB-E13-1	E13	6/22/2018	0.1836 U	34 U	0.92 J	0.1496 U	0.136 U	0.136 U	0.1564 U	0.2856 U	0.17 U	0.2584 U	0.1428 U	0.1156 U	0.1088 U
SB-E17-1-30	30	SB-E17-1	E17	6/27/2018	0.189 U	35 U	1.1 J	0.154 U	0.14 U	0.14 U	0.161 U	0.294 U	0.175 U	0.266 U	0.147 U	0.119 U	0.112 U
SB-E19-1-25	25	SB-E19-1	E19	7/11/2018	0.2241 U	41.5 U	0.25 J	0.19 J	0.166 U	0.166 U	0.1909 U	0.3486 U	0.2075 U	0.3154 U	0.1743 U	0.1411 U	0.1328 U
SB-E22-1-15	15	SB-E22-1	E22	7/12/2018	0.2538 U	47 U	0.36 J	0.35 J	0.188 U	0.188 U	0.2162 U	0.3948 U	0.235 U	0.3572 U	0.1974 U	0.1598 U	0.1504 U
SB-E26-1-25	25	SB-E26-1	E26	7/5/2018	0.2754 U	51 U	0.41 J	0.2244 U	0.204 U	0.204 U	0.2346 U	0.4284 U	0.255 U	0.3876 U	0.2142 U	0.1734 U	0.1632 U
SB-E4-1-32.5	32.5	SB-E4-1	E4	6/18/2018	45.765 U	8475 U	30.51 U	37.29 U	33.9 U	**33.9** U	38.985 U	71.19 U	230 J	64.41 U	35.595 U	28.815 U	27.12 U
DB-E6-1-2	2	DB-E6-1	E6	7/17/2018	140 J	2272.5 U	8.181 U	9.999 U	9.09 U	**9.09** U	14 J	19.089 U	20 J	33 J	9.5445 U	7.7265 U	880
SB-E7-1-31.3	31.3	SB-E7-1	E7	6/27/2018	13.1571 U	2436.5 U	8.7714 U	10.7206 U	9.746 U	**9.746** U	11.2079 U	20.4666 U	68 J,D2	18.5174 U	10.2333 U	8.2841 U	7.7968 U
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	75 J	2500 U	120 J	11 U	600	**10** U	60 J	21 U	63 J	110 J	10.5 U	8.5 U	8 U
SB-F11-1-23	23	SB-F11-1	F11	6/21/2018	0.1863 U	49 J	0.75 J	0.1518 U	0.138 U	0.138 U	0.1587 U	0.2898 U	0.1725 U	0.2622 U	0.1449 U	0.1173 U	0.1104 U
SB-F14-1-25	25	SB-F14-1	F14	6/22/2018	0.27 U	50 U	0.18 U	0.22 U	0.2 U	0.2 U	0.23 U	0.42 U	0.25 U	0.38 U	0.21 U	0.17 U	0.16 U
SB-F18-1-30	30	SB-F18-1	F18	6/28/2018	0.2322 U	43 U	0.47 J	0.1892 U	0.172 U	0.172 U	0.1978 U	0.3612 U	0.215 U	0.3268 U	0.1806 U	0.1462 U	0.1376 U
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	51 J	2551 U	9.1836 U	11.2244 U	270	**10.204** U	15 J	21.4284 U	18 J	58 J	10.7142 U	8.6734 U	960
DB-F26-1-30	30	DB-F26-1	F26	7/6/2018	0.08586 U	18 J	0.08 J	0.06996 U	0.0636 U	0.0636 U	0.07314 U	0.13356 U	0.0795 U	0.12084 U	0.06678 U	0.05406 U	0.05088 U
SB-F28-1-27.5	27.5	SB-F28-1	F28	7/2/2018	0.2133 U	39.5 U	0.2 J	0.1738 U	0.158 U	0.158 U	0.1817 U	0.3318 U	0.1975 U	0.3002 U	0.1659 U	0.1343 U	0.1264 U
DB-F4-1-30	30	DB-F4-1	F4	6/26/2018	0.2295 U	42.5 U	0.153 U	0.187 U	0.17 U	0.17 U	0.1955 U	0.357 U	0.2125 U	0.323 U	0.1785 U	0.1445 U	0.136 U
SB-F5-1-23	23	SB-F5-1	F5	6/19/2018	0.2052 U	38 U	0.46 J	0.1672 U	0.152 U	0.152 U	0.4 J	0.3192 U	1 J	0.2888 U	0.1596 U	0.1292 U	35
SB-F6-1-22	22	SB-F6-1	F6	6/19/2018	180 J	3521 U	12.6756 U	15.4924 U	14.084 U	**14.084** U	32 J	29.5764 U	100 J	86 J	14.7882 U	11.9714 U	11.2672 U
DB-F8-1-33	33	DB-F8-1	F8	7/18/2018	0.2403 U	72 J	0.1602 U	0.1958 U	0.178 U	0.178 U	0.2047 U	0.3738 U	0.2225 U	0.3382 U	0.1869 U	0.1513 U	0.1424 U
DB-G11-1-10	10	DB-G11-1	G11	7/19/2018	1.6 J	82 J	0.31 J	0.2112 U	0.192 U	0.192 U	0.2208 U	0.4032 U	0.27 J	0.3648 U	0.2016 U	0.1632 U	38
DB-G15-1-27.5	27.5	DB-G15-1	G15	7/13/2018	0.2079 U	58 J	0.47 J	0.1694 U	0.154 U	0.154 U	0.1771 U	0.3234 U	0.1925 U	0.2926 U	0.1617 U	0.1309 U	0.1232 U
DB-G18-1-30	30	DB-G18-1	G18	7/11/2018	0.1998 U	37 U	1.5 J	0.1628 U	0.148 U	0.148 U	0.1702 U	0.3108 U	0.185 U	0.2812 U	0.1554 U	0.1258 U	0.1184 U
SB-G19-1-25	25	SB-G19-1	G19	7/11/2018	0.2511 U	46.5 U	0.36	0.2046 U	0.186 U	0.186 U	0.2139 U	0.3906 U	0.2325 U	0.3534 U	0.1953 U	0.1581 U	0.1488 U
DB-G21-1-20	20	DB-G21-1	G21	8/22/2018	1.35 U	250 U	0.9 U	1.1 U	1 U	1 U	1.25 U	2.1 U	0.85 U	1.05 U	28	1.25 U	1.4 U
SB-G24-1-27.5	27.5	SB-G24-1	G24	7/2/2018	0.2646 U	49 U	0.47 J	0.2156 U	0.196 U	0.196 U	0.2254 U	0.4116 U	0.245 U	0.3724 U	0.2058 U	0.1666 U	0.1568 U

Table 5

Soil Results Summary - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	104-51-8	103-65-1	95-47-6	135-98-8	75-65-0	994-05-8	98-06-6	127-18-4	108-88-3	110-57-6	79-01-6	75-01-4	1330-20-7
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	N-butylbenzene	N-propylbenzene	o-Xylene	Sec-butylbenzene	t-Butyl alcohol (TBA)	tert-Amyl methyl ether (TAME)	Tert-butylbenzene	Tetrachloroethene	Toluene	trans-1,4-dichloro-2-butene	Trichloroethene	Vinyl Chloride	Xylenes (Total)
				Residential Screening Level [(a)] : µg/kg	2400000	3800000	650000	2200000	NE	NE	2200000	590	1100000	7.4	940	8.2	580000
				Commercial Screening Level [(b)] : µg/kg	18000000	24000000	2800000	12000000	NE	NE	12000000	2700	5300000	32	6000	150	2500000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-C2-1-12	12	SB-C2-1	C2	8/23/2018	1200	770	23 J	820	237.864 U	5.1357 U	9.1902 U	6.2169 U	4.5951 U	5.406 U	6.2169 U	3.7842 U	35 J
DB-C4-1-9	9	DB-C4-1	C4	7/12/2018	0.215 U	0.1892 U	0.1634 U	0.2408 U	7.568 U	0.1634 U	0.2924 U	0.1978 U	1 J	0.172 U	0.1978 U	0.1204 U	0.3268 U
DB-C4-1-30	30	DB-C4-1	C4	7/12/2018	1700	1400	13.5717 U	2100	628.584 U	13.5717 U	24.2862 U	16.4289 U	12.1431 U	**14.286** U	16.4289 U	**10.0002** U	27.1434 U
SB-C15-1-30	30	SB-C15-1	C15	6/22/2018	0.2325 U	0.2046 U	0.1767 U	0.2604 U	8.184 U	0.1767 U	0.3162 U	0.2139 U	0.1581 U	0.186 U	0.2139 U	0.1302 U	0.3534 U
SB-C17-1-29	29	SB-C17-1	C17	6/25/2018	0.17 U	0.1496 U	0.1292 U	0.1904 U	9.2	0.1292 U	0.2312 U	0.79 J	0.2 J	0.136 U	0.49 J	0.0952 U	0.2584 U
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	30.35 U	120 J,D2	51 J,D2	33.992 U	1068.32 U	23.066 U	41.276 U	27.922 U	20.638 U	**24.28** U	27.922 U	**16.996** U	51 J,D2
SB-C29-1-25	25	SB-C29-1	C29	7/19/2018	0.2025 U	0.1782 U	0.1539 U	0.2268 U	7.128 U	0.1539 U	0.2754 U	0.1863 U	0.79 J	0.162 U	0.1863 U	0.1134 U	0.3078 U
DB-D12-1-30	30	DB-D12-1	D12	7/10/2018	0.305 U	0.2684 U	0.2318 U	0.3416 U	10.736 U	0.2318 U	0.4148 U	0.2806 U	0.21	0.244 U	0.2806 U	0.1708 U	0.4636 U
SB-D12-1-30	30	SB-D12-1	D12	7/10/2018	62 D2	16 J,D2	0.65 U	93 D2	44 U	0.95 U	0.9 U	1 U	1.15 U	1.9 U	1.95 U	0.9 U	2.25 U
SB-D14-1-30	30	SB-D14-1	D14	6/22/2018	0.2275 U	0.2002 U	0.1729 U	0.2548 U	8.008 U	0.1729 U	0.3094 U	0.2093 U	0.1547 U	0.182 U	0.2093 U	0.1274 U	0.3458 U
SB-D20-1-28.5	28.5	SB-D20-1	D20	6/25/2018	0.1925 U	0.1694 U	0.1463 U	0.2156 U	6.776 U	0.1463 U	0.2618 U	1.2 J	0.52 J	0.154 U	0.1771 U	0.1078 U	0.2926 U
SB-D22-1-27	27	SB-D22-1	D22	6/25/2018	0.16 U	0.1408 U	0.1216 U	0.1792 U	5.632 U	0.1216 U	0.2176 U	9.9	0.19 J	0.128 U	1.4 J	0.0896 U	0.2432 U
SB-D24-1-30	30	SB-D24-1	D24	7/2/2018	0.1975 U	0.1738 U	0.1501 U	0.2212 U	6.952 U	0.1501 U	0.2686 U	5.3	0.31 J	0.158 U	2.8 J	0.1106 U	0.3002 U
DB-D26-1-70	70	DB-D26-1	D26	7/5/2018	0.1025 U	0.0902 U	0.0779 U	0.1148 U	3.608 U	0.0779 U	0.1394 U	0.0943 U	0.0697 U	0.082 U	0.0943 U	0.0574 U	0.1558 U
SB-D29-1-27.5	27.5	SB-D29-1	D29	7/13/2018	0.24 U	0.2112 U	0.1824 U	0.2688 U	8.448 U	0.1824 U	0.3264 U	0.2208 U	0.17 J	0.192 U	0.2208 U	0.1344 U	0.3648 U
SB-D29-2-30	30	SB-D29-2	D29	7/19/2018	2700	720	26.391 U	880	1222.32 U	26.391 U	47.226 U	31.947 U	23.613 U	**27.78** U	31.947 U	**19.446** U	52.782 U
SB-D4-1-32	32	SB-D4-1	D4	6/18/2018	8900	6600	8.3334 U	3500	385.968 U	8.3334 U	130 J	10.0878 U	7.4562 U	**8.772** U	10.0878 U	6.1404 U	16.6668 U
SB-D5-1-30	30	SB-D5-1	D5	6/27/2018	870	460	9.3499 U	520	433.048 U	9.3499 U	16.7314 U	11.3183 U	8.3657 U	**9.842** U	11.3183 U	6.8894 U	18.6998 U
SB-D6-1-32	32	SB-D6-1	D6	6/29/2018	4200	2700	20.216 U	2900	936.32 U	20.216 U	36.176 U	24.472 U	18.088 U	**21.28** U	24.472 U	**14.896** U	40.432 U
DB-D7-1-33	33	DB-D7-1	D7	7/17/2018	3100	2500	13 U	2000	880 U	19 U	110 J	20 U	23 U	**38** U	39 U	**18** U	45 U
SB-D8-1-31	31	SB-D8-1	D8	6/21/2018	700	520	8.189 U	760	379.28 U	8.189 U	14.654 U	9.913 U	7.327 U	**8.62** U	9.913 U	6.034 U	16.378 U
SB-E11-1-30	30	SB-E11-1	E11	7/10/2018	0.255 U	0.2244 U	0.1938 U	0.2856 U	8.976 U	0.1938 U	0.3468 U	0.2346 U	0.1734 U	0.204 U	0.2346 U	0.1428 U	0.3876 U
SB-E13-1-28	28	SB-E13-1	E13	6/22/2018	0.17 U	0.1496 U	0.1292 U	0.1904 U	5.984 U	0.1292 U	0.2312 U	1.2 J	0.31 J	0.136 U	0.1564 U	0.0952 U	0.2584 U
SB-E17-1-30	30	SB-E17-1	E17	6/27/2018	0.175 U	0.154 U	0.133 U	0.196 U	6.16 U	0.133 U	0.238 U	3.9	0.57 J	0.14 U	0.38 J	0.098 U	0.266 U
SB-E19-1-25	25	SB-E19-1	E19	7/11/2018	0.2075 U	0.1826 U	0.1577 U	0.2324 U	10	0.1577 U	0.2822 U	0.33 J	0.17 J	0.166 U	0.1909 U	0.1162 U	0.3154 U
SB-E22-1-15	15	SB-E22-1	E22	7/12/2018	0.235 U	0.2068 U	0.1786 U	0.2632 U	24	0.1786 U	0.3196 U	12	0.1598 U	0.188 U	0.2162 U	0.1316 U	0.3572 U
SB-E26-1-25	25	SB-E26-1	E26	7/5/2018	0.255 U	0.2244 U	0.1938 U	0.2856 U	8.976 U	0.1938 U	0.3468 U	0.2346 U	0.35 J	0.204 U	0.2346 U	0.1428 U	0.3876 U
SB-E4-1-32.5	32.5	SB-E4-1	E4	6/18/2018	2900	1500	32.205 U	980	1491.6 U	32.205 U	57.63 U	38.985 U	28.815 U	**33.9** U	38.985 U	**23.73** U	64.41 U
DB-E6-1-2	2	DB-E6-1	E6	7/17/2018	11.3625 U	60 J	31 J	150 J	399.96 U	8.6355 U	15.453 U	10.4535 U	7.7265 U	**9.09** U	10.4535 U	6.363 U	64 J
SB-E7-1-31.3	31.3	SB-E7-1	E7	6/27/2018	380 D2	220 J,D2	9.2587 U	320 D2	428.824 U	9.2587 U	16.5682 U	11.2079 U	8.2841 U	**9.746** U	11.2079 U	6.8222 U	18.5174 U
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	200 J	68 J	86 J	89 J	440 U	9.5 U	17 U	11.5 U	110 J	**10** U	900	7 U	200 J
SB-F11-1-23	23	SB-F11-1	F11	6/21/2018	0.1725 U	0.1518 U	0.1311 U	0.1932 U	6.072 U	0.1311 U	0.2346 U	0.1587 U	0.38 J	0.138 U	0.1587 U	0.0966 U	0.2622 U
SB-F14-1-25	25	SB-F14-1	F14	6/22/2018	0.25 U	0.22 U	0.19 U	0.28 U	8.8 U	0.19 U	0.34 U	0.23 U	0.17 U	0.2 U	0.23 U	0.14 U	0.38 U
SB-F18-1-30	30	SB-F18-1	F18	6/28/2018	0.215 U	0.1892 U	0.1634 U	0.2408 U	7.568 U	0.1634 U	0.2924 U	1 J	0.32 J	0.172 U	0.2 J	0.1204 U	0.3268 U
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	12.755 U	51 J	32 J	43 J	448.976 U	9.6938 U	17.3468 U	***75000***	8.6734 U	**10.204** U	570	7.1428 U	90 J
DB-F26-1-30	30	DB-F26-1	F26	7/6/2018	0.0795 U	0.06996 U	0.06042 U	0.08904 U	2.7984 U	0.06042 U	0.10812 U	0.1 J	0.05406 U	0.0636 U	0.07314 U	0.04452 U	0.12084 U
SB-F28-1-27.5	27.5	SB-F28-1	F28	7/2/2018	0.1975 U	0.1738 U	0.1501 U	0.2212 U	6.952 U	0.1501 U	0.2686 U	0.1817 U	0.17 J	0.158 U	0.1817 U	0.1106 U	0.3002 U
DB-F4-1-30	30	DB-F4-1	F4	6/26/2018	0.2125 U	0.187 U	0.1615 U	0.238 U	7.48 U	0.1615 U	0.289 U	0.1955 U	0.1445 U	0.17 U	0.1955 U	0.119 U	0.323 U
SB-F5-1-23	23	SB-F5-1	F5	6/19/2018	0.19 U	0.71 J	1.4 J	0.95 J	6.688 U	0.1444 U	0.2584 U	0.1748 U	0.24 J	0.152 U	0.1748 U	0.1064 U	1.4 J
SB-F6-1-22	22	SB-F6-1	F6	6/19/2018	17.605 U	78 J	150 J	140 J	619.696 U	13.3798 U	23.9428 U	16.1966 U	11.9714 U	**14.084** U	16.1966 U	**9.8588** U	240 J
DB-F8-1-33	33	DB-F8-1	F8	7/18/2018	0.2225 U	0.1958 U	0.1691 U	0.2492 U	7.832 U	0.1691 U	0.3026 U	0.2047 U	0.1513 U	0.178 U	0.2047 U	0.1246 U	0.3382 U
DB-G11-1-10	10	DB-G11-1	G11	7/19/2018	5.5	0.38 J	0.1824 U	4 J	8.448 U	0.1824 U	0.3264 U	0.2208 U	0.1632 U	0.192 U	0.2208 U	0.1344 U	0.3648 U
DB-G15-1-27.5	27.5	DB-G15-1	G15	7/13/2018	0.1925 U	0.1694 U	0.1463 U	0.2156 U	16	0.1463 U	0.2618 U	0.1771 U	0.27 J	0.154 U	0.1771 U	0.1078 U	0.2926 U
DB-G18-1-30	30	DB-G18-1	G18	7/11/2018	0.185 U	0.1628 U	0.1406 U	0.2072 U	6.512 U	0.1406 U	0.2516 U	12	0.88 J	0.148 U	1.2 J	0.1036 U	0.2812 U
SB-G19-1-25	25	SB-G19-1	G19	7/11/2018	0.2325 U	0.2046 U	0.1767 U	0.2604 U	8.184 U	0.1767 U	0.3162 U	7.2	0.27	0.186 U	0.2139 U	0.1302 U	0.3534 U
DB-G21-1-20	20	DB-G21-1	G21	8/22/2018	0.8 U	0.95 U	0.65 U	1.7 U	44 U	0.95 U	0.9 U	480	1.15 U	1.9 U	15 J	0.9 U	2.25 U
SB-G24-1-27.5	27.5	SB-G24-1	G24	7/2/2018	0.245 U	0.2156 U	0.1862 U	0.2744 U	8.624 U	0.1862 U	0.3332 U	0.2254 U	0.26 J	0.196 U	0.2254 U	0.1372 U	0.3724 U

Table 5

Soil Results Summary - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	71-55-6	75-34-3	75-35-4	563-58-6	96-18-4	95-63-6	96-12-8	541-73-1	108-67-8	78-93-3	594-20-7
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,3-Dichlorobenzene	1,3,5-Trimethylbenzene	2-Butanone (MEK)	2,2-Dichloropropane
				Residential Screening Level [(a)] : µg/kg	1700000	3600	83000	NE	1.5	300000	4.3	NE	270000	27000000	NE
				Commercial Screening Level [(b)] : µg/kg	7200000	16000	350000	NE	21	1800000	57	NE	1500000	190000000	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
DB-G25-1-9.3	9.3	DB-G25-1	G25	7/3/2018	10.1355 U	15.5411 U	12.1626 U	14.1897 U	**13.514** U	38 J	**13.514** U	14.1897 U	15.5411 U	48.6504 U	12.8383 U
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	7.5 U	30 J,P	9 U	10.5 U	**10** U	88 J,P	**10** U	10.5 U	11.5 U	36 U	9.5 U
SB-G4-1-25	25	SB-G4-1	G4	6/29/2018	0.153 U	0.2346 U	0.1836 U	0.2142 U	0.204 U	0.2856 U	0.204 U	0.2142 U	0.2346 U	5.4 J	0.1938 U
SB-G6-1-1.5	1.5	SB-G6-1	G6	8/24/2018	0.1035 U	0.1587 U	0.1242 U	0.1449 U	0.138 U	0.1932 U	0.138 U	0.1449 U	0.1587 U	0.4968 U	0.1311 U
SB-G8-1-8.5	8.5	SB-G8-1	G8	6/20/2018	6.945 U	10.649 U	8.334 U	9.723 U	**9.26** U	12.964 U	**9.26** U	9.723 U	10.649 U	56 J	8.797 U
SB-G9-1-27	27	SB-G9-1	G9	6/20/2018	0.1395 U	0.2139 U	0.1674 U	0.1953 U	0.186 U	0.2604 U	0.186 U	0.1953 U	0.2139 U	1.3 J	0.1767 U
SB-H10-1-26	26	SB-H10-1	H10	6/20/2018	0.129 U	0.1978 U	0.1548 U	0.1806 U	0.172 U	0.2408 U	0.172 U	0.1806 U	0.1978 U	0.6192 U	0.1634 U
SB-H12-1-25	25	SB-H12-1	H12	6/29/2018	0.1245 U	0.1909 U	0.1494 U	0.1743 U	0.166 U	0.2324 U	0.166 U	0.1743 U	0.1909 U	2.9 J	0.1577 U
SB-H15-1-25	25	SB-H15-1	H15	6/29/2018	0.15 U	0.23 U	0.18 U	0.21 U	0.2 U	0.28 U	0.2 U	0.21 U	0.23 U	3.6 J,P	0.19 U
SB-H18-1-22.5	22.5	SB-H18-1	H18	6/28/2018	0.1245 U	0.1909 U	0.1494 U	0.1743 U	0.166 U	0.2324 U	0.166 U	0.1743 U	0.1909 U	1.3 J	0.1577 U
SB-H22-1-10	10	SB-H22-1	H22	8/22/2018	3.504 U	5.3728 U	4.2048 U	4.9056 U	**4.672** U	80 J	**4.672** U	4.9056 U	11 J	16.8192 U	4.4384 U
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	0.75 U	1.15 U	0.9 U	1.05 U	1 U	1.4 U	1 U	1.05 U	1.15 U	25 J,D2	0.95 U
SB-H24-1-7.5	7.5	SB-H24-1	H24	7/12/2018	6.3555 U	9.7451 U	7.6266 U	8.8977 U	**8.474** U	1100	**8.474** U	8.8977 U	200 J	30.5064 U	8.0503 U
SB-H25-1-7.5	7.5	SB-H25-1	H25	7/3/2018	6.048 U	9.2736 U	7.2576 U	8.4672 U	**8.064** U	44 J	**8.064** U	8.4672 U	9.2736 U	71 J	7.6608 U
SB-H8-1-26	26	SB-H8-1	H8	6/20/2018	0.192 U	0.2944 U	0.2304 U	0.2688 U	0.256 U	0.3584 U	0.256 U	0.2688 U	0.2944 U	0.9216 U	0.2432 U
SB-I19-1-25	25	SB-I19-1	I19	6/28/2018	0.156 U	0.2392 U	0.1872 U	0.2184 U	0.208 U	0.2912 U	0.208 U	0.2184 U	0.2392 U	5.3 J	0.1976 U
SB-I21-1-19.5	19.5	SB-I21-1	I21	8/21/2018	3.87 U	5.934 U	4.644 U	5.418 U	**5.16** U	180	**5.16** U	5.418 U	22 J	18.576 U	4.902 U

Table 5

Soil Results Summary - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	99-87-6	67-64-1	71-43-2	74-83-9	156-59-2	1476-11-5	100-41-4	637-92-3	98-82-8	1330-20-7P/M	75-09-2	1634-04-4	91-20-3
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	4-Isopropyltoluene	Acetone	Benzene	Bromomethane	cis-1,2-Dichloroethene	cis-1,4-dichloro-2-butene	Ethylbenzene	Ethyl-tertbutylether (ETBE)	Isopropyl benzene	m&p-Xylene [c]	Methylene chloride	Methyl-t-butyl Ether (MTBE)	Naphthalene
				Residential Screening Level [a] : µg/kg	NE	61000000	330	6800	18000	7.4	5800	NE	1900000	550000	2200	47000	2000
				Commercial Screening Level [b] : µg/kg	NE	670000000	1400	30000	84000	32	25000	NE	9900000	2400000	26000	210000	6500
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
DB-G25-1-9.3	9.3	DB-G25-1	G25	7/3/2018	270 J	3378.5 U	99 J	14.8654 U	13.514 U	**13.514** U	40 J	28.3794 U	970	45 J	14.1897 U	11.4869 U	460
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	130 J,P	2500 U	24 J,P	11 U	10 U	**10** U	36 J,P	21 U	240 J,P	95 J,P	10.5 U	8.5 U	**2800** P
SB-G4-1-25	25	SB-G4-1	G4	6/29/2018	0.2754 U	59 J	0.35 J	0.2244 U	0.204 U	0.204 U	0.2346 U	0.4284 U	0.255 U	0.3876 U	0.2142 U	0.1734 U	0.1632 U
SB-G6-1-1.5	1.5	SB-G6-1	G6	8/24/2018	0.1863 U	34.5 U	0.1242 U	0.1518 U	0.138 U	0.138 U	0.1587 U	0.2898 U	0.1725 U	0.2622 U	0.1449 U	0.1173 U	0.1104 U
SB-G8-1-8.5	8.5	SB-G8-1	G8	6/20/2018	12.501 U	2315 U	8.334 U	10.186 U	9.26 U	**9.26** U	39 J	19.446 U	140 J	17.594 U	9.723 U	7.871 U	7.408 U
SB-G9-1-27	27	SB-G9-1	G9	6/20/2018	0.2511 U	46.5 U	0.1674 U	0.2046 U	0.186 U	0.186 U	0.2139 U	0.3906 U	0.2325 U	0.3534 U	0.1953 U	0.1581 U	0.1488 U
SB-H10-1-26	26	SB-H10-1	H10	6/20/2018	0.2322 U	43 U	0.29 J	0.1892 U	0.172 U	0.172 U	0.1978 U	0.3612 U	0.215 U	0.3268 U	0.1806 U	0.1462 U	0.1376 U
SB-H12-1-25	25	SB-H12-1	H12	6/29/2018	0.2241 U	41.5 U	1.1 J	0.1826 U	0.166 U	0.166 U	0.1909 U	0.3486 U	0.2075 U	0.3154 U	0.1743 U	0.1411 U	0.1328 U
SB-H15-1-25	25	SB-H15-1	H15	6/29/2018	0.27 U	50 U	1 J,P	0.22 U	0.2 U	0.2 U	0.23 U	0.42 U	0.25 U	0.38 U	0.21 U	0.17 U	0.16 U
SB-H18-1-22.5	22.5	SB-H18-1	H18	6/28/2018	0.2241 U	41.5 U	0.64 J	0.1826 U	0.166 U	0.166 U	0.1909 U	0.3486 U	0.2075 U	0.3154 U	0.1743 U	0.1411 U	0.1328 U
SB-H22-1-10	10	SB-H22-1	H22	8/22/2018	21 J	1168 U	26 J	5.1392 U	4.672 U	4.672 U	31 J	9.8112 U	10 J	52 J	4.9056 U	3.9712 U	**4200**
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	5.4 J, D2	320 J,D2	0.9 U	1.1 U	1 U	1 U	1.25 U	2.1 U	14 J,D2	3.6 J,D2	33 D2	1.25 U	1.4 U
SB-H24-1-7.5	7.5	SB-H24-1	H24	7/12/2018	320	2118.5 U	7.6266 U	9.3214 U	8.474 U	**8.474** U	26 J	17.7954 U	140 J	58 J	8.8977 U	7.2029 U	**2300**
SB-H25-1-7.5	7.5	SB-H25-1	H25	7/3/2018	150 J	2016 U	7.2576 U	8.8704 U	8.064 U	**8.064** U	14 J	16.9344 U	140 J	16 J	8.4672 U	6.8544 U	130 J
SB-H8-1-26	26	SB-H8-1	H8	6/20/2018	0.3456 U	64 U	0.2304 U	0.2816 U	0.256 U	0.256 U	0.2944 U	0.5376 U	0.32 U	0.4864 U	0.2688 U	0.2176 U	0.2048 U
SB-I19-1-25	25	SB-I19-1	I19	6/28/2018	0.2808 U	90 J	0.77 J	0.2288 U	0.208 U	0.208 U	0.2392 U	0.4368 U	0.26 U	0.3952 U	0.2184 U	0.1768 U	0.1664 U
SB-I21-1-19.5	19.5	SB-I21-1	I21	8/21/2018	56 J	1290 U	4.644 U	5.676 U	5.16 U	5.16 U	6.5 J	10.836 U	38 J	33 J	5.418 U	4.386 U	1800

Table 5

Soil Results Summary - Volatile Organic Compounds (VOCs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	104-51-8	103-65-1	95-47-6	135-98-8	75-65-0	994-05-8	98-06-6	127-18-4	108-88-3	110-57-6	79-01-6	75-01-4	1330-20-7
				Analytical Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
				Analyte	N-butylbenzene	N-propylbenzene	o-Xylene	Sec-butylbenzene	t-Butyl alcohol (TBA)	tert-Amyl methyl ether (TAME)	Tert-butylbenzene	Tetrachloroethene	Toluene	trans-1,4-dichloro-2-butene	Trichloroethene	Vinyl Chloride	Xylenes (Total)
				Residential Screening Level [(a)] : µg/kg	2400000	3800000	650000	2200000	NE	NE	2200000	590	1100000	7.4	940	8.2	580000
				Commercial Screening Level [(b)] : µg/kg	18000000	24000000	2800000	12000000	NE	NE	12000000	2700	5300000	32	6000	150	2500000
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
DB-G25-1-9.3	9.3	DB-G25-1	G25	7/3/2018	2700	2300	110 J	1700	594.616 U	12.8383 U	22.9738 U	15.5411 U	32 J	**13.514** U	15.5411 U	**9.4598** U	160 J
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	1400 P	620 P	49 J,P	680 P	440 U	9.5 U	17 U	11.5 U	56 J,P	**10** U	11.5 U	7 U	140 J,P
SB-G4-1-25	25	SB-G4-1	G4	6/29/2018	0.255 U	0.2244 U	0.1938 U	0.2856 U	8.976 U	0.1938 U	0.3468 U	0.2346 U	0.3 J	0.204 U	0.2346 U	0.1428 U	0.3876 U
SB-G6-1-1.5	1.5	SB-G6-1	G6	8/24/2018	0.1725 U	0.1518 U	0.1311 U	0.1932 U	6.072 U	0.1311 U	0.2346 U	0.1587 U	0.1173 U	0.138 U	0.1587 U	0.0966 U	0.2622 U
SB-G8-1-8.5	8.5	SB-G8-1	G8	6/20/2018	690	330	8.797 U	400	407.44 U	8.797 U	15.742 U	10.649 U	7.871 U	**9.26** U	10.649 U	6.482 U	17.594 U
SB-G9-1-27	27	SB-G9-1	G9	6/20/2018	0.2325 U	0.2046 U	0.1767 U	0.2604 U	8.184 U	0.1767 U	0.3162 U	0.2139 U	0.1581 U	0.186 U	0.2139 U	0.1302 U	0.3534 U
SB-H10-1-26	26	SB-H10-1	H10	6/20/2018	0.215 U	0.1892 U	0.1634 U	0.2408 U	7.568 U	0.1634 U	0.2924 U	0.1978 U	0.19 J	0.172 U	0.1978 U	0.1204 U	0.3268 U
SB-H12-1-25	25	SB-H12-1	H12	6/29/2018	0.2075 U	0.1826 U	0.1577 U	0.2324 U	7.304 U	0.1577 U	0.2822 U	0.1909 U	0.45 J	0.166 U	0.1909 U	0.1162 U	0.3154 U
SB-H15-1-25	25	SB-H15-1	H15	6/29/2018	0.25 U	0.22 U	0.19 U	0.28 U	8.8 U	0.19 U	0.34 U	0.23 U	0.43 J,P	0.2 U	0.23 U	0.14 U	0.38 U
SB-H18-1-22.5	22.5	SB-H18-1	H18	6/28/2018	0.2075 U	0.1826 U	0.1577 U	0.2324 U	7.304 U	0.1577 U	0.2822 U	3.2 J	0.48 J	0.166 U	0.1909 U	0.1162 U	0.3154 U
SB-H22-1-10	10	SB-H22-1	H22	8/22/2018	35 J	15 J	66 J	13 J	205.568 U	4.4384 U	7.9424 U	5.3728 U	9.3 J	4.672 U	5.3728 U	3.2704 U	120
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	53 D2	18 J,D2	8.3 J,D2	22 J,D2	44 U	0.95 U	0.9 U	1 U	1.15 U	1.9 U	1.95 U	0.9 U	12 J,D2
SB-H24-1-7.5	7.5	SB-H24-1	H24	7/12/2018	950	250	97 J	420	372.856 U	8.0503 U	14.4058 U	9.7451 U	7.2029 U	**8.474** U	9.7451 U	5.9318 U	160 J
SB-H25-1-7.5	7.5	SB-H25-1	H25	7/3/2018	260	160 J	110 J	150 J	354.816 U	7.6608 U	13.7088 U	9.2736 U	6.8544 U	**8.064** U	9.2736 U	5.6448 U	130 J
SB-H8-1-26	26	SB-H8-1	H8	6/20/2018	0.32 U	0.2816 U	0.2432 U	0.3584 U	33	0.2432 U	0.4352 U	0.2944 U	0.2176 U	0.256 U	0.2944 U	0.1792 U	0.4864 U
SB-I19-1-25	25	SB-I19-1	I19	6/28/2018	0.26 U	0.2288 U	0.1976 U	0.2912 U	9.152 U	0.1976 U	0.3536 U	6.5	0.33 J	0.208 U	0.86 J	0.1456 U	0.3952 U
SB-I21-1-19.5	19.5	SB-I21-1	I21	8/21/2018	76 J	36 J	38 J	41 J	227.04 U	4.902 U	8.772 U	5.934 U	4.4 J	5.16 U	5.934 U	3.612 U	72 J

Notes:
EPA = U.S. Environmental Protection Agency
DTSC = Department of Toxic Substances Control
Data presented herein is a summary of VOC soil data analyzed by EPA 8260B, and includes all compounds with at least one detection above the laboratory method detection limit (MDL), and any compounds reported as non-detect whose MDLs are above the respective residential or commercial/industrial screening level.
Soil screening levels are derived from the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 (April 2019 update, June 2020 revision), and the EPA Regional Screening Level (RSL) THQ = 1.0 (May 2020).
(a) The residential screening level is the most stringent between the EPA RSL for residential soil and the DTSC HERO Note 3 for residential soil.
(b) The commercial screening level is the most stringent between the EPA RSL for composite worker soil and the DTSC HERO Note 3 for commercial/industrial soil.
(c) The more stringent of the two screening levels for m-xylene and p-xylene was used.
µg/kg = micrograms per kilogram
ft bgs = feet below ground surface
NE = not established
U = not detected above the laboratory MDL.
J = Result is an estimate.
D2 = Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
P = Sample was received without proper preservation according to EPA guidelines.
BOLD Indicates the non-detect value exceeds one or both of the compound-specific screening levels.
BOLD Indicates the reported concentration exceeds the compound-specific residential screening level.
BOLD Indicates the reported concentration exceeds the compound specific commercial screening level.

Table 6

Soil Results Summary - Semi-Volatile Organic Compounds and Polycyclic Aromatic Hydrocarbons (SVOCs and PAHs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	90-12-0	90-12-0	120-82-1	106-46-7	88-06-2	121-14-2	606-20-2	534-52-1	91-57-6	91-57-6	91-94-1	106-47-8	100-01-6
				Analytical Method	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	EPA 8270C
				Analyte	1-Methyl naphthalene	*1-Methyl naphthalene*	1,2,4-Trichlorobenzene	1,4-Dichloro-benzene	2,4,6-Trichlorophenol	2,4-Dinitro-toluene	2,6-Dinitro-toluene	2-Methyl-4,6-dinitrophenol	2-Methyl naphthalene	*2-Methyl-naphthalene*	3,3'-Dichloro-benzidine	4-Chloro-aniline	4-Nitro-aniline
				Residential Screening Level [(a)] : µg/kg	9900	9900	7800	2600	7800	1700	360	5100	190000	190000	450	2700	27000
				Commercial Screening Level [(b)] : µg/kg	30000	30000	35000	11000	21000	4700	990	42000	1300000	1300000	1200	7400	74000
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
DB-C4-1-5	5	DB-C4-1	C4	7/12/2018	6100 J	5700	1100 U	1550 U	1750 U	700 U	**1650** U	1050 U	5400 J	5100	**2700** U	**3650** U	7400 U
DB-C4-1-10	10	DB-C4-1	C4	7/12/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
SB-C24-1-0.5	0.5	SB-C24-1	C24	7/2/2018	1100 J	1000	880 U	1240 U	1400 U	560 U	**1320** U	840 U	1400 J,L	1300 L	**2160** U	**2920** U	5920 U
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	7700	5000	440 U	620 U	700 U	280 U	**660** U	420 U	9500 L	6000 L	**1080** U	1460 U	2960 U
SB-C24-1-10	10	SB-C24-1	C24	7/2/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
SB-D5-1-0	0	SB-D5-1	D5	6/27/2018	105 U	18.5 U	110 U	155 U	175 U	70 U	165 U	105 U	105 U	31 J	270 U	365 U	740 U
SB-D5-1-5	5	SB-D5-1	D5	6/27/2018	21 U	5 J	22 U	31 U	35 U	14 U	33 U	21 U	21 U	7.5 J	54 U	73 U	148 U
SB-D6-1-0.5	0.5	SB-D6-1	D6	6/29/2018	105 U	370 U	110 U	155 U	175 U	70 U	165 U	105 U	105 U	380 U	270 U	365 U	740 U
SB-D6-1-5	5	SB-D6-1	D6	6/29/2018	420 U	74 U	440 U	620 U	700 U	280 U	**660** U	420 U	420 U	76 U	**1080** U	1460 U	2960 U
DB-D7-1-0.5	0.5	DB-D7-1	D7	7/17/2018	2100 U	370 U	2200 U	**3100** U	3500 U	1400 U	**3300** U	2100 U	2100 U	380 U	**5400** U	**7300** U	14800 U
DB-D7-1-5	5	DB-D7-1	D7	7/17/2018	2100 U	370 U	2200 U	**3100** U	3500 U	1400 U	**3300** U	2100 U	2100 U	380 U	**5400** U	**7300** U	14800 U
DB-D7-1-10	10	DB-D7-1	D7	7/17/2018	105 U	18.5 U	110 U	155 U	175 U	70 U	165 U	105 U	105 U	19 U	270 U	365 U	740 U
SB-E11-1-2.5	2.5	SB-E11-1	E11	7/10/2018	2100 U	185 U	2200 U	**3100** U	3500 U	1400 U	**3300** U	2100 U	2100 U	190 U	**5400** U	**7300** U	14800 U
DB-E6-1-0.5	0.5	DB-E6-1	E6	7/17/2018	210 U	37 U	220 U	310 U	350 U	140 U	330 U	210 U	210 U	61 J	**540** U	730 U	1480 U
DB-E6-1-5	5	DB-E6-1	E6	7/17/2018	420 U	75 J	440 U	620 U	700 U	280 U	**660** U	420 U	420 U	150 J	**1080** U	1460 U	2960 U
DB-E6-1-10	10	DB-E6-1	E6	7/17/2018	210 U	37 U	220 U	310 U	350 U	140 U	330 U	210 U	210 U	38 U	**540** U	730 U	1480 U
SB-E7-1-0	0	SB-E7-1	E7	6/27/2018	52.5 U	33	55 U	77.5 U	87.5 U	35 U	82.5 U	52.5 U	52.5 U	110	135 U	182.5 U	370 U
SB-E7-1-5	5	SB-E7-1	E7	6/27/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	2800 J	2800	1100 U	1550 U	1750 U	700 U	**1650** U	1050 U	3600 J	3600	**2700** U	**3650** U	7400 U
SB-F24-1-10	10	SB-F24-1	F24	7/9/2018	21 U	13	22 U	31 U	35 U	14 U	33 U	21 U	21 U	21	54 U	73 U	148 U
DB-F8-1-0.5	0.5	DB-F8-1	F8	7/18/2018	660 J	510	440 U	620 U	700 U	280 U	**660** U	420 U	720 J	520	**1080** U	1460 U	2960 U
DB-F8-1-2.5	2.5	DB-F8-1	F8	7/18/2018	1050 U	190 J	1100 U	1550 U	1750 U	700 U	**1650** U	1050 U	1050 U	190 U	**2700** U	**3650** U	7400 U
DB-F8-1-5.0	5	DB-F8-1	F8	7/18/2018	42 U	3.7 U	44 U	62 U	70 U	28 U	66 U	42 U	42 U	3.8 U	108 U	146 U	296 U
DB-G21-1-0	0	DB-G21-1	G21	8/22/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
DB-G21-1-0.5	0.5	DB-G21-1	G21	8/22/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
DB-G21-1-5	5	DB-G21-1	G21	8/22/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
DB-G21-1-10	10	DB-G21-1	G21	8/22/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
DB-G25-1-5	5	DB-G25-1	G25	7/3/2018	**26000**	**25000**	440 U	620 U	700 U	280 U	**660** U	420 U	39000 L	39000 L	**1080** U	1460 U	2960 U
DB-G25-1-10	10	DB-G25-1	G25	7/3/2018	4200	4000	220 U	310 U	350 U	140 U	330 U	210 U	6300 L	6800 L	**540** U	730 U	1480 U
DB-G27-1-2.5	2.5	SB-G27-1	G27	7/9/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	4800 J	4800	1100 U	1550 U	1750 U	700 U	**1650** U	1050 U	6000 J	6300	**2700** U	**3650** U	7400 U
SB-G4-1-5	5	SB-G4-1	G4	6/29/2018	52.5 U	74 U	55 U	77.5 U	87.5 U	35 U	82.5 U	52.5 U	52.5 U	76 U	135 U	182.5 U	370 U
SB-G4-1-10	10	SB-G4-1	G4	6/29/2018	52.5 U	37 U	55 U	77.5 U	87.5 U	35 U	82.5 U	52.5 U	52.5 U	38 U	135 U	182.5 U	370 U
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	210 U	37 U	220 U	310 U	350 U	140 U	330 U	210 U	210 U	38 U	**540** U	730 U	1480 U
SB-H22-1-5	5	SB-H22-1	H22	8/22/2018	210 U	37 U	220 U	310 U	350 U	140 U	330 U	210 U	210 U	38 U	**540** U	730 U	1480 U
SB-H22-1-10	10	SB-H22-1	H22	8/22/2018	2000 J	2000	220 U	310 U	350 U	140 U	330 U	210 U	210 U	2300	**540** U	730 U	1480 U
SB-H22-1-20	20	SB-H22-1	H22	8/22/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
SB-H23-1-0.5	0.5	SB-H23-1	H23	8/21/2018	21 U	3.7 U	220 U	310 U	350 U	140 U	330 U	210 U	210 U	38 U	**540** U	730 U	1480 U
SB-H23-1-5	5	SB-H23-1	H23	8/21/2018	210 U	37 U	220 U	310 U	350 U	140 U	330 U	210 U	210 U	38 U	**540** U	730 U	1480 U
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	920 J,D2	890	220 U	310 U	350 U	140 U	330 U	210 U	920 J,D2	880	**540** U	730 U	1480 U
SB-H23-1-15	15	SB-H23-1	H23	8/21/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
SB-H24-1-2.5	2.5	SB-H24-1	H24	7/12/2018	4200 J	3900	2200 U	**3100** U	3500 U	1400 U	**3300** U	2100 U	5300 J	5300	**5400** U	**7300** U	14800 U
SB-H24-1-5	5	SB-H24-1	H24	7/12/2018	**15000** J	**14000**	2200 U	**3100** U	3500 U	1400 U	**3300** U	2100 U	21000 J	21000	**5400** U	**7300** U	14800 U
SB-H24-1-10	10	SB-H24-1	H24	7/12/2018	**12000** J	**11000**	4400 U	**6200** U	7000 U	**2800** U	**6600** U	4200 U	16000 J	15000	**10800** U	**14600** U	**29600** U
SB-H24-1-15	15	SB-H24-1	H24	7/12/2018	4200 U	1700 J	4400 U	**6200** U	7000 U	**2800** U	**6600** U	4200 U	4200 U	1300 J	**10800** U	**14600** U	**29600** U
SB-H24-1-20	20	SB-H24-1	H24	7/12/2018	105 U	41 J	110 U	155 U	175 U	70 U	165 U	105 U	105 U	44 J	270 U	365 U	740 U

Table 6

Soil Results Summary - Semi-Volatile Organic Compounds and Polycyclic Aromatic Hydrocarbons (SVOCs and PAHs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	90-12-0	90-12-0	120-82-1	106-46-7	88-06-2	121-14-2	606-20-2	534-52-1	91-57-6	91-57-6	91-94-1	106-47-8	100-01-6
				Analytical Method	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	EPA 8270C
				Analyte	1-Methyl naphthalene	*1-Methyl naphthalene*	1,2,4-Trichlorobenzene	1,4-Dichloro-benzene	2,4,6-Trichlorophenol	2,4-Dinitro-toluene	2,6-Dinitro-toluene	2-Methyl-4,6-dinitrophenol	2-Methyl naphthalene	*2-Methyl-naphthalene*	3,3'-Dichloro-benzidine	4-Chloro-aniline	4-Nitro-aniline
				Residential Screening Level [(a)] : µg/kg	9900	9900	7800	2600	7800	1700	360	5100	190000	190000	450	2700	27000
				Commercial Screening Level [(b)] : µg/kg	30000	30000	35000	11000	21000	4700	990	42000	1300000	1300000	1200	7400	74000
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-H25-1-5	5	SB-H25-1	H25	7/3/2018	210 U	37 U	220 U	310 U	350 U	140 U	330 U	210 U	210 U	38 U	**540** U	730 U	1480 U
SB-H25-1-10	10	SB-H25-1	H25	7/3/2018	**14000** J	**15000**	**8800** U	**12400** U	**14000** U	**5600** U	**13200** U	**8400** U	16000 J,L	17000 L	**21600** U	**29200** U	**59200** U
SB-I19-1-5	5	SB-I19-1	I19	6/28/2018	21 U	21	22 U	31 U	35 U	14 U	33 U	21 U	21 U	48	54 U	73 U	148 U
SB-I19-1-10	10	SB-I19-1	I19	6/28/2018	21 U	3.7 U	22 U	31 U	35 U	14 U	33 U	21 U	21 U	3.8 U	54 U	73 U	148 U
SB-I21-1-0.5	0.5	SB-I21-1	I21	8/21/2018	21 U	7.9 J	22 U	31 U	35 U	14 U	33 U	21 U	21 U	12	54 U	73 U	148 U
SB-I21-1-5	5	SB-I21-1	I21	8/21/2018	210 U	150	220 U	310 U	350 U	140 U	330 U	210 U	210 U	78 J	**540** U	730 U	1480 U
SB-I21-1-10	10	SB-I21-1	I21	8/21/2018	21 U	5 J	22 U	31 U	35 U	14 U	33 U	21 U	21 U	5.7 J	54 U	73 U	148 U
SB-I21-1-15	15	SB-I21-1	I21	8/21/2018	210 U	56 J	220 U	310 U	350 U	140 U	330 U	210 U	210 U	48 J	**540** U	730 U	1480 U
SB-I21-1-20	20	SB-I21-1	I21	8/21/2018	1700 J,D2	1500	220 U	310 U	350 U	140 U	330 U	210 U	1500 J,D2	1500	**540** U	730 U	1480 U

Table 6

Soil Results Summary - Semi-Volatile Organic Compounds and Polycyclic Aromatic Hydrocarbons (SVOCs and PAHs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	208-96-8	208-96-8	83-32-9	83-32-9	120-12-7	120-12-7	103-33-3	56-55-3	56-55-3	191-24-2	191-24-2	92-87-5	50-32-8
				Analytical Method	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C
				Analyte	Acenaphthylene	*Acenaphthylene*	Acenaphthene	*Acenaphthene*	Anthracene	*Anthracene*	Azobenzene	Benz(a) anthracene	*Benz(a) anthracene*	Benzo(g,h,i) perylene	*Benzo(g,h,i) perylene*	Benzidine	Benzo(a) pyrene
				Residential Screening Level [(a)] : µg/kg	NE	NE	3300000	3300000	17000000	17000000	5600	1100	1100	NE	NE	0.24	110
				Commercial Screening Level [(b)] : µg/kg	NE	NE	23000000	23000000	130000000	130000000	26000	12000	12000	NE	NE	3	1300
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
DB-C4-1-5	5	DB-C4-1	C4	7/12/2018	1000 U	230 J	1250 U	680	1150 U	190 J	3350 U	1100 U	55 U	1450 U	330 J	**1150** U	**1250** U
DB-C4-1-10	10	DB-C4-1	C4	7/12/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.1 U	29 U	5.9 J	**23** U	25 U
SB-C24-1-0.5	0.5	SB-C24-1	C24	7/2/2018	800 U	132 U	1000 U	340 J	920 U	100 J	2680 U	880 U	57 J	1160 U	48 U	**920** U	**1000** U
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	400 U	260	3700 J	1100	1000 J	370	1340 U	440 U	190	580 U	16 J	**460** U	**500** U
SB-C24-1-10	10	SB-C24-1	C24	7/2/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.1 U	29 U	1.2 U	**23** U	25 U
SB-D5-1-0	0	SB-D5-1	D5	6/27/2018	100 U	16.5 U	125 U	7 U	115 U	20 J	335 U	110 U	5.5 U	145 U	24 J	**115** U	**125** U
SB-D5-1-5	5	SB-D5-1	D5	6/27/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.9 J	67 U	22 U	1.7 J	29 U	2.8 J	**23** U	25 U
SB-D6-1-0.5	0.5	SB-D6-1	D6	6/29/2018	100 U	330 U	125 U	140 U	115 U	120 U	335 U	110 U	110 U	145 U	120 U	**115** U	**125** U
SB-D6-1-5	5	SB-D6-1	D6	6/29/2018	400 U	66 U	500 U	28 U	460 U	67 J	1340 U	440 U	26 J	580 U	24 U	**460** U	**500** U
DB-D7-1-0.5	0.5	DB-D7-1	D7	7/17/2018	2000 U	330 U	2500 U	140 U	2300 U	120 U	**6700** U	**2200** U	110 U	2900 U	120 U	**2300** U	**2500** U
DB-D7-1-5	5	DB-D7-1	D7	7/17/2018	2000 U	330 U	2500 U	140 U	2300 U	120 U	**6700** U	**2200** U	110 U	2900 U	120 U	**2300** U	**2500** U
DB-D7-1-10	10	DB-D7-1	D7	7/17/2018	100 U	16.5 U	125 U	7 U	115 U	6 U	335 U	110 U	5.5 U	145 U	6 U	**115** U	**125** U
SB-E11-1-2.5	2.5	SB-E11-1	E11	7/10/2018	2000 U	165 U	2500 U	70 U	2300 U	60 U	**6700** U	**2200** U	55 U	2900 U	310 J	**2300** U	**2500** U
DB-E6-1-0.5	0.5	DB-E6-1	E6	7/17/2018	200 U	33 U	250 U	14 U	230 U	12 U	670 U	220 U	11 U	290 U	12 U	**230** U	**250** U
DB-E6-1-5	5	DB-E6-1	E6	7/17/2018	400 U	66 U	500 U	28 U	460 U	24 U	1340 U	440 U	22 U	580 U	24 U	**460** U	**500** U
DB-E6-1-10	10	DB-E6-1	E6	7/17/2018	200 U	52 J	250 U	14 U	230 U	15 J	670 U	220 U	11 U	290 U	12 U	**230** U	**250** U
SB-E7-1-0	0	SB-E7-1	E7	6/27/2018	50 U	9 J	62.5 U	3.5 U	57.5 U	14 J	167.5 U	55 U	2.75 U	72.5 U	7.6 J	**57.5** U	62.5 U
SB-E7-1-5	5	SB-E7-1	E7	6/27/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.1 U	29 U	1.2 U	**23** U	25 U
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	1000 U	165 U	1600 J	1300	1150 U	260 J	3350 U	1100 U	160 J	1450 U	60 U	**1150** U	**1250** U
SB-F24-1-10	10	SB-F24-1	F24	7/9/2018	20 U	4.1 J	57 J	50	35 J	35	67 U	26 J	28	29 U	4.9 J	**23** U	25 U
DB-F8-1-0.5	0.5	DB-F8-1	F8	7/18/2018	400 U	46 J	500 U	7 U	460 U	35 J	1340 U	440 U	8.6 J	580 U	6 U	**460** U	**500** U
DB-F8-1-2.5	2.5	DB-F8-1	F8	7/18/2018	1000 U	165 U	1250 U	300 J	1150 U	67 J	3350 U	1100 U	55 U	1450 U	60 U	**1150** U	**1250** U
DB-F8-1-5.0	5	DB-F8-1	F8	7/18/2018	40 U	3.3 U	50 U	1.4 U	46 U	1.5 J	134 U	44 U	2.1 J	58 U	8.2 J	**46** U	50 U
DB-G21-1-0	0	DB-G21-1	G21	8/22/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.1 U	29 U	3.8 J	**23** U	25 U
DB-G21-1-0.5	0.5	DB-G21-1	G21	8/22/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.1 U	29 U	1.2 U	**23** U	25 U
DB-G21-1-5	5	DB-G21-1	G21	8/22/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.1 U	29 U	1.2 U	**23** U	25 U
DB-G21-1-10	10	DB-G21-1	G21	8/22/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.1 U	29 U	1.2 U	**23** U	25 U
DB-G25-1-5	5	DB-G25-1	G25	7/3/2018	400 U	66 U	500 U	860	460 U	520	1340 U	440 U	190 J	580 U	41 J	**460** U	**500** U
DB-G25-1-10	10	DB-G25-1	G25	7/3/2018	200 U	190	250 U	350	230 U	200	670 U	220 U	110	290 U	73 J	**230** U	**250** U
DB-G27-1-2.5	2.5	SB-G27-1	G27	7/9/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.1 U	29 U	1.2 U	**23** U	25 U
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	1000 U	165 U	1250 U	190 J	1150 U	250 J	3350 U	1100 U	180 J	1450 U	60 U	**1150** U	**1250** U
SB-G4-1-5	5	SB-G4-1	G4	6/29/2018	50 U	66 U	62.5 U	41 J	94 J,D2	140 J	167.5 U	410 J,D2	450	600 J,D2	400	**57.5** U	**850** D2
SB-G4-1-10	10	SB-G4-1	G4	6/29/2018	50 U	33 U	62.5 U	14 U	57.5 U	17 J	167.5 U	55 U	25 J	72.5 U	32 J	**57.5** U	62.5 U
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	200 U	33 U	250 U	14 U	230 U	12 U	670 U	220 U	11 U	290 U	21 J	**230** U	**250** U
SB-H22-1-5	5	SB-H22-1	H22	8/22/2018	200 U	33 U	250 U	14 U	230 U	12 U	670 U	220 U	11 U	290 U	25 J	**230** U	**250** U
SB-H22-1-10	10	SB-H22-1	H22	8/22/2018	200 U	33 U	250 U	14 U	230 U	270	670 U	220 U	11 U	290 U	41 J	**230** U	**250** U
SB-H22-1-20	20	SB-H22-1	H22	8/22/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	2.7 B1,J	29 U	1.2 U	**23** U	25 U
SB-H23-1-0.5	0.5	SB-H23-1	H23	8/21/2018	200 U	33 U	440 J,D2	14 U	230 U	690	670 U	260 J,D2	220	290 U	74 J	**230** U	**250** U
SB-H23-1-5	5	SB-H23-1	H23	8/21/2018	200 U	33 U	250 U	14 U	230 U	12 U	670 U	220 U	26 J	290 U	36 J	**230** U	**250** U
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	200 U	33 U	250 U	14 U	230 U	150	670 U	220 U	72 J	290 U	31 J	**230** U	**250** U
SB-H23-1-15	15	SB-H23-1	H23	8/21/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.1 U	29 U	1.2 U	**23** U	25 U
SB-H24-1-2.5	2.5	SB-H24-1	H24	7/12/2018	2000 U	330 U	2500 U	460 J	2300 U	200 J	**6700** U	**2200** U	110 U	2900 U	120 U	**2300** U	**2500** U
SB-H24-1-5	5	SB-H24-1	H24	7/12/2018	2000 U	490 J	2500 U	140 U	2300 U	490 J	**6700** U	**2200** U	330 J	2900 U	120 U	**2300** U	**2500** U
SB-H24-1-10	10	SB-H24-1	H24	7/12/2018	4000 U	660 U	5000 U	830 J	4600 U	870 J	**13400** U	**4400** U	860 J	5800 U	240 U	**4600** U	**5000** U
SB-H24-1-15	15	SB-H24-1	H24	7/12/2018	4000 U	660 U	5000 U	350 J	4600 U	240 U	**13400** U	**4400** U	260 J	5800 U	240 U	**4600** U	**5000** U
SB-H24-1-20	20	SB-H24-1	H24	7/12/2018	100 U	16.5 U	125 U	7 U	115 U	6 U	335 U	110 U	6.1 J	145 U	6 U	**115** U	**125** U

Table 6

Soil Results Summary - Semi-Volatile Organic Compounds and Polycyclic Aromatic Hydrocarbons (SVOCs and PAHs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	208-96-8	208-96-8	83-32-9	83-32-9	120-12-7	120-12-7	103-33-3	56-55-3	56-55-3	191-24-2	191-24-2	92-87-5	50-32-8
				Analytical Method	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C
				Analyte	Acenaphthylene	*Acenaphthylene*	Acenaphthene	*Acenaphthene*	Anthracene	*Anthracene*	Azobenzene	Benz(a) anthracene	*Benz(a) anthracene*	Benzo(g,h,i) perylene	*Benzo(g,h,i) perylene*	Benzidine	Benzo(a) pyrene
				Residential Screening Level [(a)] : µg/kg	NE	NE	3300000	3300000	17000000	17000000	5600	1100	1100	NE	NE	0.24	110
				Commercial Screening Level [(b)] : µg/kg	NE	NE	23000000	23000000	130000000	130000000	26000	12000	12000	NE	NE	3	1300
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-H25-1-5	5	SB-H25-1	H25	7/3/2018	200 U	33 U	250 U	14 U	230 U	12 U	670 U	220 U	11 U	290 U	17 J	**230** U	**250** U
SB-H25-1-10	10	SB-H25-1	H25	7/3/2018	8000 U	1320 U	10000 U	1600 J	9200 U	5400	**26800** U	**8800** U	2800 J	11600 U	480 U	**9200** U	**10000** U
SB-I19-1-5	5	SB-I19-1	I19	6/28/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.6 J	67 U	22 U	1.5 J	29 U	6.4 J	**23** U	25 U
SB-I19-1-10	10	SB-I19-1	I19	6/28/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.1 U	29 U	1.2 U	**23** U	25 U
SB-I21-1-0.5	0.5	SB-I21-1	I21	8/21/2018	20 U	3.3 U	25 U	4.7 J	23 U	1.2 U	67 U	22 U	1.1 U	29 U	1.8 J	**23** U	25 U
SB-I21-1-5	5	SB-I21-1	I21	8/21/2018	200 U	33 U	250 U	14 U	230 U	12 U	670 U	220 U	11 U	290 U	12 U	**230** U	**250** U
SB-I21-1-10	10	SB-I21-1	I21	8/21/2018	20 U	3.3 U	25 U	1.4 U	23 U	1.2 U	67 U	22 U	1.4 J	29 U	2.2 J	**23** U	25 U
SB-I21-1-15	15	SB-I21-1	I21	8/21/2018	200 U	33 U	250 U	40 J	230 U	39 J	670 U	220 U	24 J	290 U	13 J	**230** U	**250** U
SB-I21-1-20	20	SB-I21-1	I21	8/21/2018	200 U	33 U	250 U	77 J	230 U	290	670 U	220 U	180	290 U	25 J	**230** U	**250** U

Table 6

Soil Results Summary - Semi-Volatile Organic Compounds and Polycyclic Aromatic Hydrocarbons (SVOCs and PAHs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	50-32-8	205-99-2	205-99-2	207-08-9	207-08-9	65-85-0	100-51-6	111-44-4	117-81-7	86-74-8	218-01-9	218-01-9
				Analytical Method	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	*EPA 8270CM*
				Analyte	*Benzo(a) pyrene*	Benzo(b) fluoranthene	*Benzo(b) fluoranthene*	Benzo(k) fluoranthene	*Benzo(k) fluoranthene*	Benzoic acid	Benzyl alcohol	Bis(2-chloroethyl) Ether	Bis(2-ethylhexyl) phthalate	Carbazole	Chrysene	*Chrysene*
				Residential Screening Level [(a)] : µg/kg	110	1100	1100	11000	11000	250000000	6300000	100	39000	NE	110000	110000
				Commercial Screening Level [(b)] : µg/kg	1300	13000	13000	130000	130000	2100000000	53000000	470	110000	NE	1300000	1300000
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
DB-C4-1-5	5	DB-C4-1	C4	7/12/2018	90 U	**1350** U	85 U	1600 U	85 U	1800 U	1800 U	**1250** U	2600 U	1150 U	1000 U	84 J
DB-C4-1-10	10	DB-C4-1	C4	7/12/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	92 J	25 U	52 U	23 U	20 U	0.83 U
SB-C24-1-0.5	0.5	SB-C24-1	C24	7/2/2018	72 U	1080 U	68 U	1280 U	68 U	1440 U	1440 U	**1000** U	2080 U	920 U	800 U	55 J
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	51 J	540 U	76 J	640 U	55 J	720 U	720 U	**500** U	1040 U	460 U	400 U	180
SB-C24-1-10	10	SB-C24-1	C24	7/2/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	53 B1,J	25 U	52 U	23 U	20 U	0.83 U
SB-D5-1-0	0	SB-D5-1	D5	6/27/2018	9 U	135 U	8.5 U	160 U	8.5 U	180 U	180 U	**125** U	260 U	115 U	100 U	4.2 J
SB-D5-1-5	5	SB-D5-1	D5	6/27/2018	1.8 U	27 U	5.2 J	32 U	5.1 J	36 U	38 J	25 U	52 U	23 U	20 U	10
SB-D6-1-0.5	0.5	SB-D6-1	D6	6/29/2018	**180** U	135 U	170 U	160 U	170 U	180 U	180 U	**125** U	260 U	115 U	100 U	83 U
SB-D6-1-5	5	SB-D6-1	D6	6/29/2018	36 U	540 U	58 J	640 U	54 J	720 U	720 U	**500** U	1040 U	460 U	400 U	240
DB-D7-1-0.5	0.5	DB-D7-1	D7	7/17/2018	**180** U	**2700** U	170 U	3200 U	170 U	3600 U	3600 U	**2500** U	5200 U	2300 U	2000 U	83 U
DB-D7-1-5	5	DB-D7-1	D7	7/17/2018	**180** U	**2700** U	170 U	3200 U	170 U	3600 U	3600 U	**2500** U	5200 U	2300 U	2000 U	83 U
DB-D7-1-10	10	DB-D7-1	D7	7/17/2018	9 U	135 U	8.5 U	160 U	8.5 U	180 U	180 U	**125** U	260 U	115 U	100 U	4.15 U
SB-E11-1-2.5	2.5	SB-E11-1	E11	7/10/2018	90 U	**2700** U	85 U	3200 U	85 U	3600 U	3600 U	**2500** U	5200 U	2300 U	2000 U	72 J
DB-E6-1-0.5	0.5	DB-E6-1	E6	7/17/2018	18 U	270 U	17 U	320 U	17 U	360 U	360 U	**250** U	520 U	230 U	200 U	8.3 U
DB-E6-1-5	5	DB-E6-1	E6	7/17/2018	36 U	540 U	34 U	640 U	34 U	720 U	720 U	**500** U	1040 U	460 U	400 U	16.6 U
DB-E6-1-10	10	DB-E6-1	E6	7/17/2018	18 U	270 U	17 U	320 U	17 U	360 U	360 U	**250** U	520 U	230 U	200 U	8.3 U
SB-E7-1-0	0	SB-E7-1	E7	6/27/2018	4.5 U	67.5 U	4.25 U	80 U	4.25 U	90 U	90 U	62.5 U	130 U	57.5 U	50 U	7.5 J
SB-E7-1-5	5	SB-E7-1	E7	6/27/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	47 J	25 U	52 U	23 U	20 U	0.83 U
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	90 U	**1350** U	85 U	1600 U	85 U	1800 U	1800 U	**1250** U	2600 U	1150 U	1000 U	240 J
SB-F24-1-10	10	SB-F24-1	F24	7/9/2018	8 J	27 U	15	32 U	11	36 U	78 J	25 U	52 U	23 U	29 J	27
DB-F8-1-0.5	0.5	DB-F8-1	F8	7/18/2018	19 J	540 U	8.5 U	640 U	8.5 U	720 U	720 U	**500** U	1040 U	460 U	400 U	20 J
DB-F8-1-2.5	2.5	DB-F8-1	F8	7/18/2018	90 U	**1350** U	85 U	1600 U	85 U	1800 U	1800 U	**1250** U	2600 U	1150 U	1000 U	84 J
DB-F8-1-5.0	5	DB-F8-1	F8	7/18/2018	2.8 J	54 U	2.8 J	64 U	2.2 J	72 U	72 U	50 U	104 U	46 U	40 U	3.3 J
DB-G21-1-0	0	DB-G21-1	G21	8/22/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	41 J	25 U	52 U	23 U	20 U	1.8 J
DB-G21-1-0.5	0.5	DB-G21-1	G21	8/22/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	41 J	25 U	52 U	23 U	20 U	0.83 U
DB-G21-1-5	5	DB-G21-1	G21	8/22/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	36 U	25 U	52 U	23 U	20 U	0.83 U
DB-G21-1-10	10	DB-G21-1	G21	8/22/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	52 J	25 U	52 U	23 U	20 U	0.83 U
DB-G25-1-5	5	DB-G25-1	G25	7/3/2018	65 J	540 U	130 J	640 U	100 J	720 U	720 U	**500** U	1040 U	460 U	400 U	270
DB-G25-1-10	10	DB-G25-1	G25	7/3/2018	**150**	270 U	140	320 U	110	360 U	360 U	**250** U	520 U	230 U	200 U	140
DB-G27-1-2.5	2.5	SB-G27-1	G27	7/9/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	68 J	25 U	110 J	23 U	20 U	0.83 U
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	90 U	**1350** U	85 U	1600 U	85 U	1800 U	1800 U	**1250** U	2600 U	1150 U	1000 U	360 J
SB-G4-1-5	5	SB-G4-1	G4	6/29/2018	**960**	520 J,D2	480	610 J,D2	580	90 U	90 U	62.5 U	130 U	57.5 U	480 J,D2	440
SB-G4-1-10	10	SB-G4-1	G4	6/29/2018	43 J	67.5 U	37 J	80 U	29 J	90 U	90 U	62.5 U	130 U	57.5 U	50 U	30 J
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	18 U	270 U	17 U	320 U	17 U	360 U	360 U	**250** U	520 U	230 U	200 U	8.3 U
SB-H22-1-5	5	SB-H22-1	H22	8/22/2018	80 J	270 U	17 U	320 U	17 U	360 U	360 U	**250** U	520 U	230 U	200 U	12 J
SB-H22-1-10	10	SB-H22-1	H22	8/22/2018	**130**	270 U	120	320 U	61 J	360 U	360 U	**250** U	520 U	230 U	200 U	380
SB-H22-1-20	20	SB-H22-1	H22	8/22/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	36 U	25 U	52 U	23 U	20 U	0.83 U
SB-H23-1-0.5	0.5	SB-H23-1	H23	8/21/2018	**290**	270 U	200	320 U	180	360 U	360 U	**250** U	520 U	230 U	340 J,D2	290
SB-H23-1-5	5	SB-H23-1	H23	8/21/2018	55 J	270 U	29 J	320 U	17 U	360 U	360 U	**250** U	520 U	230 U	200 U	70 J
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	88 J	270 U	51 J	320 U	21 J	360 U	360 U	**250** U	520 U	290 J,D2	290 J,D2	230
SB-H23-1-15	15	SB-H23-1	H23	8/21/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	72 J	25 U	52 U	23 U	20 U	0.9 J
SB-H24-1-2.5	2.5	SB-H24-1	H24	7/12/2018	**180** U	**2700** U	170 U	3200 U	170 U	3600 U	3600 U	**2500** U	5200 U	2300 U	2000 U	84 J
SB-H24-1-5	5	SB-H24-1	H24	7/12/2018	**230** J	**2700** U	170 U	3200 U	170 U	3600 U	3600 U	**2500** U	5200 U	2300 U	2000 U	600 J
SB-H24-1-10	10	SB-H24-1	H24	7/12/2018	**420** J	**5400** U	340 U	6400 U	340 U	7200 U	7200 U	**5000** U	10400 U	4600 U	4000 U	1700 J
SB-H24-1-15	15	SB-H24-1	H24	7/12/2018	**380** J	**5400** U	340 U	6400 U	340 U	7200 U	7200 U	**5000** U	10400 U	4600 U	4000 U	910 J
SB-H24-1-20	20	SB-H24-1	H24	7/12/2018	9 U	135 U	8.5 U	160 U	8.5 U	180 U	180 U	**125** U	260 U	115 U	100 U	13 J

Table 6

Soil Results Summary - Semi-Volatile Organic Compounds and Polycyclic Aromatic Hydrocarbons (SVOCs and PAHs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	50-32-8	205-99-2	205-99-2	207-08-9	207-08-9	65-85-0	100-51-6	111-44-4	117-81-7	86-74-8	218-01-9	218-01-9
				Analytical Method	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	*EPA 8270CM*
				Analyte	*Benzo(a) pyrene*	Benzo(b) fluoranthene	*Benzo(b) fluoranthene*	Benzo(k) fluoranthene	*Benzo(k) fluoranthene*	Benzoic acid	Benzyl alcohol	Bis(2-chloroethyl) Ether	Bis(2-ethylhexyl) phthalate	Carbazole	Chrysene	*Chrysene*
				Residential Screening Level [(a)] : µg/kg	110	1100	1100	11000	11000	250000000	6300000	100	39000	NE	110000	110000
				Commercial Screening Level [(b)] : µg/kg	1300	13000	13000	130000	130000	2100000000	53000000	470	110000	NE	1300000	1300000
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-H25-1-5	5	SB-H25-1	H25	7/3/2018	18 U	270 U	17 U	320 U	17 U	360 U	360 U	**250** U	520 U	230 U	200 U	14 J
SB-H25-1-10	10	SB-H25-1	H25	7/3/2018	**1200** J	**10800** U	680 U	**12800** U	680 U	61000 J	14400 U	**10000** U	20800 U	9200 U	8000 U	5300
SB-I19-1-5	5	SB-I19-1	I19	6/28/2018	4.8 J,L	27 U	3.2 J	32 U	2 J	36 U	42 B1,J	25 U	52 U	23 U	20 U	5.3 J
SB-I19-1-10	10	SB-I19-1	I19	6/28/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	36 U	25 U	52 U	23 U	20 U	0.83 U
SB-I21-1-0.5	0.5	SB-I21-1	I21	8/21/2018	1.8 U	27 U	1.7 U	32 U	1.7 U	36 U	66 J	25 U	52 U	23 U	20 U	2 J
SB-I21-1-5	5	SB-I21-1	I21	8/21/2018	18 U	270 U	17 U	320 U	17 U	360 U	360 U	**250** U	520 U	230 U	200 U	11 J
SB-I21-1-10	10	SB-I21-1	I21	8/21/2018	3.2 J	27 U	1.7 U	32 U	1.7 U	36 U	36 U	25 U	52 U	23 U	20 U	2.9 J
SB-I21-1-15	15	SB-I21-1	I21	8/21/2018	18 U	270 U	17 U	320 U	17 U	360 U	360 U	**250** U	520 U	230 U	200 U	52 J
SB-I21-1-20	20	SB-I21-1	I21	8/21/2018	100	270 U	70 J	320 U	53 J	360 U	360 U	**250** U	520 U	230 U	330 J,D2	310

Table 6

Soil Results Summary - Semi-Volatile Organic Compounds and Polycyclic Aromatic Hydrocarbons (SVOCs and PAHs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	53-70-3	53-70-3	132-64-9	206-44-0	206-44-0	86-73-7	86-73-7	118-74-1	87-68-3	77-47-4	67-72-1	193-39-5
				Analytical Method	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C
				Analyte	Dibenz(a,h) anthracene	*Dibenz(a,h) anthracene*	Dibenzofuran	Fluoranthene	*Fluoranthene*	Fluorene	*Fluorene*	Hexachloro-benzene	Hexachloro-butadiene	Hexachloro-cyclo-pentadiene	Hexachloro-ethane	Indeno(1,2,3-cd)pyrene
				Residential Screening Level [(a)] : µg/kg	28	28	66000	2400000	2400000	2300000	2300000	190	1200	1800	1800	1100
				Commercial Screening Level [(b)] : µg/kg	310	310	650000	18000000	18000000	17000000	17000000	860	5300	7500	8000	13000
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
DB-C4-1-5	5	DB-C4-1	C4	7/12/2018	**1050** U	**70** U	700 U	1050 U	78 J	1350 U	690	**750** U	**1950** U	700 U	**2150** U	**4500** U
DB-C4-1-10	10	DB-C4-1	C4	7/12/2018	21 U	1.4 U	14 U	21 U	2.1 J	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
SB-C24-1-0.5	0.5	SB-C24-1	C24	7/2/2018	**840** U	**56** U	560 U	840 U	300 J	1080 U	450	**600** U	**1560** U	560 U	1720 U	**3600** U
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	**420** U	19 J	280 U	2800 J	1400	3300 J	1300	**300** U	780 U	280 U	860 U	**1800** U
SB-C24-1-10	10	SB-C24-1	C24	7/2/2018	21 U	1.4 U	14 U	21 U	1.8 J	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
SB-D5-1-0	0	SB-D5-1	D5	6/27/2018	**105** U	7 U	70 U	105 U	4.8 B1,J	135 U	6.5 U	75 U	195 U	70 U	215 U	450 U
SB-D5-1-5	5	SB-D5-1	D5	6/27/2018	21 U	2.2 J	14 U	21 U	3.2 B1,J	27 U	1.8 J	15 U	39 U	14 U	43 U	90 U
SB-D6-1-0.5	0.5	SB-D6-1	D6	6/29/2018	**105** U	**180** J	70 U	105 U	84 U	135 U	130 U	75 U	195 U	70 U	215 U	450 U
SB-D6-1-5	5	SB-D6-1	D6	6/29/2018	**420** U	**35** J	280 U	420 U	170 J	540 U	190 J	**300** U	780 U	280 U	860 U	**1800** U
DB-D7-1-0.5	0.5	DB-D7-1	D7	7/17/2018	**2100** U	**140** U	1400 U	2100 U	84 U	2700 U	130 U	**1500** U	**3900** U	1400 U	**4300** U	**9000** U
DB-D7-1-5	5	DB-D7-1	D7	7/17/2018	**2100** U	**140** U	1400 U	2100 U	84 U	2700 U	130 U	**1500** U	**3900** U	1400 U	**4300** U	**9000** U
DB-D7-1-10	10	DB-D7-1	D7	7/17/2018	**105** U	7 U	70 U	105 U	4.2 U	135 U	6.5 U	75 U	195 U	70 U	215 U	450 U
SB-E11-1-2.5	2.5	SB-E11-1	E11	7/10/2018	**2100** U	**70** U	1400 U	2100 U	130 J	2700 U	65 U	**1500** U	**3900** U	1400 U	**4300** U	**9000** U
DB-E6-1-0.5	0.5	DB-E6-1	E6	7/17/2018	**210** U	14 U	140 U	210 U	8.4 U	270 U	13 U	150 U	390 U	140 U	430 U	900 U
DB-E6-1-5	5	DB-E6-1	E6	7/17/2018	**420** U	28 U	280 U	420 U	18 J	540 U	26 U	**300** U	780 U	280 U	860 U	**1800** U
DB-E6-1-10	10	DB-E6-1	E6	7/17/2018	**210** U	14 U	140 U	210 U	21 J	270 U	13 U	150 U	390 U	140 U	430 U	900 U
SB-E7-1-0	0	SB-E7-1	E7	6/27/2018	**52.5** U	3.5 U	35 U	52.5 U	7.1 B1,J	67.5 U	12 J	37.5 U	97.5 U	35 U	107.5 U	225 U
SB-E7-1-5	5	SB-E7-1	E7	6/27/2018	21 U	1.4 U	14 U	21 U	0.84 U	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	**1050** U	**70** U	1000 J	1050 U	850	1350 U	840	**750** U	**1950** U	700 U	**2150** U	**4500** U
SB-F24-1-10	10	SB-F24-1	F24	7/9/2018	21 U	2.3 J	38 J	120 J	110	36 J	35	15 U	39 U	14 U	43 U	90 U
DB-F8-1-0.5	0.5	DB-F8-1	F8	7/18/2018	**420** U	7 U	280 U	420 U	27 J	540 U	160	**300** U	780 U	280 U	860 U	**1800** U
DB-F8-1-2.5	2.5	DB-F8-1	F8	7/18/2018	**1050** U	**70** U	700 U	1050 U	130 J	1350 U	140 J	**750** U	**1950** U	700 U	**2150** U	**4500** U
DB-F8-1-5.0	5	DB-F8-1	F8	7/18/2018	**42** U	1.4 U	28 U	42 U	4.8 J	54 U	1.3 U	30 U	78 U	28 U	86 U	180 U
DB-G21-1-0	0	DB-G21-1	G21	8/22/2018	21 U	1.4 U	14 U	21 U	0.84 U	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
DB-G21-1-0.5	0.5	DB-G21-1	G21	8/22/2018	21 U	1.4 U	14 U	21 U	0.84 U	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
DB-G21-1-5	5	DB-G21-1	G21	8/22/2018	21 U	1.4 U	14 U	21 U	0.84 U	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
DB-G21-1-10	10	DB-G21-1	G21	8/22/2018	21 U	1.4 U	14 U	21 U	0.84 U	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
DB-G25-1-5	5	DB-G25-1	G25	7/3/2018	**420** U	**38** J	280 U	1300 J	1100	4800 J	1500	**300** U	780 U	280 U	860 U	**1800** U
DB-G25-1-10	10	DB-G25-1	G25	7/3/2018	**210** U	24 J	140 U	430 J	380	590 J	500	150 U	390 U	140 U	430 U	900 U
DB-G27-1-2.5	2.5	SB-G27-1	G27	7/9/2018	21 U	1.4 U	14 U	21 U	0.9 J	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	**1050** U	**70** U	700 U	1050 U	310 J	1350 U	490 J	**750** U	**1950** U	700 U	**2150** U	**4500** U
SB-G4-1-5	5	SB-G4-1	G4	6/29/2018	**120** J,D2	**130** J	35 U	390 J,D2	420	67.5 U	26 U	37.5 U	97.5 U	35 U	107.5 U	620 J,D2
SB-G4-1-10	10	SB-G4-1	G4	6/29/2018	**52.5** U	22 J	35 U	52.5 U	37 J	67.5 U	13 U	37.5 U	97.5 U	35 U	107.5 U	225 U
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	**210** U	14 U	140 U	210 U	8.4 U	270 U	13 U	150 U	390 U	140 U	430 U	900 U
SB-H22-1-5	5	SB-H22-1	H22	8/22/2018	**210** U	14 U	140 U	210 U	8.4 U	270 U	13 U	150 U	390 U	140 U	430 U	900 U
SB-H22-1-10	10	SB-H22-1	H22	8/22/2018	**210** U	15 J	140 U	530 J	570	860 J	820	150 U	390 U	140 U	430 U	900 U
SB-H22-1-20	20	SB-H22-1	H22	8/22/2018	21 U	1.4 U	14 U	21 U	0.84 U	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
SB-H23-1-0.5	0.5	SB-H23-1	H23	8/21/2018	**210** U	14 U	210 J,D2	910 J,D2	840	270 U	360	150 U	390 U	140 U	430 U	900 U
SB-H23-1-5	5	SB-H23-1	H23	8/21/2018	**210** U	14 U	140 U	210 U	41 J	270 U	22 J	150 U	390 U	140 U	430 U	900 U
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	**210** U	14 U	140 U	210 U	200	350 J,D2	340	150 U	390 U	140 U	430 U	900 U
SB-H23-1-15	15	SB-H23-1	H23	8/21/2018	21 U	1.4 U	14 U	21 U	1.2 J	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
SB-H24-1-2.5	2.5	SB-H24-1	H24	7/12/2018	**2100** U	**140** U	1400 U	2100 U	370 J	2700 U	1200	**1500** U	**3900** U	1400 U	**4300** U	**9000** U
SB-H24-1-5	5	SB-H24-1	H24	7/12/2018	**2100** U	**140** U	1400 U	2100 U	530 J	3300 J	2500	**1500** U	**3900** U	1400 U	**4300** U	**9000** U
SB-H24-1-10	10	SB-H24-1	H24	7/12/2018	**4200** U	**280** U	2800 U	4200 U	1100 J	5400 U	2800	**3000** U	**7800** U	**2800** U	**8600** U	**18000** U
SB-H24-1-15	15	SB-H24-1	H24	7/12/2018	**4200** U	**280** U	2800 U	4200 U	680 J	5400 U	550 J	**3000** U	**7800** U	**2800** U	**8600** U	**18000** U
SB-H24-1-20	20	SB-H24-1	H24	7/12/2018	**105** U	7 U	70 U	105 U	6.9 J	135 U	16 J	75 U	195 U	70 U	215 U	450 U

Table 6

Soil Results Summary - Semi-Volatile Organic Compounds and Polycyclic Aromatic Hydrocarbons (SVOCs and PAHs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	53-70-3	53-70-3	132-64-9	206-44-0	206-44-0	86-73-7	86-73-7	118-74-1	87-68-3	77-47-4	67-72-1	193-39-5
				Analytical Method	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C
				Analyte	Dibenz(a,h) anthracene	*Dibenz(a,h) anthracene*	Dibenzofuran	Fluoranthene	*Fluoranthene*	Fluorene	*Fluorene*	Hexachloro-benzene	Hexachloro-butadiene	Hexachloro-cyclo-pentadiene	Hexachloro-ethane	Indeno(1,2,3-cd)pyrene
				Residential Screening Level [(a)] : µg/kg	28	28	66000	2400000	2400000	2300000	2300000	190	1200	1800	1800	1100
				Commercial Screening Level [(b)] : µg/kg	310	310	650000	18000000	18000000	17000000	17000000	860	5300	7500	8000	13000
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-H25-1-5	5	SB-H25-1	H25	7/3/2018	**210** U	18 J	140 U	210 U	8.4 U	270 U	13 U	150 U	390 U	140 U	430 U	900 U
SB-H25-1-10	10	SB-H25-1	H25	7/3/2018	**8400** U	710 J	5600 U	8400 U	2400 J	10800 U	5600	**6000** U	**15600** U	**5600** U	**17200** U	**36000** U
SB-I19-1-5	5	SB-I19-1	I19	6/28/2018	21 U	1.4 U	14 U	21 U	5.3 J	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
SB-I19-1-10	10	SB-I19-1	I19	6/28/2018	21 U	1.4 U	14 U	21 U	1.3 J	27 U	1.3 U	15 U	39 U	14 U	43 U	90 U
SB-I21-1-0.5	0.5	SB-I21-1	I21	8/21/2018	21 U	1.4 U	14 U	21 U	1.7 J	27 U	1.4 J	15 U	39 U	14 U	43 U	90 U
SB-I21-1-5	5	SB-I21-1	I21	8/21/2018	**210** U	14 U	140 U	210 U	30 J	270 U	35 J	150 U	390 U	140 U	430 U	900 U
SB-I21-1-10	10	SB-I21-1	I21	8/21/2018	21 U	1.4 U	14 U	21 U	2.5 J	27 U	1.6 J	15 U	39 U	14 U	43 U	90 U
SB-I21-1-15	15	SB-I21-1	I21	8/21/2018	**210** U	14 U	140 U	210 U	78 J	270 U	65 J	150 U	390 U	140 U	430 U	900 U
SB-I21-1-20	20	SB-I21-1	I21	8/21/2018	**210** U	14 U	160 J,D2	300 J,D2	270	530 J,D2	530	150 U	390 U	140 U	430 U	900 U

Table 6

Soil Results Summary - Semi-Volatile Organic Compounds and Polycyclic Aromatic Hydrocarbons (SVOCs and PAHs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	193-39-5	91-20-3	91-20-3	62-75-9	621-64-7	98-95-3	87-86-5	85-01-8	85-01-8	129-00-0	129-00-0
				Analytical Method	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*
				Analyte	*Indeno(1,2,3-cd)pyrene*	Naphthalene	*Naphthalene*	N-Nitrosodimethyl-amine (NDMA)	N-Nitrosodi-n-propylamine (NDPA)	Nitrobenzene	Pentachloro phenol	Phenanthrene	*Phenanthrene*	Pyrene	*Pyrene*
				Residential Screening Level [(a)] : µg/kg	1100	2000	2000	2	78	5100	1000	NE	NE	1800000	1800000
				Commercial Screening Level [(b)] : µg/kg	13000	6500	6500	34	210	22000	2000	NE	NE	13000000	13000000
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
DB-C4-1-5	5	DB-C4-1	C4	7/12/2018	90 U	1250 U	580	**1700** U	**1300** U	1050 U	**2750** U	1100 U	1300	1150 U	120 J
DB-C4-1-10	10	DB-C4-1	C4	7/12/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	4.4 J	23 U	0.78 U
SB-C24-1-0.5	0.5	SB-C24-1	C24	7/2/2018	72 U	1000 U	160 U	**1360** U	**1040** U	840 U	**2200** U	880 U	930	920 U	320 J
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	18 U	500 U	120	**680** U	**520** U	420 U	**1100** U	6300	2800	3000 J	1300
SB-C24-1-10	10	SB-C24-1	C24	7/2/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	2 J	23 U	3.2 J
SB-D5-1-0	0	SB-D5-1	D5	6/27/2018	9 U	125 U	20 U	**170** U	**130** U	105 U	275 U	110 U	14 J	115 U	5.2 B1,J
SB-D5-1-5	5	SB-D5-1	D5	6/27/2018	1.8 U	25 U	18	**34** U	26 U	21 U	55 U	22 U	13	23 U	4.5 B1,J
SB-D6-1-0.5	0.5	SB-D6-1	D6	6/29/2018	180 U	125 U	400 U	**170** U	**130** U	105 U	275 U	110 U	140 U	115 U	79 B1,J
SB-D6-1-5	5	SB-D6-1	D6	6/29/2018	36 U	500 U	80 U	**680** U	**520** U	420 U	**1100** U	440 U	78 J	460 U	240
DB-D7-1-0.5	0.5	DB-D7-1	D7	7/17/2018	180 U	**2500** U	400 U	**3400** U	**2600** U	2100 U	**5500** U	2200 U	140 U	2300 U	78 U
DB-D7-1-5	5	DB-D7-1	D7	7/17/2018	180 U	**2500** U	400 U	**3400** U	**2600** U	2100 U	**5500** U	2200 U	140 U	2300 U	78 U
DB-D7-1-10	10	DB-D7-1	D7	7/17/2018	9 U	125 U	20 U	**170** U	**130** U	105 U	275 U	110 U	7 U	115 U	3.9 U
SB-E11-1-2.5	2.5	SB-E11-1	E11	7/10/2018	90 U	**2500** U	200 U	**3400** U	**2600** U	2100 U	**5500** U	2200 U	83 J	2300 U	110 J
DB-E6-1-0.5	0.5	DB-E6-1	E6	7/17/2018	18 U	250 U	40 U	**340** U	**260** U	210 U	550 U	220 U	16 J	230 U	8.6 J
DB-E6-1-5	5	DB-E6-1	E6	7/17/2018	36 U	500 U	80 U	**680** U	**520** U	420 U	**1100** U	440 U	66 J	460 U	33 J
DB-E6-1-10	10	DB-E6-1	E6	7/17/2018	18 U	250 U	40 U	**340** U	**260** U	210 U	550 U	220 U	14 U	230 U	7.8 U
SB-E7-1-0	0	SB-E7-1	E7	6/27/2018	4.5 U	62.5 U	34	**85** U	65 U	52.5 U	137.5 U	55 U	16 J	57.5 U	11 B1,J
SB-E7-1-5	5	SB-E7-1	E7	6/27/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	1.4 U	23 U	2 B1,J
SB-F24-1-2.5	2.5	SB-F24-1	F24	7/9/2018	90 U	1250 U	670	**1700** U	**1300** U	1050 U	**2750** U	2100 J	2100	1150 U	590
SB-F24-1-10	10	SB-F24-1	F24	7/9/2018	3.8 J	25 U	10	**34** U	26 U	21 U	55 U	90 J	84	94 J	84
DB-F8-1-0.5	0.5	DB-F8-1	F8	7/18/2018	9 U	500 U	55	**680** U	**520** U	420 U	**1100** U	440 U	310	460 U	52
DB-F8-1-2.5	2.5	DB-F8-1	F8	7/18/2018	90 U	1250 U	200 U	**1700** U	**1300** U	1050 U	**2750** U	1100 U	220 J	1150 U	180 J
DB-F8-1-5.0	5	DB-F8-1	F8	7/18/2018	2.3 J	50 U	4 U	**68** U	52 U	42 U	110 U	44 U	4.1 J	46 U	5.9 J
DB-G21-1-0	0	DB-G21-1	G21	8/22/2018	3.3 J	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	1.4 U	23 U	0.78 U
DB-G21-1-0.5	0.5	DB-G21-1	G21	8/22/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	1.4 U	23 U	0.78 U
DB-G21-1-5	5	DB-G21-1	G21	8/22/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	1.4 U	23 U	0.78 U
DB-G21-1-10	10	DB-G21-1	G21	8/22/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	1.4 U	23 U	0.78 U
DB-G25-1-5	5	DB-G25-1	G25	7/3/2018	36 U	***7600***	***8700***	**680** U	**520** U	420 U	**1100** U	9600	11000	1900 J	1700
DB-G25-1-10	10	DB-G25-1	G25	7/3/2018	72 J	250 U	40 U	**340** U	**260** U	210 U	550 U	1600 J	1300	430 J	370
DB-G27-1-2.5	2.5	SB-G27-1	G27	7/9/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	1.4 U	23 U	0.78 U
DB-G27-1-10	10	SB-G27-1	G27	7/9/2018	90 U	1250 U	200 U	**1700** U	**1300** U	1050 U	**2750** U	1200 J	1400	1150 U	540
SB-G4-1-5	5	SB-G4-1	G4	6/29/2018	510	62.5 U	80 U	**85** U	65 U	52.5 U	137.5 U	150 J,D2	170 J	490 J,D2	480
SB-G4-1-10	10	SB-G4-1	G4	6/29/2018	29 J	62.5 U	40 U	**85** U	65 U	52.5 U	137.5 U	55 U	21 J	57.5 U	40 B1,J
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	18 U	250 U	40 U	**340** U	**260** U	210 U	550 U	220 U	14 U	230 U	7.8 U
SB-H22-1-5	5	SB-H22-1	H22	8/22/2018	21 J	250 U	40 U	**340** U	**260** U	210 U	550 U	220 U	14 U	230 U	17 B1,J
SB-H22-1-10	10	SB-H22-1	H22	8/22/2018	22 J	1700 J	1600	**340** U	**260** U	210 U	550 U	1500 J	1500	650 J	640
SB-H22-1-20	20	SB-H22-1	H22	8/22/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	1.4 U	23 U	0.78 U
SB-H23-1-0.5	0.5	SB-H23-1	H23	8/21/2018	86 J	250 U	40 U	**340** U	**260** U	210 U	550 U	690 J,D2	660	230 U	1200
SB-H23-1-5	5	SB-H23-1	H23	8/21/2018	18 U	250 U	99 J	**340** U	**260** U	210 U	550 U	220 U	29 J	250 J,D2	220
SB-H23-1-10	10	SB-H23-1	H23	8/21/2018	18 U	250 U	70 J	**340** U	**260** U	210 U	550 U	600 J,D2	670	540 J,D2	480
SB-H23-1-15	15	SB-H23-1	H23	8/21/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	1.9 J	23 U	3.6 J
SB-H24-1-2.5	2.5	SB-H24-1	H24	7/12/2018	180 U	**2500** U	400 U	**3400** U	**2600** U	2100 U	**5500** U	2200 U	940 J	2300 U	610 J
SB-H24-1-5	5	SB-H24-1	H24	7/12/2018	180 U	**6200** J	**5900**	**3400** U	**2600** U	2100 U	**5500** U	6000 J	5000	2300 U	1500
SB-H24-1-10	10	SB-H24-1	H24	7/12/2018	360 U	**5000** U	800 U	**6800** U	**5200** U	4200 U	**11000** U	8000 J	7100	4600 U	3000
SB-H24-1-15	15	SB-H24-1	H24	7/12/2018	360 U	**5000** U	800 U	**6800** U	**5200** U	4200 U	**11000** U	4400 U	1700 J	4600 U	2400
SB-H24-1-20	20	SB-H24-1	H24	7/12/2018	9 U	125 U	20 U	**170** U	**130** U	105 U	275 U	110 U	37 J	115 U	24 J

Table 6

Soil Results Summary - Semi-Volatile Organic Compounds and Polycyclic Aromatic Hydrocarbons (SVOCs and PAHs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	193-39-5	91-20-3	91-20-3	62-75-9	621-64-7	98-95-3	87-86-5	85-01-8	85-01-8	129-00-0	129-00-0
				Analytical Method	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	*EPA 8270CM*	EPA 8270C	*EPA 8270CM*
				Analyte	*Indeno(1,2,3-cd)pyrene*	Naphthalene	*Naphthalene*	N-Nitrosodimethyl-amine (NDMA)	N-Nitrosodi-n-propylamine (NDPA)	Nitrobenzene	Pentachloro phenol	Phenanthrene	*Phenanthrene*	Pyrene	*Pyrene*
				Residential Screening Level [(a)] : µg/kg	1100	2000	2000	2	78	5100	1000	NE	NE	1800000	1800000
				Commercial Screening Level [(b)] : µg/kg	13000	6500	6500	34	210	22000	2000	NE	NE	13000000	13000000
Sample ID	Depth (ft bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-H25-1-5	5	SB-H25-1	H25	7/3/2018	18 U	250 U	40 U	**340** U	**260** U	210 U	550 U	220 U	14 U	230 U	23 J
SB-H25-1-10	10	SB-H25-1	H25	7/3/2018	720 U	**10000** U	1600 U	**13600** U	**10400** U	**8400** U	**22000** U	16000 J	17000	9200 U	8300
SB-I19-1-5	5	SB-I19-1	I19	6/28/2018	4.9 J,L	25 U	25	**34** U	26 U	21 U	55 U	22 U	6.3 J	23 U	6.7 B1,J
SB-I19-1-10	10	SB-I19-1	I19	6/28/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	2.6 J	23 U	1.1 B1,J
SB-I21-1-0.5	0.5	SB-I21-1	I21	8/21/2018	1.8 U	25 U	22	**34** U	26 U	21 U	55 U	22 U	1.5 J	23 U	4.3 J
SB-I21-1-5	5	SB-I21-1	I21	8/21/2018	18 U	250 U	40 U	**340** U	**260** U	210 U	550 U	220 U	57 J	230 U	28 J
SB-I21-1-10	10	SB-I21-1	I21	8/21/2018	1.8 U	25 U	4 U	**34** U	26 U	21 U	55 U	22 U	3.7 J	23 U	6.5 J
SB-I21-1-15	15	SB-I21-1	I21	8/21/2018	18 U	250 U	40 U	**340** U	**260** U	210 U	550 U	220 U	150	230 U	130
SB-I21-1-20	20	SB-I21-1	I21	8/21/2018	18 U	250 U	93 J	**340** U	**260** U	210 U	550 U	1400 J,D2	1300	620 J,D2	610

Notes:
EPA = U.S. Environmental Protection Agency
DTSC = Department of Toxic Substances Control
Data presented herein is a summary of SVOC/PAH soil data analyzed by EPA 8270C and 8270CM, and includes all compounds with at least one detection above the laboratory method detection limit (MDL), and any compounds reported as non-detect whose MDLs are above the respective residential or commercial/industrial screening level.
Italicized analytical method and compound name indicate select analytes that were additionally analyzed by EPA 8270 Selective Ion Method (8270CM).
Soil screening levels are derived from the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 (April 2019 update, June 2020 revision), and the EPA Regional Screening Level (RSL) THQ = 1.0 (May 2020).
[(a)] The residential screening level is the most stringent between the EPA RSL for residential soil and the DTSC HERO Note 3 for residential soil.
[(b)] The commercial screening level is the most stringent between the EPA RSL for composite worker soil and the DTSC HERO Note 3 for commercial/industrial soil.
µg/kg = microgram per kilogram
ft bgs = feet below ground surface
NE = not established
U = analyte not detected above MDL
J = Reported value is estimated.
L = The laboratory control sample or laboratory control sample duplicate was outside of control limits. Associated sample data was reported with qualifier.
D2 = Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
B1 = Analyte was present in the sample and associated method blank greater than the MDL but less than the reporting detection limit.
BOLD Indicates the non-detect value exceeds one or both of the compound-specific screening levels.
BOLD Indicates the reported concentration exceeds the compound-specific residential screening level.
BOLD Indicates the reported concentration exceeds the compound specific commercial screening level.

Table 7

Soil Results Summary - Herbicides
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	**93-76-5**	**93-72-1**	**94-75-7**	**94-82-6**	**51-36-5**	**50594-66-6**	**25057-89-0**	**133-90-4**	**75-99-0**	**120-36-5**	**2136-79-0**	**1918-00-9**	**88-85-7**	**94-74-6**	**93-65-2**	**100-02-7**	**87-86-5**	**1918-02-01**
				Analytical Method	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**	**EPA 8151A**
				Analyte Name	**2,4,5-T**	**2,4,5-TP**	**2,4-D**	**2,4-DB**	**3,5-Dichloro benzoic acid**	**Acifluorfen**	**Bentazon**	**Chloramben**	**Dalapon**	**Dichloro prop**	**DCPA diacid**	**Dicamba**	**Dinoseb**	**MCPA**	**MCPP**	**4-Nitro phenol**	**Penta chloro phenol**	**Picloram**
				Residential Screening Level [(a)] : µg/kg	**630000**	**510000**	**700000**	**1900000**	**NE**	**NE**	**1900000**	**950000**	**1900000**	**NE**	**NE**	**1900000**	**63000**	**32000**	**63000**	**NE**	**1000**	**4400000**
				Commercial Screening Level [(b)] : µg/kg	**5300000**	**4200000**	**7300000**	**16000000**	**NE**	**NE**	**16000000**	**7900000**	**16000000**	**NE**	**NE**	**16000000**	**530000**	**260000**	**530000**	**NE**	**2000**	**37000000**
Sample ID	**Depth (ft-bgs)**	**Location**	**Grid Cell**	**Sample Date**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
SB-D12-1-0	0	SB-D12-1	D12	7/10/2018	200 U	200 U	200 U	200 U	200 U	400 U	200 U	200 U	400 U	200 U	400 U	200 U	400 U	**40000** U	40000 U	200 U	200 U	200 U
SB-D12-1-0.5	0.5	SB-D12-1	D12	7/10/2018	200 U	200 U	200 U	200 U	200 U	400 U	200 U	200 U	400 U	200 U	400 U	200 U	400 U	**40000** U	40000 U	200 U	200 U	200 U
SB-D12-1-2.5	2.5	SB-D12-1	D12	7/10/2018	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	20 U	10 U	20 U	10 U	20 U	2000 U	2000 U	10 U	10 U	10 U
SB-D12-1-5	5	SB-D12-1	D12	7/10/2018	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	20 U	10 U	20 U	10 U	20 U	2000 U	2000 U	10 U	10 U	10 U
SB-F10-1-0	0	SB-F10-1	F10	6/21/2018	20 U	20 U	20 U	20 U	20 U	40 U	20 U	20 U	40 U	20 U	40 U	20 U	40 U	4000 U	4000 U	20 U	20 U	20 U
SB-F10-1-0.5	0.5	SB-F10-1	F10	6/21/2018	20 U	20 U	20 U	20 U	20 U	40 U	20 U	20 U	40 U	20 U	40 U	20 U	40 U	4000 U	4000 U	20 U	20 U	20 U
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	10 U	10 U	10 U	10 U	10 U	20 U	10 U	11.6	20 U	10 U	20 U	10 U	20 U	2000 U	2000 U	10 U	10 U	10 U
SB-F10-1-5	5	SB-F10-1	F10	6/21/2018	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	20 U	10 U	20 U	10 U	20 U	2000 U	2000 U	10 U	10 U	10 U
SB-F11-1-0	0	SB-F11-1	F11	6/21/2018	20 U	20 U	20 U	20 U	20 U	40 U	20 U	20 U	40 U	20 U	40 U	20 U	40 U	4000 U	4000 U	20 U	20 U	20 U
SB-F11-1-0.5	0.5	SB-F11-1	F11	6/21/2018	50 U	50 U	50 U	50 U	50 U	100 U	50 U	50 U	100 U	50 U	100 U	50 U	100 U	10000 U	10000 U	50 U	50 U	50 U
SB-F11-1-2.5	2.5	SB-F11-1	F11	6/21/2018	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	20 U	10 U	20 U	10 U	20 U	2000 U	2000 U	10 U	10 U	10 U
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	80 U	80 U	80 U	80 U	80 U	160 U	80 U	80 U	160 U	80 U	160 U	80 U	160 U	16000 U	16000 U	80 U	80 U	80 U
SB-H22-1-2.5	2.5	SB-H22-1	H22	8/22/2018	40 U	40 U	40 U	40 U	40 U	80 U	40 U	40 U	80 U	40 U	80 U	40 U	80 U	8000 U	8000 U	40 U	40 U	40 U

Notes:

EPA = U.S. Environmental Protection Agency
DTSC = Department of Toxic Substances Control
2,4,5-T = 2,4,5-trichlorophenoxyacetic acid
2,4,5-TP = 2,4,5-trichlorophenoxy
2,4-D = 2,4-dichlorophenoxyacetic acid
2,4-DB = 2,4-dichlorophenoxy
Dinoseb = DNBP or 2-sec-Butyl-4, 6-dinitrophenol
MCPA = 2-methyl-4-chlorophenoxyacetic acid
MCPP = Mecoprop
Data presented herein is a summary of all herbicides analyzed by EPA Method 8151A in soil. Additional results for 4-nitrophenol and pentachlorophenol analyzed by EPA Method 8270C are displayed in Table 6.
Soil screening levels are derived from the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 (April 2019 update, June 2020 revision), and the EPA Regional Screening Level (RSL) THQ = 1.0 (May 2020).
[(a)] The residential screening level is the most stringent between the EPA RSL for residential soil and the DTSC HERO Note 3 for residential soil.
[(b)] The commercial screening level is the most stringent between the EPA RSL for composite worker soil and the DTSC HERO Note 3 for commercial/industrial soil.
µg/kg = microgram per kilogram
NE = not established
ft bgs = feet below ground surface
U = analyte not detected above method detection limit (MDL)

BOLD Indicates the non-detect value exceeds one or both of the compound-specific screening levels.
BOLD Indicates the reported concentration exceeds the compound-specific residential screening level.
BOLD Indicates the reported concentration exceeds the compound specific commercial screening level.

Table 8

Soil Results Summary - Pesticides
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	72-54-8	72-55-9	50-29-3	319-84-6	309-00-2	319-85-7	57-74-9	319-85-7	60-57-1	7421-93-4	53494-70-5
				Analytical Method	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A
				Analyte	4,4'-DDD	4,4'-DDE	4,4'-DDT	a-BHC	Aldrin	b-BHC	Chlordane	d-BHC	Dieldrin	Endrin aldehyde	Endrin ketone
				Residential Screening Level[(a)] : µg/kg	1900	2000	1900	86	39	300	1700	300	34	NE	NE
				Commercial Screening Level[(b)] : µg/kg	6200	9300	7100	240	180	820	6100	820	93	NE	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-D12-1-0	0	SB-D12-1	D12	7/10/2018	3.35 U	2.85 U	4.75 U	1 U	1.7 U	6 U	60 U	2.25 U	3.15 U	4.5 U	6 U
SB-D12-1-0.5	0.5	SB-D12-1	D12	7/10/2018	0.67 U	0.57 U	0.95 U	0.2 U	0.34 U	1.2 U	12 U	0.45 U	0.63 U	0.9 U	1.2 U
SB-D12-1-2.5	2.5	SB-D12-1	D12	7/10/2018	0.67 U	0.57 U	0.95 U	0.2 U	0.34 U	1.2 U	12 U	0.45 U	0.63 U	0.9 U	1.2 U
SB-D12-1-5	5	SB-D12-1	D12	7/10/2018	0.67 U	0.57 U	0.95 U	0.2 U	0.34 U	1.2 U	12 U	0.45 U	0.63 U	0.9 U	1.2 U
SB-F10-1-0	0	SB-F10-1	F10	6/21/2018	6.7 U	5.7 U	9.5 U	2 U	3.4 U	12 U	120 U	4.5 U	6.3 U	9 U	12 U
SB-F10-1-0.5	0.5	SB-F10-1	F10	6/21/2018	6.7 U	5.7 U	9.5 U	2 U	3.4 U	12 U	120 U	4.5 U	6.3 U	9 U	12 U
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	6.7 U	5.7 U	9.5 U	2 U	3.4 U	12 U	120 U	4.5 U	6.3 U	9 U	12 U
SB-F10-1-5	5	SB-F10-1	F10	6/21/2018	1.34 U	1.14 U	1.9 U	0.4 U	0.68 U	2.4 U	24 U	0.9 U	1.26 U	1.8 U	2.4 U
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	0.67 U	0.57 U	0.95 U	0.2 U	0.34 U	1.2 U	12 U	0.45 U	0.63 U	0.9 U	1.2 U
SB-H22-1-2.5	2.5	SB-H22-1	H22	8/22/2018	0.67 U	0.57 U	0.95 U	0.2 U	0.34 U	1.2 U	12 U	0.45 U	0.63 U	0.9 U	1.2 U

Table 8

Soil Results Summary - Pesticides
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	959-98-8	33213-65-9	1031-07-8	72-20-8	76-44-8	1024-57-3	58-89-9	72-43-5	8001-35-2
				Analytical Method	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A
				Analyte	Endosulfan I [c]	Endosulfan II [c]	Endosulfan sulfate	Endrin	Heptachlor	Heptachlor epoxide	Lindane (Gamma-BHC)	Methoxychlor	Toxaphene
				Residential Screening Level[a] : µg/kg	450000	450000	380000	19000	130	70	570	320000	450
				Commercial Screening Level[b] : µg/kg	6000000	6000000	3200000	160000	630	330	2000	2600000	1200
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-D12-1-0	0	SB-D12-1	D12	7/10/2018	1.4 U	4 U	8.5 U	3.1 U	2.2 U	1.35 U	1.5 U	26 U	60 U
SB-D12-1-0.5	0.5	SB-D12-1	D12	7/10/2018	0.28 U	0.8 U	1.7 U	0.62 U	0.44 U	0.27 U	0.3 U	5.2 U	12 U
SB-D12-1-2.5	2.5	SB-D12-1	D12	7/10/2018	0.28 U	0.8 U	1.7 U	0.62 U	0.44 U	0.27 U	0.3 U	5.2 U	12 U
SB-D12-1-5	5	SB-D12-1	D12	7/10/2018	0.28 U	0.8 U	1.7 U	0.62 U	0.44 U	0.27 U	0.3 U	5.2 U	12 U
SB-F10-1-0	0	SB-F10-1	F10	6/21/2018	10 U	8 U	17 U	6.2 U	4.4 U	2.7 U	3 U	52 U	120 U
SB-F10-1-0.5	0.5	SB-F10-1	F10	6/21/2018	10 U	8 U	17 U	6.2 U	4.4 U	2.7 U	3 U	52 U	120 U
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	10 U	8 U	17 U	6.2 U	4.4 U	2.7 U	3 U	52 U	120 U
SB-F10-1-5	5	SB-F10-1	F10	6/21/2018	2 U	1.6 U	3.4 U	1.24 U	0.88 U	0.54 U	0.6 U	10.4 U	24 U
SB-H22-1-0.5	0.5	SB-H22-1	H22	8/22/2018	0.28 U	0.8 U	1.7 U	0.62 U	0.44 U	0.27 U	0.3 U	5.2 U	12 U
SB-H22-1-2.5	2.5	SB-H22-1	H22	8/22/2018	0.28 U	0.8 U	1.7 U	0.62 U	0.44 U	0.27 U	0.3 U	5.2 U	12 U

Notes:
EPA = U.S. Environmental Protection Agency
DTSC = Department of Toxic Substances Control
4,4'-DDD = 4,4'-dichlorodiphenyldichloroethane
4,4'-DDE = 4,4'-dichlorodiphenyldichloroethylene
4,4'-DDT = 4,4'-dichlorodiphenyltrichloroethane
BHC = beta-Hexachlorocyclohexane
Data presented herein is a summary of all pesticides analyzed by EPA Method 8081A in soil.
Soil screening levels are derived from the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 (April 2019 update, June 2020 revision), and the EPA Regional Screening Level (RSL) THQ = 1.0 (May 2020).
[a] The residential screening level is the most stringent between the EPA RSL for residential soil and the DTSC HERO Note 3 for residential soil.
[b] The commercial screening level is the most stringent between the EPA RSL for composite worker soil and the DTSC HERO Note 3 for commercial/industrial soil.
[c] Per WSP's March 13, 2020 Response to Comments, the screening level for endosulfan was used for endosulfan I and II.
µg/kg = microgram per kilogram
NE = not established
ft bgs = feet below ground surface
U = analyte not detected above method detection limit (MDL)

BOLD Indicates the non-detect value exceeds one or both of the compound-specific screening levels.
BOLD Indicates the reported concentration exceeds the compound-specific residential screening level.
BOLD Indicates the reported concentration exceeds the compound specific commercial screening level.

Table 9

Soil Results Summary - Polychlorinated Biphenyls (PCBs)
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

				CAS Number	12674-11-2	11104-28-2	11141-16-5	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4
				Analytical Method	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082
				Analyte	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	PCB-1262	PCB-1268
				Residential Screening Level [(a)] : µg/kg	4000	200	170	230	230	240	240	NE	NE
				Commercial Screening Level [(b)] : µg/kg	17000	530	490	580	580	590	600	NE	NE
Sample ID	Depth (ft-bgs)	Location	Grid Cell	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
SB-C24-1-0.5	0.5	SB-C24-1	C24	7/2/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-C24-1-5	5	SB-C24-1	C24	7/2/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-C24-1-10	10	SB-C24-1	C24	7/2/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-D12-1-0	0	SB-D12-1	D12	7/10/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	140	17 U	8.6 U
SB-D12-1-0.5	0.5	SB-D12-1	D12	7/10/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-D12-1-2.5	2.5	SB-D12-1	D12	7/10/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-D5-1-0	0	SB-D5-1	D5	6/27/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-D5-1-5	5	SB-D5-1	D5	6/27/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-E7-1-0	0	SB-E7-1	E7	6/27/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-E7-1-5	5	SB-E7-1	E7	6/27/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-F10-1-0	0	SB-F10-1	F10	6/21/2018	30 U	140 U	95 U	140 U	190 U	200 U	69 U	170 U	86 U
SB-F10-1-0.5	0.5	SB-F10-1	F10	6/21/2018	30 U	140 U	95 U	140 U	190 U	200 U	69 U	170 U	86 U
SB-F10-1-2.5	2.5	SB-F10-1	F10	6/21/2018	30 U	140 U	95 U	140 U	190 U	200 U	69 U	170 U	86 U
SB-F10-1-5	5	SB-F10-1	F10	6/21/2018	6 U	28 U	19 U	28 U	38 U	40 U	13.8 U	34 U	17.2 U
DB-G21-1-0.5	0.5	DB-G21-1	G21	8/22/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
DB-G21-1-10	10	DB-G21-1	G21	8/22/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-H23-1-0.5	0.5	SB-H23-1	H23	8/21/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-H23-1-15	15	SB-H23-1	H23	8/21/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-H8-1-0.5	0.5	SB-H8-1	H8	6/20/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	70	17 U	8.6 U
SB-H8-1-5	5	SB-H8-1	H8	6/20/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-H8-1-10	10	SB-H8-1	H8	6/20/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-I19-1-5	5	SB-I19-1	I19	6/28/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-I19-1-10	10	SB-I19-1	I19	6/28/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-I21-1-0.5	0.5	SB-I21-1	I21	8/21/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-I21-1-15	15	SB-I21-1	I21	8/21/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U
SB-I21-1-20	20	SB-I21-1	I21	8/21/2018	3 U	14 U	9.5 U	14 U	19 U	20 U	6.9 U	17 U	8.6 U

Notes:
EPA = U.S. Environmental Protection Agency
DTSC = Department of Toxic Substances Control
Data presented herein is a summary of all PCBs analyzed by EPA Method 8082 in soil.
Soil screening levels are derived from the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 (April 2019 update, June 2020 revision), and the EPA Regional Screening Level (RSL) THQ = 1.0 (May 2020).
[(a)] The residential screening level is the most stringent between the EPA RSL for residential soil and the DTSC HERO Note 3 for residential soil.
[(b)] The commercial screening level is the most stringent between the EPA RSL for composite worker soil and the DTSC HERO Note 3 for commercial/industrial soil
µg/kg = microgram per kilogram
NE = not established
ft bgs = feet below ground surface
U = analyte not detected above method detection limit (MDL)
BOLD Indicates the non-detect value exceeds one or both of the compound-specific screening levels.
BOLD Indicates the reported concentration exceeds the compound-specific residential screening level.
BOLD Indicates the reported concentration exceeds the compound specific commercial screening level.

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
	Analyte	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium
	Residential Screening Level [(a)]	31	12	15,000	16	71	120,000	23	3,100	80	390	820	390	390	0.78
	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Depth	Statistics														
Surface (0 - 0.5 ft bgs)	Observations	130	130	130	130	130	130	130	130	130	130	130	130	130	130
	Detections	84	119	130	2	95	130	130	130	129	81	130	62	26	45
	Detection frequency	65%	92%	100%	2%	73%	100%	100%	100%	99%	62%	100%	48%	20%	35%
	Detections > SL	3	11	0	0	0	0	1	0	72	0	0	0	0	41
	Non-detections > SL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Minimum	0.40	0.47	7.21	0.53	0.22	1.02	0.64	1.86	1.6	0.15	0.78	0.84	0.14	0.57
	Maximum	**174**	**21.8**	469	0.57	7.99	419	**25.2**	1,620	**3,610**	14.6	156	17.8	1.12	**8.05**
	Median	4.84	4.59	110	0.55	0.72	22	8.93	37.5	**96.3**	1.01	13.8	3.71	0.23	**2.18**
Shallow (>0.5 - 5 ft bgs)	Observations	147	147	147	147	147	147	147	147	147	147	147	147	147	147
	Detections	94	136	147	0	94	147	147	147	147	83	147	55	29	50
	Detection frequency	64%	93%	100%	0%	64%	100%	100%	100%	100%	57%	100%	37%	20%	34%
	Detections > SL	11	13	0	0	0	0	2	0	47	0	0	0	0	44
	Non-detections > SL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Minimum	0.41 J	0.49 J	9.01	--	0.22 J	4.12	0.73	0.89 J	0.91 B1,J	0.16 J	1.72	0.73 J	0.14 B1,J	0.44 B1,J
	Maximum	**1,030**	**33.3**	577	--	31.8	3,670	**26.4**	2,550	**39,900**	15.9	208	13.9	1.31	**7.27**
	Median	4.76	4.04	116	--	0.625	19.9	10.1	25.1	22.8	0.97	14.3	2.83	0.25	**2.52**
Deeper (>5 - 30 ft bgs)	Observations	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	Detections	14	21	22	0	11	22	22	22	22	16	22	13	4	3
	Detection frequency	64%	96%	100%	0%	50%	100%	100%	100%	100%	73%	100%	59%	18%	14%
	Detections > SL	0	4	0	0	0	0	0	0	9	0	0	0	0	2
	Non-detections > SL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Minimum	0.5 J	0.96 B1,J	31.8	--	0.23 J	5.23	3.38	4.99	2.1	0.18 J	3.3	0.85 J	0.15 J	0.77 J
	Maximum	20.2	**48.8**	195	--	12.4	60.3	13.3	323	**1,560**	3.84	84	13.5	0.42 J	**1.26** J
	Median	2.33	4	70.9	--	0.51	12.8	7.1	22.5	47.6	0.645	10	4.34	0.19	**0.84**
Deepest (> 30 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 6010B	EPA 6010B	EPA 7471A	EPA 8015M	EPA 8015M	EPA 8015M	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082
	Analyte	Vanadium	Zinc	Mercury	TPH GRO (C8 to C10)	TPH DRO (C10 to C28)	TPH MO (C28 to C40)	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	PCB-1262
	Residential Screening Level [(a)]	390	23,000	1	82	96	2,400	4,000	200	170	230	230	240	240	NE
	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics														
Surface (0 - 0.5 ft bgs)	Observations	130	130	130	130	130	130	11	11	11	11	11	11	11	11
	Detections	130	130	110	0	85	66	0	0	0	0	0	0	2	0
	Detection frequency	100%	100%	85%	0%	65%	51%	0%	0%	0%	0%	0%	0%	18%	0%
	Detections > SL	0	0	1	0	59	3	0	0	0	0	0	0	0	--
	Non-detections > SL	0	0	0	47	13	0	0	0	0	0	0	0	0	--
	Minimum	2.52	8.38	0.03	--	11	21	--	--	--	--	--	--	70	--
	Maximum	203	1,530	**1.3**	--	**18,000**	**5,700**	--	--	--	--	--	--	140	--
	Median	36.7	104	0.07	--	**220**	310	--	--	--	--	--	--	105	--
Shallow (>0.5 - 5 ft bgs)	Observations	147	147	147	148	148	148	10	10	10	10	10	10	10	10
	Detections	147	147	114	1	78	63	0	0	0	0	0	0	0	0
	Detection frequency	100%	100%	78%	1%	53%	43%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	1	0	1	1	56	8	0	0	0	0	0	0	0	--
	Non-detections > SL	0	0	0	36	1	0	0	0	0	0	0	0	0	--
	Minimum	4.41	5.53	0.03 J	**1,000**	14	23	--	--	--	--	--	--	--	--
	Maximum	**401**	16,200	**1.28**	**1,000**	**25,000**	**5,600**	--	--	--	--	--	--	--	--
	Median	38.3	73.7	0.05	**1,000**	**605**	450	--	--	--	--	--	--	--	--
Deeper (>5 - 30 ft bgs)	Observations	22	22	18	259	259	259	7	7	7	7	7	7	7	7
	Detections	22	22	17	2	64	25	0	0	0	0	0	0	0	0
	Detection frequency	100%	100%	94%	1%	25%	10%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	0	0	1	0	41	5	0	0	0	0	0	0	0	--
	Non-detections > SL	0	0	0	25	1	1	0	0	0	0	0	0	0	--
	Minimum	12.4	23.1	0.03 J	32	12	36	--	--	--	--	--	--	--	--
	Maximum	113	6,060	**1.37**	75	**33,000**	**6,500**	--	--	--	--	--	--	--	--
	Median	33.2	100	0.04	53.5	**745**	610	--	--	--	--	--	--	--	--
Deepest (> 30 ft bgs)	Observations	0	0	0	115	115	115	0	0	0	0	0	0	0	0
	Detections	--	--	--	0	30	3	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	0%	26%	3%	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	0	17	0	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	10	0	0	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	11	50	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	**26,000**	120	--	--	--	--	--	--	--	--
	Median	--	--	--	--	**110**	68	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8082	EPA 8270C [c]	EPA 8270C [c]	EPA 8270C [c]	EPA 8270C [c]	EPA 8270CM [b]	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C
	Analyte	PCB-1268	1,2,4-Trichloro benzene	1,2-Dichloro benzene	1,3-Dichloro benzene	1,4-Dichloro benzene	1-Methyl naphthalene	2,4,5-Trichloro phenol	2,4,6-Trichloro phenol	2,4-Dichloro phenol	2,4-Dimethyl phenol	2,4-Dinitrophenol	2,4-Dinitro toluene	2,6-Dinitro toluene	2-Chloro naphthalene
	Residential Screening Level [a]	NE	7,800	1,800,000	NE	2,600	9,900	6,300,000	7,800	190,000	1,300,000	130,000	1,700	360	4,100,000
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics														
Surface (0 - 0.5 ft bgs)	Observations	11	12	12	12	12	12	12	12	12	12	12	12	12	12
	Detections	0	0	0	0	0	4	0	0	0	0	0	0	0	0
	Detection frequency	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	--	0	0	--	0	0	0	0	0	0	0	0	0	0
	Non-detections > SL	--	0	0	--	1	0	0	0	0	0	0	0	3	0
	Minimum	--	--	--	--	--	7.9	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	1,000	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	272	--	--	--	--	--	--	--	--
Shallow (>0.5 - 5 ft bgs)	Observations	10	38	38	38	38	24	24	24	24	24	24	24	24	24
	Detections	0	0	0	0	0	12	0	0	0	0	0	0	0	0
	Detection frequency	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	--	0	0	--	0	2	0	0	0	0	0	0	0	0
	Non-detections > SL	--	0	0	--	4	0	0	0	0	0	0	0	12	0
	Minimum	--	--	--	--	--	5.0 J	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	25,000	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	1,495	--	--	--	--	--	--	--	--
Deeper (>5 - 30 ft bgs)	Observations	7	72	72	72	72	21	21	21	21	21	21	21	21	21
	Detections	0	0	0	0	0	12	0	0	0	0	0	0	0	0
	Detection frequency	0%	0%	0%	0%	0%	57%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	--	0	0	--	0	2	0	0	0	0	0	0	0	0
	Non-detections > SL	--	1	0	--	3	0	0	1	0	0	0	3	4	0
	Minimum	--	--	--	--	--	5.0 J	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	15,000	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	1,600	--	--	--	--	--	--	--	--
Deepest (> 30 ft bgs)	Observations	0	8	8	8	8	0	0	0	0	0	0	0	0	0
	Detections	--	0	0	0	0	--	--	--	--	--	--	--	--	--
	Detection frequency	--	0%	0%	0%	0%	--	--	--	--	--	--	--	--	--
	Detections > SL	--	0	0	--	0	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	0	0	--	0	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8270C	EPA 8270C	EPA 8270CM [b]	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C
	Analyte	2-Chlorophenol	2-Methyl-4,6-dinitrophenol	2-Methyl naphthalene	2-Methylphenol (o-Cresol)	2-Nitroaniline	2-Nitrophenol	3 and 4-Methylphenol (m and p-Cresol)	3,3'-Dichloro benzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Nitroaniline
	Residential Screening Level [a]	340,000	5,100	190,000	3,200,000	630,000	NE	3,200,000	450	NE	NE	6,300,000	2,700	NE	27,000
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics														
Surface (0 - 0.5 ft bgs)	Observations	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Detections	0	0	6	0	0	0	0	0	0	0	0	0	0	0
	Detection frequency	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	0	0	0	0	0	--	0	0	--	--	0	0	--	0
	Non-detections > SL	0	0	0	0	0	--	0	6	--	--	0	2	--	0
	Minimum	--	--	12	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	1,300	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	85.5	--	--	--	--	--	--	--	--	--	--	--
Shallow (>0.5 - 5 ft bgs)	Observations	24	24	24	24	24	24	24	24	24	24	24	24	24	24
	Detections	0	0	11	0	0	0	0	0	0	0	0	0	0	0
	Detection frequency	0%	0%	46%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	0	0	0	0	0	--	0	0	--	--	0	0	--	0
	Non-detections > SL	0	0	0	0	0	--	0	16	--	--	0	8	--	0
	Minimum	--	--	7.5 J	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	39,000 L	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	3,600	--	--	--	--	--	--	--	--	--	--	--
Deeper (>5 - 30 ft bgs)	Observations	21	21	21	21	21	21	21	21	21	21	21	21	21	21
	Detections	0	0	12	0	0	0	0	0	0	0	0	0	0	0
	Detection frequency	0%	0%	57%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	0	0	0	0	0	--	0	0	--	--	0	0	--	0
	Non-detections > SL	0	1	0	0	0	--	0	10	--	--	0	4	--	3
	Minimum	--	--	5.7 J	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	17,000 L	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	1,400	--	--	--	--	--	--	--	--	--	--	--
Deepest (> 30 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

Depth	Method	EPA 8270C [d]	EPA 8270CM [b]	EPA 8270CM [b]	EPA 8270C	EPA 8270CM [b]	EPA 8270C	EPA 8270CM [b]	EPA 8270C	EPA 8270CM [b]	EPA 8270CM [b]	EPA 8270CM [b]	EPA 8270CM [b]	EPA 8270C
	Analyte	4-Nitrophenol	Acenaphthene	Acenaph thylene	Aniline	Anthracene	Azobenzene	Benz(a) anthracene	Benzidine	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Benzoic acid
	Residential Screening Level [a]	NE	3,300,000	NE	95,000	17,000,000	5,600	1,100	0.24	110	1,100	NE	11,000	250,000,000
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics													
Surface (0 - 0.5 ft bgs)	Observations	19	12	12	12	12	12	12	12	12	12	12	12	12
	Detections	0	2	2	0	5	0	3	0	2	1	6	1	0
	Detection frequency	0%	17%	17%	0%	42%	0%	25%	0%	17%	8%	50%	8%	0%
	Detections > SL	--	0	--	0	0	0	0	0	1	0	--	0	0
	Non-detections > SL	--	0	--	0	0	1	0	12	2	0	--	0	0
	Minimum	--	4.7	9	--	14	--	8.6	--	19	200	1.8	180	--
	Maximum	--	340	46	--	690	--	220	--	**290**	200	74	180	--
	Median	--	172	27.5	--	35	--	57	--	**154**	200	14.3	180	--
Shallow (>0.5 - 5 ft bgs)	Observations	30	24	24	24	24	24	24	24	24	24	24	24	24
	Detections	0	7	3	0	12	0	10	0	8	8	11	7	0
	Detection frequency	0%	29%	13%	0%	50%	0%	42%	0%	33%	33%	46%	29%	0%
	Detections > SL	--	0	--	0	0	0	0	0	2	0	--	0	0
	Non-detections > SL	--	0	--	0	0	4	0	24	2	0	--	0	0
	Minimum	--	41 J	230 J	--	1.5 J	--	1.5 J	--	2.8 J	2.8 J	2.8 J	2 J	--
	Maximum	--	1,300	490 J	--	520	--	450	--	**960**	480	400	580	--
	Median	--	680	260	--	165	--	93	--	60	43.5	25	54	--
Deeper (>5 - 30 ft bgs)	Observations	21	21	21	21	21	21	21	21	21	21	21	21	21
	Detections	0	8	3	0	11	0	13	0	10	6	9	6	1
	Detection frequency	0%	38%	14%	0%	52%	0%	62%	0%	48%	29%	43%	29%	5%
	Detections > SL	--	0	--	0	0	0	1	0	5	0	--	0	0
	Non-detections > SL	--	0	--	0	0	3	0	21	0	0	--	0	0
	Minimum	--	40 J	4.1 J	--	15 J	--	1.4 J	--	3.2 J	15	2.2 J	11	61,000 J
	Maximum	--	1,600 J	190	--	5,400	--	**2,800** J	--	**1,200** J	140	73 J	110	61,000 J
	Median	--	270	52	--	200	--	72	--	**115**	60.5	25	41	61,000
Deepest (> 30 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270CM [b]	EPA 8270C	EPA 8270C	EPA 8270CM [b]	EPA 8270C	EPA 8270C
	Analyte	Benzyl alcohol	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) Ether	Bis(2-chloro isopropyl) Ether	Bis(2-ethylhexyl) phthalate	Butylbenzyl Phthalate	Carbazole	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenz(a,h) anthracene	Dibenzofuran	Diethyl phthalate
	Residential Screening Level [a]	6,300,000	190,000	100	2,000,000	39,000	290,000	NE	110,000	6,300,000	630,000	28	66,000	51,000,000
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics													
Surface (0 - 0.5 ft bgs)	Observations	12	12	12	12	12	12	12	12	12	12	12	12	12
	Detections	3	0	0	0	0	0	0	7	0	0	1	1	0
	Detection frequency	25%	0%	0%	0%	0%	0%	0%	58%	0%	0%	8%	8%	0%
	Detections > SL	0	0	0	0	0	0	--	0	0	0	1	0	0
	Non-detections > SL	0	0	8	0	0	0	--	0	0	0	2	0	0
	Minimum	41	--	--	--	--	--	--	1.8	--	--	180	210	--
	Maximum	66	--	--	--	--	--	--	290	--	--	180	210	--
	Median	41	--	--	--	--	--	--	7.5	--	--	180	210	--
Shallow (>0.5 - 5 ft bgs)	Observations	24	24	24	24	24	24	24	24	24	24	24	24	24
	Detections	4	0	0	0	2	0	0	17	0	0	6	1	0
	Detection frequency	17%	0%	0%	0%	8%	0%	0%	71%	0%	0%	25%	4%	0%
	Detections > SL	0	0	0	0	0	0	--	0	0	0	3	0	0
	Non-detections > SL	0	0	16	0	0	0	--	0	0	0	7	0	0
	Minimum	38 J	--	--	--	110 J	--	--	3.3 J	--	--	2.20 J	1000 J	--
	Maximum	68 J	--	--	--	6,200	--	--	600 J	--	--	130 J	1000 J	--
	Median	44.5	--	--	--	3,155	--	--	84	--	--	27	1000	--
Deeper (>5 - 30 ft bgs)	Observations	21	21	21	21	21	21	21	21	21	21	21	21	21
	Detections	5	0	0	0	0	0	1	14	0	0	5	2	0
	Detection frequency	24%	0%	0%	0%	0%	0%	5%	67%	0%	0%	24%	10%	0%
	Detections > SL	0	0	0	0	0	0	--	0	0	0	1	0	0
	Non-detections > SL	0	0	12	0	0	0	--	0	0	0	3	0	0
	Minimum	52 J	--	--	--	--	--	290 J,D2	0.9 J	--	--	2.3 J	38 J	--
	Maximum	92 J	--	--	--	--	--	290 J,D2	5,300	--	--	710 J	160 J,D2	--
	Median	72	--	--	--	--	--	290	185	--	--	22	99	--
Deepest (> 30 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8270C	EPA 8270CM [b]	EPA 8270CM [b]	EPA 8270C	EPA 8270C [c]	EPA 8270C	EPA 8270C	EPA 8270CM [b]	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270C	EPA 8270CM [b] [c]
	Analyte	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachloro benzene	Hexachloro butadiene	Hexachloro cyclo pentadiene	Hexachloro ethane	Indeno(1,2,3 -cd)pyrene	Isophorone	N-Nitrosodi-n-propylamine (NDPA)	N-Nitrosodi methylamine (NDMA)	N-Nitrosodi phenylamine	Naphthalene
	Residential Screening Level [a]	NE	2,400,000	2,300,000	190	1,200	1,800	1,800	1,100	570,000	78	2	110,000	2,000
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics													
Surface (0 - 0.5 ft bgs)	Observations	12	12	12	12	12	12	12	12	12	12	12	12	12
	Detections	0	6	5	0	0	0	0	2	0	0	0	0	3
	Detection frequency	0%	50%	42%	0%	0%	0%	0%	17%	0%	0%	0%	0%	25%
	Detections > SL	--	0	0	0	0	0	0	0	0	0	0	0	0
	Non-detections > SL	--	0	0	3	2	0	1	0	0	8	12	0	0
	Minimum	--	1.7	1.4	--	--	--	--	3.3	--	--	--	--	22
	Maximum	--	840	450	--	--	--	--	86	--	--	--	--	55
	Median	--	17.1	160	--	--	--	--	44.6	--	--	--	--	34
Shallow (>0.5 - 5 ft bgs)	Observations	24	24	24	24	38	24	24	24	24	24	24	24	38
	Detections	0	17	11	0	0	0	0	4	0	0	0	0	14
	Detection frequency	0%	71%	46%	0%	0%	0%	0%	17%	0%	0%	0%	0%	37%
	Detections > SL	--	0	0	0	0	0	0	0	0	0	0	0	2
	Non-detections > SL	--	0	0	12	8	0	7	0	0	16	24	0	0
	Minimum	--	0.90 J	1.8 J	--	--	--	--	2.3 J	--	--	--	--	0.32 J
	Maximum	--	1,400	2,500	--	--	--	--	510	--	--	--	--	**8,700**
	Median	--	130	690	--	--	--	--	12.9	--	--	--	--	205
Deeper (>5 - 30 ft bgs)	Observations	21	21	21	21	72	21	21	21	21	21	21	21	72
	Detections	0	18	12	0	0	0	0	4	0	0	0	0	13
	Detection frequency	0%	86%	57%	0%	0%	0%	0%	19%	0%	0%	0%	0%	18%
	Detections > SL	--	0	0	0	0	0	0	0	0	0	0	0	3
	Non-detections > SL	--	0	0	4	4	3	4	0	0	12	21	0	0
	Minimum	--	1.2 J	1.6 J	--	--	--	--	3.8 J	--	--	--	--	0.24 J
	Maximum	--	2,400 J	5,600	--	--	--	--	72 J	--	--	--	--	**4,200**
	Median	--	94	495	--	--	--	--	25.5	--	--	--	--	130
Deepest (> 30 ft bgs)	Observations	0	0	0	0	8	0	0	0	0	0	0	0	8
	Detections	--	--	--	--	0	--	--	--	--	--	--	--	0
	Detection frequency	--	--	--	--	0%	--	--	--	--	--	--	--	0%
	Detections > SL	--	--	--	--	0	--	--	--	--	--	--	--	0
	Non-detections > SL	--	--	--	--	0	--	--	--	--	--	--	--	0
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8270C	EPA 8270C [d]	EPA 8270CM [b]	EPA 8270C	EPA 8270CM [b]	EPA 8270C	EPA 8270C	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
	Analyte	Nitro benzene	Pentachloro phenol	Phenanthrene	Phenol	Pyrene	Pyridine	Total Cresol	1,1,1,2-Tetrachloro ethane	1,1,1-Trichloro ethane	1,1,2,2-Tetrachloro ethane	1,1,2-Trichloro ethane	1,1,2-Trichlorotri fluoroethane	1,1-Dichloro ethane
	Residential Screening Level [a]	5,100	1,000	NE	19,000,000	1,800,000	58,000	6,300,000	2,000	1,700,000	600	1,100	6,700,000	3,600
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics													
Surface (0 - 0.5 ft bgs)	Observations	12	12	12	12	12	12	12	0	0	0	0	0	0
	Detections	0	0	7	0	8	0	0	--	--	--	--	--	--
	Detection frequency	0%	0%	58%	0%	67%	0%	0%	--	--	--	--	--	--
	Detections > SL	0	0	--	0	0	0	0	--	--	--	--	--	--
	Non-detections > SL	0	3	--	0	0	0	0	--	--	--	--	--	--
	Minimum	--	--	1.5	--	4.3	--	--	--	--	--	--	--	--
	Maximum	--	--	930	--	1,200	--	--	--	--	--	--	--	--
	Median	--	--	16	--	31.5	--	--	--	--	--	--	--	--
Shallow (>0.5 - 5 ft bgs)	Observations	24	24	24	24	24	24	24	14	14	14	14	14	14
	Detections	0	0	17	0	19	0	0	0	1	0	0	0	1
	Detection frequency	0%	0%	71%	0%	79%	0%	0%	0%	7%	0%	0%	0%	7%
	Detections > SL	0	0	--	0	0	0	0	0	0	0	0	0	0
	Non-detections > SL	0	12	--	0	0	0	0	0	0	0	0	0	0
	Minimum	--	--	4.1 J	--	2 B1,J	--	--	--	910	--	--	--	150 J
	Maximum	--	--	11,000	--	1,700	--	--	--	910	--	--	--	150 J
	Median	--	--	83	--	120	--	--	--	910	--	--	--	150
Deeper (>5 - 30 ft bgs)	Observations	21	21	21	21	21	21	21	51	51	51	51	51	51
	Detections	0	0	17	0	16	0	0	0	0	0	0	0	3
	Detection frequency	0%	0%	81%	0%	76%	0%	0%	0%	0%	0%	0%	0%	6%
	Detections > SL	0	0	--	0	0	0	0	0	0	0	0	0	0
	Non-detections > SL	1	4	--	0	0	0	0	0	0	0	0	0	0
	Minimum	--	--	1.9 J	--	1.1 B1,J	--	--	--	--	--	--	--	0.3 J
	Maximum	--	--	17,000	--	8,300	--	--	--	--	--	--	--	30 J,P
	Median	--	--	150	--	250	--	--	--	--	--	--	--	0.32
Deepest (> 30 ft bgs)	Observations	0	0	0	0	0	0	0	8	8	8	8	8	8
	Detections	--	--	--	--	--	--	--	0	0	0	0	0	0
	Detection frequency	--	--	--	--	--	--	--	0%	0%	0%	0%	0%	0%
	Detections > SL	--	--	--	--	--	--	--	0	0	0	0	0	0
	Non-detections > SL	--	--	--	--	--	--	--	0	0	0	0	0	0
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
	Analyte	1,1-Dichloro ethene	1,1-Dichloro propene	1,2,3-Trichloro benzene	1,2,3-Trichloro propane	1,2,4-Trimethyl benzene	1,2-Dibromo-3-chloro propane	1,2-Dibromo ethane	1,2-Dichloro ethane	1,2-Dichloro propane	1,3,5-Trimethyl benzene	1,3-Dichloro propane	2,2-Dichloro propane	2-Butanone (MEK)	2-Chloro toluene
	Residential Screening Level [(a)]	83,000	NE	40,000	1.5	300,000	4.3	36	460	2,500	270,000	410,000	NE	27,000,000	470,000
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics														
Surface (0 - 0.5 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shallow (>0.5 - 5 ft bgs)	Observations	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	Detections	1	0	0	0	5	0	0	0	0	3	0	0	9	0
	Detection frequency	7%	0%	0%	0%	36%	0%	0%	0%	0%	21%	0%	0%	64%	0%
	Detections > SL	0	--	0	0	0	0	0	0	0	0	0	--	0	0
	Non-detections > SL	0	--	0	5	0	5	0	0	0	0	0	--	0	0
	Minimum	11 J	--	--	--	4.30 J	--	--	--	--	38 J	--	--	2.2 J	--
	Maximum	11 J	--	--	--	3,100	--	--	--	--	140 J	--	--	83 J	--
	Median	11	--	--	--	370	--	--	--	--	120	--	--	9.5	--
Deeper (>5 - 30 ft bgs)	Observations	51	51	51	51	51	51	51	51	51	51	51	51	51	51
	Detections	1	0	0	0	12	0	0	0	0	5	0	0	35	0
	Detection frequency	2%	0%	0%	0%	24%	0%	0%	0%	0%	10%	0%	0%	69%	0%
	Detections > SL	0	--	0	0	0	0	0	0	0	0	0	--	0	0
	Non-detections > SL	0	--	0	12	0	12	0	0	0	0	0	--	0	0
	Minimum	0.2 J	--	--	--	0.5 J	--	--	--	--	0.9 J	--	--	0.7 J	--
	Maximum	0.23 J	--	--	--	1,100	--	--	--	--	200 J	--	--	71 J	--
	Median	0.23	--	--	--	61	--	--	--	--	22	--	--	2.1	--
Deepest (> 30 ft bgs)	Observations	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Detections	0	0	0	0	0	0	0	0	0	0	0	0	2	0
	Detection frequency	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	0%
	Detections > SL	0	--	0	0	0	0	0	0	0	0	0	--	0	0
	Non-detections > SL	0	--	0	6	0	6	0	0	0	0	0	--	0	0
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	1 J	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	3 J	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	1.85	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
	Analyte	4-Chloro toluene	4-Isopropyl toluene	4-Methyl-2-pentanone (MIBK)	Acetone	Allyl Chloride	Benzene	Bromo benzene	Bromochloro methane	Bromo dichloro methane	Bromoform	Bromo methane	Carbon Tetrachloride	Chloro benzene	Chloro dibromo methane
	Residential Screening Level [(a)]	440,000	NE	33,000,000	61,000,000	720	330	290,000	150,000	290	19,000	6,800	650	280,000	940
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics														
Surface (0 - 0.5 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shallow (>0.5 - 5 ft bgs)	Observations	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	Detections	0	4	0	8	0	7	0	0	0	0	0	0	0	0
	Detection frequency	0%	29%	0%	57%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	0	--	0	0	0	0	0	0	0	0	0	0	0	0
	Non-detections > SL	0	--	0	0	0	0	0	0	0	0	0	0	0	0
	Minimum	--	51 J	--	120	--	0.24 J	--	--	--	--	--	--	--	--
	Maximum	--	440	--	1,400	--	120 J	--	--	--	--	--	--	--	--
	Median	--	108	--	170	--	2	--	--	--	--	--	--	--	--
Deeper (>5 - 30 ft bgs)	Observations	51	51	51	51	51	51	51	51	51	51	51	51	51	51
	Detections	0	10	0	11	0	33	0	0	0	0	2	0	0	0
	Detection frequency	0%	20%	0%	22%	0%	65%	0%	0%	0%	0%	4%	0%	0%	0%
	Detections > SL	0	--	0	0	0	0	0	0	0	0	0	0	0	0
	Non-detections > SL	0	--	0	0	0	0	0	0	0	0	0	0	0	0
	Minimum	--	1.6 J	--	18.0 J	--	0.08 J	--	--	--	--	0.2 J	--	--	--
	Maximum	--	320	--	320 J,D2	--	99 J	--	--	--	--	0.35 J	--	--	--
	Median	--	140	--	59	--	0.48	--	--	--	--	0.27	--	--	--
Deepest (> 30 ft bgs)	Observations	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Detections	0	1	0	1	0	2	0	0	0	0	0	0	0	0
	Detection frequency	0%	13%	0%	13%	0%	25%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	0	--	0	0	0	0	0	0	0	0	0	0	0	0
	Non-detections > SL	0	--	0	0	0	0	0	0	0	0	0	0	0	0
	Minimum	--	47 J	--	72 J	--	0 J	--	--	--	--	--	--	--	--
	Maximum	--	47 J	--	72 J	--	18 J	--	--	--	--	--	--	--	--
	Median	--	47	--	72	--	9.04	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
	Analyte	Chloroethane	Chloroform	Chloro methane	cis-1,2-Dichloro ethene	cis-1,3-Dichloro propene	cis-1,4-dichloro-2-butene	Di-isopropyl ether (DIPE)	Dibromo methane	Dichloro difluoro methane	Ethyl-tertbutylether (ETBE)	Ethyl benzene	Isopropyl benzene	m & p-Xylene	Methyl-t-butyl Ether (MTBE)
	Residential Screening Level [(a)]	14,000,000	320	110,000	18,000	NE	7.4	2,200,000	24,000	87,000	NE	5,800	1,900,000	550,000	47,000
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics														
Surface (0 - 0.5 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shallow (>0.5 - 5 ft bgs)	Observations	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	Detections	0	0	0	2	0	0	0	0	0	0	7	5	7	0
	Detection frequency	0%	0%	0%	14%	0%	0%	0%	0%	0%	0%	50%	36%	50%	0%
	Detections > SL	0	0	0	0	--	0	0	0	0	--	0	0	7	0
	Non-detections > SL	0	0	0	0	--	5	0	0	0	--	0	0	0	0
	Minimum	--	--	--	270	--	--	--	--	--	--	0.27 J	18 J	0.81 J	--
	Maximum	--	--	--	600	--	--	--	--	--	--	60 J	140 J	340	--
	Median	--	--	--	435	--	--	--	--	--	--	14	49	33	--
Deeper (>5 - 30 ft bgs)	Observations	51	51	51	51	51	51	51	51	51	51	51	51	51	51
	Detections	0	0	0	0	0	0	0	0	0	0	10	16	10	0
	Detection frequency	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	31%	20%	0%
	Detections > SL	0	0	0	0	--	0	0	0	0	--	0	0	10	0
	Non-detections > SL	0	0	0	0	--	9	0	0	0	--	0	0	0	0
	Minimum	--	--	--	--	--	--	--	--	--	--	0.4 J	0.27 J	3.6 J,D2	--
	Maximum	--	--	--	--	--	--	--	--	--	--	40 J	970	95 J,P	--
	Median	--	--	--	--	--	--	--	--	--	--	28.5	120	39	--
Deepest (> 30 ft bgs)	Observations	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Detections	0	0	0	0	0	0	0	0	0	0	0	6	0	1
	Detection frequency	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	75%	0%	13%
	Detections > SL	0	0	0	0	--	0	0	0	0	0	0	0	0	0
	Non-detections > SL	0	0	0	0	--	6	0	0	0	0	0	0	0	0
	Minimum	--	--	--	--	--	--	--	--	--	--	--	68 J,D2	--	8 J
	Maximum	--	--	--	--	--	--	--	--	--	--	--	1,500	--	8 J
	Median	--	--	--	--	--	--	--	--	--	--	--	445	--	8

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
	Analyte	Methylene chloride	N-butyl benzene	N-propyl benzene	o-Xylene	Sec-butyl benzene	Styrene	t-Butyl alcohol (TBA)	Tert-amyl methylether (TAME)	Tert-butyl benzene	Tetrachloro ethene	Toluene	trans-1,2-dichloro ethene	trans-1,3-dichloro propene	trans-1,4-dichloro-2-butene
	Residential Screening Level [(a)]	2,200	2,400,000	3,800,000	650,000	2,200,000	5,600,000	NE	NE	2,200,000	590	1,100,000	130,000	NE	7.4
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics														
Surface (0 - 0.5 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shallow (>0.5 - 5 ft bgs)	Observations	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	Detections	9	2	5	8	4	1	4	0	0	3	10	1	0	0
	Detection frequency	64%	14%	36%	57%	29%	7%	29%	0%	0%	21%	71%	7%	0%	0%
	Detections > SL	0	0	0	0	0	0	--	--	--	1	0	0	--	0
	Non-detections > SL	0	0	0	0	0	0	--	--	--	0	0	0	--	5
	Minimum	3 J	200 J	51 J	0.32 J	43 J	1.1 J	14	--	--	3.10 J	0.30 J	340	--	--
	Maximum	110 J	470	340	130 J	330	1.1 J	36	--	--	**75,000**	110 J	340	--	--
	Median	11	335	68	31.5	120	1.1	20	--	--	4.9	0.645	340	--	--
Deeper (>5 - 30 ft bgs)	Observations	51	51	51	51	51	51	51	51	51	51	51	51	51	51
	Detections	5	14	16	10	16	0	5	0	0	15	30	0	0	0
	Detection frequency	10%	28%	31%	20%	31%	0%	10%	0%	0%	29%	59%	0%	0%	0%
	Detections > SL	0	0	0	0	0	0	--	--	--	0	0	0	--	0
	Non-detections > SL	0	0	0	0	0	0	--	--	--	0	0	0	--	9
	Minimum	0.21 J	5.5	0.4 J	1.4 J	0.95 J	--	9.2	--	--	0.1 J	0.2 J	--	--	--
	Maximum	33 D2	2,700	2,300	150 J	2,100	--	33	--	--	480	56 J,P	--	--	--
	Median	0.63	780	205	57.5	275	--	16	--	--	3.9	0.325	--	--	--
Deepest (> 30 ft bgs)	Observations	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Detections	0	6	6	0	6	0	0	0	2	0	0	0	0	0
	Detection frequency	0%	75%	75%	0%	75%	0%	0%	0%	25%	0%	0%	0%	0%	0%
	Detections > SL	0	0	0	0	0	0	--	--	0	0	0	0	--	0
	Non-detections > SL	0	0	0	0	0	0	--	--	0	0	0	0	--	6
	Minimum	--	380 D2	220 J,D2		320 D2	--	--	--	110 J	--	--	--	--	--
	Maximum	--	8,900	6,600		3,500	--	--	--	130 J	--	--	--	--	--
	Median	--	3,000	2,000		1,490	--	--	--	120	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A
	Analyte	Trichloro ethene	Trichloro fluoro methane	Vinyl Chloride	Xylenes (Total)	4,4'-DDD	4,4'-DDE	4,4'-DDT	a-BHC	Aldrin	b-BHC	Chlordane (technical)	d-BHC	Dieldrin	Endosulfan I
	Residential Screening Level [(a)]	940	1,200,000	8.2	580,000	1,900	2,000	1,900	86	39	300	1,700	NE	34	450,000
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics														
Surface (0 - 0.5 ft bgs)	Observations	0	0	0	0	5	5	5	5	5	5	5	5	5	5
	Detections	--	--	--	--	0	0	0	0	0	0	0	0	0	0
	Detection frequency	--	--	--	--	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	--	--	--	--	0	0	0	0	0	0	0	--	0	0
	Non-detections > SL	--	--	--	--	0	0	0	0	0	0	0	--	0	0
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shallow (>0.5 - 5 ft bgs)	Observations	14	14	14	14	6	6	6	6	6	6	6	6	6	6
	Detections	2	0	0	8	0	0	0	0	0	0	0	0	0	0
	Detection frequency	14%	0%	0%	57%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	0	0	0	0	0	0	0	0	0	0	0	--	0	0
	Non-detections > SL	0	0	1	0	0	0	0	0	0	0	0	--	0	0
	Minimum	570	--	--	1.1 J	--	--	--	--	--	--	--	--	--	--
	Maximum	900	--	--	470	--	--	--	--	--	--	--	--	--	--
	Median	735	--	--	57.5	--	--	--	--	--	--	--	--	--	--
Deeper (>5 - 30 ft bgs)	Observations	51	51	51	51	0	0	0	0	0	0	0	0	0	0
	Detections	8	0	0	10	--	--	--	--	--	--	--	--	--	--
	Detection frequency	16%	0%	0%	20%	--	--	--	--	--	--	--	--	--	--
	Detections > SL	0	0	0	0	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	0	0	4	0	--	--	--	--	--	--	--	--	--	--
	Minimum	0.2 J	--	--	1.4 J	--	--	--	--	--	--	--	--	--	--
	Maximum	15 J	--	--	240 J	--	--	--	--	--	--	--	--	--	--
	Median	1.03	--	--	125	--	--	--	--	--	--	--	--	--	--
Deepest (> 30 ft bgs)	Observations	8	8	8	8	0	0	0	0	0	0	0	0	0	0
	Detections	0	0	0	0	--	--	--	--	--	--	--	--	--	--
	Detection frequency	0%	0%	0%	0%	--	--	--	--	--	--	--	--	--	--
	Detections > SL	0	0	0	0	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	0	0	3	0	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	EPA 8081A	8151A	8151A	8151A	8151A
	Analyte	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin Ketone	Heptachlor	Heptachlor epoxide	Lindane (Gamma-BHC)	Methoxychlor	Toxaphene	2,4,5-T	2,4,5-TP	2,4-D	2,4-DB
	Residential Screening Level [(a)]	450,000	380,000	19,000	NE	NE	130	70	570	320,000	450	630,000	510,000	700,000	1,900,000
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics														
Surface (0 - 0.5 ft bgs)	Observations	5	5	5	5	5	5	5	5	5	5	7	7	7	7
	Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detection frequency	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	0	0	0	--	--	0	0	0	0	0	0	0	0	0
	Non-detections > SL	0	0	0	--	--	0	0	0	0	0	0	0	0	0
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shallow (>0.5 - 5 ft bgs)	Observations	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detection frequency	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	0	0	0	--	--	0	0	0	0	0	0	0	0	0
	Non-detections > SL	0	0	0	--	--	0	0	0	0	0	0	0	0	0
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deeper (>5 - 30 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deepest (> 30 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	8151A	8151A	8151A	8151A	8151A	8151A	8151A	8151A	8151A	8151A	8151A	8151A	8151A
	Analyte	Acifluorfen	Bentazon	Chloramben	Dalapon	Dicamba	3,5-Dichloro benzoic acid	DCPA diacid	Dichloroprop	Dinoseb	MCPA	MCPP	Penta chloro phenol (PCP)	Picloram
	Residential Screening Level [(a)]	NE	1,900,000	950,000	1,900,000	1,900,000	NE	NE	NE	63,000	32,000	63,000	1,000	4,400,000
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Depth	Statistics													
Surface (0 - 0.5 ft bgs)	Observations	7	7	7	7	7	7	7	7	7	7	7	7	7
	Detections	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detection frequency	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	--	0	0	0	0	--	--	--	0	0	0	0	0
	Non-detections > SL	--	0	0	0	0	--	--	--	0	2	0	0	0
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--
Shallow (>0.5 - 5 ft bgs)	Observations	6	6	6	6	6	6	6	6	6	6	6	6	6
	Detections	0	0	1	0	0	0	0	0	0	0	0	0	0
	Detection frequency	0%	0%	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Detections > SL	--	0	0	0	0	--	--	--	0	0	0	0	0
	Non-detections > SL	--	0	0	0	0	--	--	--	0	0	0	0	0
	Minimum	--	--	11.6	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	11.6	--	--	--	--	--	--	--	--	--	--
	Median	--	--	11.6	--	--	--	--	--	--	--	--	--	--
Deeper (>5 - 30 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--
Deepest (> 30 ft bgs)	Observations	0	0	0	0	0	0	0	0	0	0	0	0	0
	Detections	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detection frequency	--	--	--	--	--	--	--	--	--	--	--	--	--
	Detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--
	Non-detections > SL	--	--	--	--	--	--	--	--	--	--	--	--	--
	Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--
	Median	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10

Soil Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

Notes:

[a] Soil screening levels are derived from the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 (April 2019 update, June 2020 revision), and the EPA Regional Screening Level (RSL) THQ = 1.0 (May 2020).

[b] Eighteen compounds were analyzed by EPA Method 8270CM (selective ion method) in addition to EPA Method 8270C. For these compounds, summary statistics were calculated using the 8270CM results only.

[c] Six compounds were analyzed by EPA Methods 8260B and 8270C, but are displayed under 8270C only.

[d] Two compounds were analyzed by EPA Methods 8151A and 8270C, but are displayed under 8270C only.

EPA = U.S. Environmental Protection Agency
mg/kg = milligram per kilogram
µg/kg = micrograms per kilogram
ft bgs = feet below ground surface
NE = not established
-- = not applicable or no data
U = not detected above laboratory method detection limit
J = Result is an estimate.
B1 = analyte was present in a sample and associated method blank greater than MDL and less than reporting limit.
L = Laboratory control sample or control sample duplicate was out of control limits.
D2 = Reporting limit is elevated due to sample matrix. Target analyte was not detected above reporting limit.
P = Sample was received without proper preservation according to EPA guidelines.

Detections = observations with a result greater than the method detection limit (MDL).
Detection frequency = number of detections divided by number of samples in that grouping.
Detections > SL = Number of detections whose results exceeded the residential screening level (SL).
Non-detections > SL = Number of observations that were not detected but whose MDL exceeded the residential screening level.
Minimum, maximum, and median computed on positively detected observations only. Non-detect observations were excluded. Flags not assigned to median values.

BOLD analyte result exceeded the compound-specific residential screening level and was reported above laboratory MDL.

Table 11

Soil Gas Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
	Analyte	1,2,4-Trichloro benzene	1,2-Dichloro benzene	1,3-Dichloro benzene	1,4-Dichloro benzene	Hexachloro butadiene	Naphthalene	1,1,1,2-Tetrachloro ethane	1,1,1-Trichloro ethane	1,1,2,2-Tetrachloro ethane	1,1,2-Trichloro ethane	1,1,2-Trichloro trifluoro ethane	1,1-Dichloro ethane
	Residential Screening Level [(a)]	380	210,000	NE	260	130	83	380	1,000,000	48	180	5,200,000	1,800
	Units	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Depth	Statistics												
Shallow (0 - 10 ft bgs)	Observations	232	232	232	232	232	232	232	232	232	232	232	232
	Detections	0	3	0	1	0	46	0	108	0	3	6	89
	Detection frequency	0%	1%	0%	0%	0%	20%	0%	47%	0%	1%	3%	38%
	Detections > SL	0	0	--	0	0	17	0	0	0	2	0	5
	Non-detections > SL	0	0	--	0	0	0	0	0	0	0	0	0
	Minimum	--	16	--	14	--	9.2	--	4.6	--	41	7.0	2.8
	Maximum	--	140	--	14	--	**5,100**	--	98,000	--	**270**	110	**57,000**
	Median	--	33	--	14	--	52	--	160	--	**240**	31.3	38
Deep (> 10 ft bgs)	Observations	218	218	218	218	218	218	218	218	218	218	218	218
	Detections	1	2	0	2	0	40	0	110	0	2	7	89
	Detection frequency	1%	1%	0%	1%	0%	18%	0%	51%	0%	1%	3%	41%
	Detections > SL	0	0	--	0	0	13	0	0	0	1	0	6
	Non-detections > SL	0	0	--	0	0	0	0	0	0	0	0	0
	Minimum	9.4	29	--	7.6	--	14	--	3.6	--	16	1.0	3.2
	Maximum	9	180	--	15	--	**2,400**	--	180,000	--	**2,900**	1,300	**170,000**
	Median	9.4	104	--	11.3	--	43.5	--	150	--	**1,458**	10	43

Table 11

Soil Gas Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
	Analyte	1,1-Dichloro ethene	1,1-Dichloro propene	1,2,3-Trichloro benzene	1,2,3-Trichloro propane	1,2,4-Trimethyl benzene	1,2-Dibromo-3-chloro propane	1,2-Dibromo ethane	1,2-Dichloro ethane	1,2-Dichloro propane	1,3,5-Trimethyl benzene	1,3-Dichloro propane	2,2-Dichloro propane
	Residential Screening Level [a]	73,000	NE	3,300	0.14	63,000	0.17	4.7	110	760	63,000	83,000	NE
	Units	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Depth	Statistics												
Shallow (0 - 10 ft bgs)	Observations	232	232	232	232	232	232	232	232	232	232	232	232
	Detections	66	0	0	0	115	0	0	2	1	45	0	2
	Detection frequency	28%	0%	0%	0%	50%	0%	0%	1%	0%	19%	0%	1%
	Detections > SL	0	--	0	0	0	0	0	1	0	0	0	--
	Non-detections > SL	0	--	0	232	0	232	0	0	0	0	0	--
	Minimum	2.2	--	--	--	2.0	--	--	7.4	41	2.4	--	1,000
	Maximum	2,300	--	--	--	4,300	--	--	**280**	41	1,600	--	1,000
	Median	25.5	--	--	--	8.2	--	--	**144**	41	39	--	1,000
Deep (> 10 ft bgs)	Observations	218	218	218	218	218	218	218	218	218	218	218	218
	Detections	67	0	0	0	88	0	1	2	1	42	1	0
	Detection frequency	31%	0%	0%	0%	40%	0%	1%	1%	1%	19%	1%	0%
	Detections > SL	0	--	0	0	0	0	1	1	0	0	0	--
	Non-detections > SL	0	--	0	218	0	218	0	0	0	0	0	--
	Minimum	3.6	--	--	--	2.0	--	**29**	3.6	27	2.4	59	--
	Maximum	13,000	--	--	--	17,000	--	**29**	**1,500**	27	7,800	59	--
	Median	17	--	--	--	12.5	--	**29**	**752**	27	18	59	--

Table 11

Soil Gas Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
	Analyte	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromo benzene	Bromochloro methane	Bromodi chloro methane	Bromoform	Bromo methane	Carbon Tetrachloride	Carbon disulfide	Chloro benzene	Chloro ethane
	Residential Screening Level [(a)]	83,000	83,000	97	63,000	42,000	76	2,600	5,200	470	730,000	52,000	10,000,000
	Units	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
Depth	Statistics												
Shallow (0 - 10 ft bgs)	Observations	232	232	232	232	232	232	232	232	232	232	232	232
	Detections	0	0	57	0	0	0	0	0	0	26	3	17
	Detection frequency	0%	0%	25%	0%	0%	0%	0%	0%	0%	11%	1%	7%
	Detections > SL	0	0	9	0	0	0	0	0	0	0	0	0
	Non-detections > SL	0	0	0	0	0	0	0	0	0	0	0	0
	Minimum	--	--	2.4	--	--	--	--	--	--	2.0	17	4.0
	Maximum	--	--	**730**	--	--	--	--	--	--	41	58	3,600
	Median	--	--	19	--	--	--	--	--	--	8.5	44	340
Deep (> 10 ft bgs)	Observations	218	218	218	218	218	218	218	218	218	218	218	218
	Detections	0	0	46	0	0	0	0	0	0	6	3	16
	Detection frequency	0%	0%	21%	0%	0%	0%	0%	0%	0%	3%	1%	7%
	Detections > SL	0	0	8	0	0	0	0	0	0	0	0	0
	Non-detections > SL	0	0	0	0	0	0	0	0	0	0	0	0
	Minimum	--	--	2.4	--	--	--	--	--	--	1.8	8.2	13
	Maximum	--	--	**2,600**	--	--	--	--	--	--	11	1,100	13,000
	Median	--	--	15.5	--	--	--	--	--	--	5.1	10	72

Table 11

Soil Gas Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
	Analyte	Chloroform	Chloro methane	cis-1,2-Dichloro ethene	cis-1,3-dichloro propene	Dibromo methane	Dichloro difluoro methane	Ethyl benzene	Isopropyl benzene	Methylene chloride	N-butyl benzene	N-propyl benzene	Sec-butyl benzene
	Residential Screening Level [(a)]	120	94,000	8,300	NE	4,200	100,000	1,100	420,000	1,000	210,000	1,000,000	420,000
	Units	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Depth	Statistics												
Shallow (0 - 10 ft bgs)	Observations	232	232	232	232	232	232	232	232	232	232	232	232
	Detections	22	10	48	0	0	19	36	45	1	46	51	45
	Detection frequency	10%	4%	21%	0%	0%	8%	16%	19%	0.4%	20%	22%	19%
	Detections > SL	1	0	2	--	0	0	3	0	0	0	0	0
	Non-detections > SL	0	0	0	--	0	0	0	0	0	0	0	0
	Minimum	4.6	7.4	6.2	--	--	3.0	6.0	2.2	15	3.8	3.0	3.4
	Maximum	**300**	74	**40,000**	--	--	8	**2,500**	1,000	15	1,100	1,800	1,200
	Median	9.6	22.5	86.5	--	--	4.8	53	53	15	42.5	55	63
Deep (> 10 ft bgs)	Observations	218	218	218	218	218	218	218	218	218	218	218	218
	Detections	22	4	48	0	0	18	27	43	1	49	51	45
	Detection frequency	10%	2%	22%	0%	0%	8%	12%	20%	0.5%	23%	23%	21%
	Detections > SL	1	0	2	--	0	0	1	0	0	0	0	0
	Non-detections > SL	0	0	0	--	0	0	0	0	0	0	0	0
	Minimum	4.8	22	6.0	--	--	3.0	7.6	2.4	470	2.8	2.8	3.2
	Maximum	**450**	170	**84,000**	--	--	180	**3,600**	2,000	470	2,300	5,400	2,100
	Median	11.5	62.5	58	--	--	5	41	23	470	34	24	36

Table 11

Soil Gas Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
	Analyte	Styrene	Tert-butyl benzene	Tetrachloro ethene	Toluene	trans-1,2-Dichloro ethene	trans-1,3-Dichloro propene	Trichloro ethene	Trichloro fluoro methane	Vinyl Chloride	Methyl tert-butyl ether (MtBE)	tert-Butanol (TBA)	Dibromo chloro methane
	Residential Screening Level [(a)]	940,000	420,000	460	310,000	83,000	NE	480	1,300,000	9.5	11,000	NE	130
	Units	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Depth	Statistics												
Shallow (0 - 10 ft bgs)	Observations	232	232	232	232	232	232	232	232	232	232	232	232
	Detections	5	10	217	102	25	0	120	1	37	0	0	0
	Detection frequency	2%	4%	94%	44%	11%	0%	52%	0%	16%	0%	0%	0%
	Detections > SL	0	0	94	0	0	--	27	0	32	0	--	0
	Non-detections > SL	0	0	0	0	0	--	0	0	0	0	--	0
	Minimum	2.6	6.40	3.8	2.2	8.0	--	4.8	8.4	4.40	--	--	--
	Maximum	83	91	**98,000**	780	1,400	--	**24,000**	8.4	**13,000**	--	--	--
	Median	12	22.5	310	3.9	29	--	98.5	8.4	**65**	--	--	--
Deep (> 10 ft bgs)	Observations	218	218	218	218	218	218	218	218	218	218	218	218
	Detections	1	10	201	81	22	0	120	2	30	0	0	0
	Detection frequency	1%	5%	92%	37%	10%	0%	55%	1%	14%	0%	0%	0%
	Detections > SL	0	0	95	0	0	--	29	0	26	0	--	0
	Non-detections > SL	0	0	0	0	0	--	0	0	0	0	--	0
	Minimum	27	11.0	4.0	2.2	8.80	--	5.2	4.2	4.4	--	--	--
	Maximum	27	2,600	**110,000**	880	2,400	--	**46,000**	24	**3,300**	--	--	--
	Median	27	41	370	4.2	29.5	--	120	14.1	**165**	--	--	--

Table 11

Soil Gas Summary Statistics
2018 Remedial Investigation
Taylor Yard G-2
Los Angeles, California

	Method	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**	**EPA 8260B**
	Analyte	**o-Xylene**	**Diisopropyl Ether (DIPE)**	**p-Isopropyl toluene**	**Ethyl tert-butyl ether (EtBE)**	**tert-Amyl methyl ether (TAME)**	**2-Propanol**	**m & p-Xylenes**
	Residential Screening Level [(a)]	**100,000**	**730,000**	**NE**	**NE**	**NE**	**210,000**	**100,000**
	Units	**$\mu g/m^3$**	**$\mu g/m^3$**	**$\mu g/m^3$**	**$\mu g/m^3$**	**$\mu g/m^3$**	**$\mu g/m^3$**	**$\mu g/m^3$**
Depth	**Statistics**							
Shallow (0 - 10 ft bgs)	**Observations**	232	232	232	232	232	232	232
	Detections	42	0	46	0	2	0	72
	Detection frequency	18%	0%	20%	0%	1%	0%	31%
	Detections > SL	0	0	--	--	--	0	0
	Non-detections > SL	0	0	--	--	--	0	0
	Minimum	3.6	--	5.8	--	110	--	2
	Maximum	1,600	--	830	--	170	--	2,100
	Median	39	--	25	--	140	--	12
Deep (> 10 ft bgs)	**Observations**	218	218	218	218	218	218	218
	Detections	34	0	32	0	3	0	72
	Detection frequency	16%	0%	15%	0%	1%	0%	33%
	Detections > SL	0	0	--	--	--	0	0
	Non-detections > SL	0	0	--	--	--	0	0
	Minimum	3.8	--	5.8	--	77.0	--	2
	Maximum	1,300	--	1,100	--	990	--	9,200
	Median	37	--	35	--	500	--	6.5

Notes:

[(a)] Screening levels are derived from the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note 3 (April 2019 update, June 2020 revision), and the EPA Regional Screening Level THQ=1.0 (May 2020) for ambient air. A default attenuation factor of 0.0001 was applied to the ambient air screening levels (SLs).

EPA = U.S. Environmental Protection Agency

$\mu g/m^3$ = microgram per cubic meter of air

ft bgs = feet below ground surface

NE = not established

-- = not available or no data

Detections = observations with a result greater than the method detection limit (MDL).

Detection frequency = number of detections divided by number of samples in that grouping.

Detections > SL = Number of detections whose results exceeded the residential SL.

Non-detections > SL = Number of observations that were not detected but whose MDL exceeded the residential SL.

Minimum, maximum, and median computed on positively detected observations only. Non-detect observations were excluded. Flags not assigned to median values.

BOLD analytes result exceeded the compound-specific residential screening level and was reported above laboratory MDL.

Appendix B Supplemental Outreach Summary

G2 TAYLOR YARD RIVER PARK PROJECT

TAYLOR YARD G2 RIVER PARK PROJECT SUPPLEMENTAL OUTREACH SUMMARY

Prepared for:
The Bureau of Engineering
City of Los Angeles

Prepared by:

MUJERES DE LA TIERRA
570 W. AVE 26
LOS ANGELES, CA 90065
TEL: +1 323 207-5155

ENGINEERING
CITY OF LOS ANGELES

TABLE OF TABLES

Appendix B serves as the supplemental outreach summary in support of Chapter 5 of the Taylor Yard G2 River Park Project Implementation Plan and Pre-Design Report. The following Tables and Figure offer a detailed account of the outreach performed in support of the project between September 2017 through the publication of this report. Information includes descriptions of the public materials developed, general public meetings, Technical Advisory Stakeholder Committee and Community Leadership Committee (TASC/CLC) meetings, news releases and emails as well as a comprehensive breakdown of canvassing and outreach activities performed by BOE's NGO partner Mujeres de la Tierra (MDLT).

Table 1. Taylor Yard G2 River Park Project Community Outreach Tracking 2017-2019

Type of Outreach	Event	Meeting Dates	Location	Meeting Topic
Materials ETC				
Digital	Social media, website updates by BOE	Facebook	Facebook	Various
Digital	Website updates	Website – monthly updates and as needed	Website	Various
Digital	Eblast	Every other month	Eblasts	Various
Meeting Photos	Digital Photos	Posted periodically following public events and meetings	TaylorYardG2.com	Photos
Collateral	General Project Fact Sheet	Published May 2018 – Updated October 2018	TaylorYardG2.com	Fact Sheet
Collateral	Fact Sheet on Site Assessment Work	Published Fall 2018	TaylorYardG2.com	Site Assessment Fact Sheet
General Public Meetings				
Community Meeting	G2 Consultant Team Selection	09/13/17	Media Center	Public meeting soliciting community input on selection of consultant team to assist in initial technical studies and development of preliminary design concepts
Community Event	G2 Community Tour	01/20/18	TaylorYardG2.com	Community tour of site, with stops, docents, River Rover etc.
Community Event	Taylor Yard G2 Community Design Workshop	01/24/18	Sotomayor Learning Academies	Community design workshop, presentation and breakouts
Community Meeting	Taylor Yard G2 Community Update	10/04/18	LA River Center	G2 only

Type of Outreach	Event	Meeting Dates	Location	Meeting Topic
Community Meeting	Site Testing and Assessment Updates and Overview (Task 2)	12/05/18	LA River Center	Overview of site testing, examples, photos, equipment for show and tell, etc.
Community Meeting	Site Assessment Community Discussion and Planning Workshop	05/18/19	Sotomayor Learning Academies	Presentation of Site Assessment results, introduction of habitat viewing platform Selgascano, presentation of three site planning options; interactive workshop
Neighborhood Council - City attends	Greater Cypress Park NC	From 10/09/18 2nd Tuesdays	Cypress Park Rec Center, 2630 Pepper Ave, LA	NC Meeting - gave update during Government Update discussion at beginning of session
Neighborhood Councils	Elysian Valley Riverside NC	From 10/10/18 2nd Wednesdays	Dorris Place Elementary, 2225 Dorris Place, LA;	NC Meeting - gave update during Government Update discussion at beginning of session
Neighborhood Councils	Atwater Village NC	From 10/11/18 2nd Thursdays	Christ's Church of Griffith Park, 3852 Edenhurst Ave., LA;	NC Meeting - gave update during Government Update discussion at beginning of session
Neighborhood Councils	Glassell Park NC	From 10/16/18 3rd Tuesdays	Community Center, 3750 Verdugo Rd., LA;	
Neighborhood Councils	Lincoln Heights NC	From 10/18/18 3rd Thursdays	Senior Citizens Center, 2324 Workman St, LA.	Gave update during public comment period
Other Outreach	Canvassing community for January Site Tour and Design	Around community meetings and workshops	Surrounding Community	Provided meeting flyer to community members
Other Outreach	Place project display in local libraries	Ongoing	Cypress Park Library	Project summary boards or displays
Other outreach	Meet with women in the community	October 2018 - ongoing	TBD; hosted by MDLT	Soccer, other issues affecting the community; hearing from women and their concerns
Other outreach	Meet with Principal of Sotomayor	Week of October 15, 2018 – Follow-up Meeting May 2019	Sotomayor Learning Academies	Site testing; using their communication tools; concerns, etc.
Other outreach	Meet with soccer coaches	October 26th 2018 - 5 p.m. again December 2018	LASC office	Need for soccer fields in community
Neighborhood Council - City attends	Greater Cypress Park NC	11/13/18 2nd Tuesdays	Cypress Park Rec Center, 2630 Pepper Ave, LA;	

Type of Outreach	Event	Meeting Dates	Location	Meeting Topic
Neighborhood Councils	Elysian Valley Riverside NC	11/14/18 2nd Wednesdays	Dorris Place Elementary, 2225 Dorris Place, LA;	
Neighborhood Councils	Atwater Village NC	11/15/18 2nd Thursdays	Christ's Church of Griffith Park, 3852 Edenhurst Ave., LA;	
Neighborhood Councils	Glassell Park NC	11/20/18 3rd Tuesdays	Community Center, 3750 Verdugo Rd., LA;	
Neighborhood Councils	Alliance of River Communities NC	11/19/18 3rd Mondays	Community Center, 3750 Verdugo Rd., LA	
TASC/CLC Meetings				
Advisory Stakeholder Committee Meeting	Combined TASC + CLC Meeting	12/06/17	Media Center	Kickoff Meeting. Introduction to TASC/CLC, project details and schedule
Advisory Stakeholder Committee Meeting	TASC Meeting	09/06/18	Media Center	— Previewed results of Community Survey. — Reviewed three preliminary design concepts. — Provided updated on Site assessments. — Presented on water quality improvement opportunities.
Advisory Stakeholder Committee Meeting	CLC Meeting	09/06/18	Media Center	— Previewed Results of Community Survey. Reviewed three preliminary design concepts. — Provided update on site assessments. — Presented on water quality improvement opportunities.
Advisory Stakeholder Committee Meeting	TASC + CLC	11/06/18 1:00PM	Public Works Building, 1149 S. Broadway, LA	ARBOR Objectives, Los Angeles Biodiversity Index, Habitat
Advisory Stakeholder Committee Meeting	TASC + CLC	03/07/19 6:00 PM	Public Works Building, 1149 S. Broadway, LA	Site Assessments, Soil Remediation Options, Stormwater, River Hydrology and Hydraulics, Ecology/Habitat Restoration
Advisory Stakeholder Committee Meeting	TASC + CLC	04/29/19 6:00 PM	Media Center	Review of Refined Preliminary Design Concepts

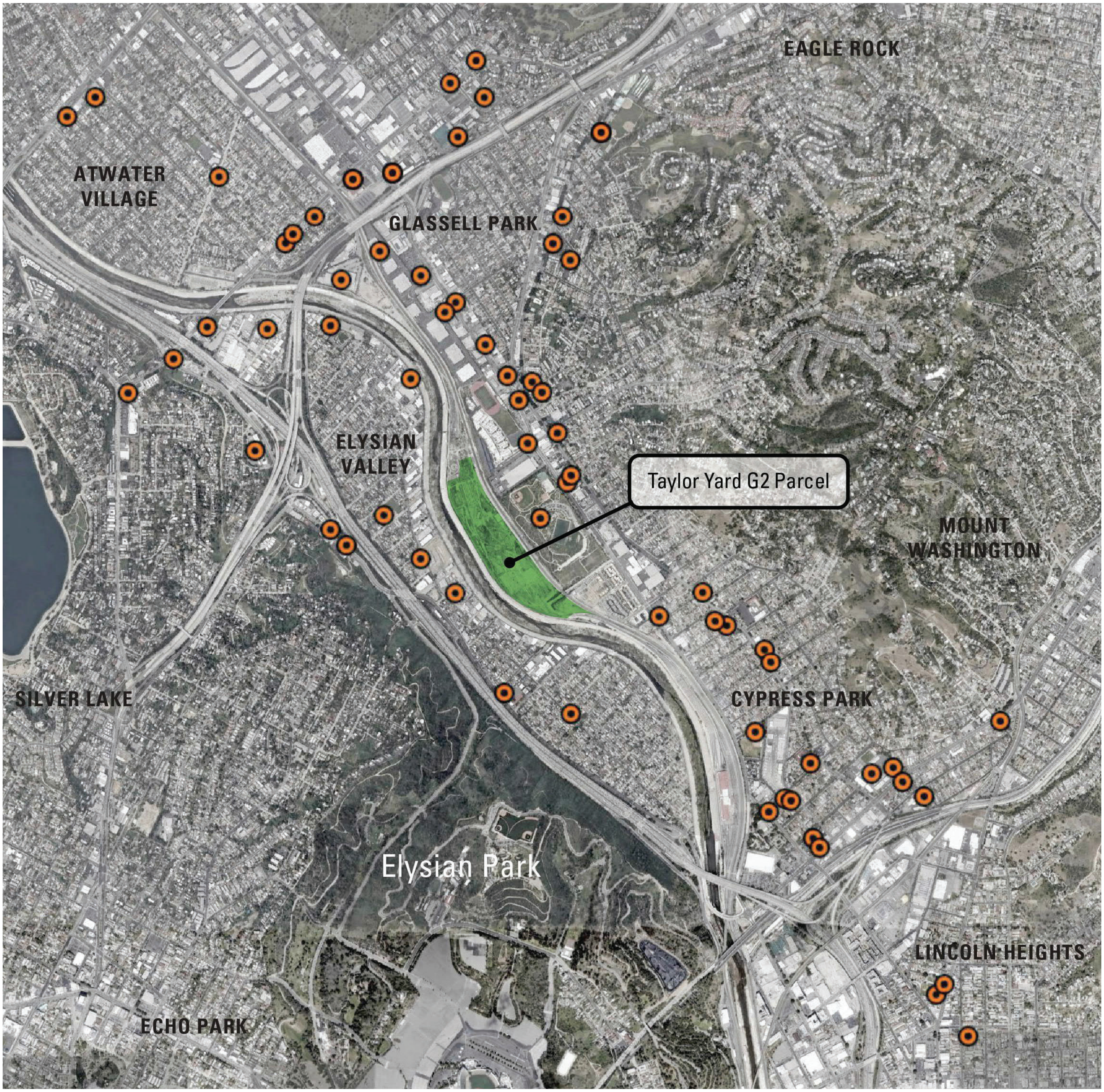
Table 2. Taylor Yard G2 River Park Project News Release and E-Blast Schedule Tracking 2017-2019

SUBJECT / EVENT	DATE	AUDIENCE	TOPIC(S)
News Release			
Los Angeles Bureau of Engineering Prepares for Soil Testing at Taylor Yard G2 Parcel on LA River	04/05/18		Notice of preparations for soil testing, outreach, and project background.
E-Blasts			
January Community Site Tour and Design Workshop Meeting Reminder	01/06/18	Sent to entire TYG2 mailing list	Distribution of the meeting notices in English and Spanish. Announcement of website launch
TASC Follow-up	02/07/18	Sent to combined TASC/CLC List	— Reviewed success of December TASC meeting and following January Public Meetings. — Distributed Online Survey
February General Update	02/23/18	Sent to entire TYG2 mailing list	— Distributed Online Survey. Summarized January Community Events and distributed resources. — Generally Announced next steps for project
Survey Extension	03/10/18	Sent to entire TYG2 Mailing List	Announced extension of community survey
RELEASE: Preliminary Site Assessments	04/05/18	Sent to entire TYG2 mailing list	— Announced the beginning of site assessments. — Announced survey received over 1300 responses
TASC May Follow- Up	05/29/18	Sent to combined TASC/CLC List	— Announced postponement of next meeting to summer. — Provided site assessment information. — Distributed fact sheet.
TASC Summer Meeting Announcement	08/10/18	Sent to TASC List	Announced September 6 TASC meeting
CLC Summer Meeting Announcement	08/10/18	Sent to CLC List	Announced September 6 CLC meeting
TASC Summer Meeting Reminder	08/30/18	Sent to TASC List	Reminder for September 6 TASC meeting
CLC Summer Meeting Reminder	08/30/18	Sent to CLC List	Reminder for September 6 CLC meeting
Survey Results - USACE Temporary Use	09/12/18	Sent to entire TYG2 mailing list	— Announcement of Survey Summary report. — Announcements of USACE use of site as haul route. — Announcement of content of next public meeting, Date TBD.
Community Update Meeting Announcement	09/19/18	Sent to entire TYG2 mailing list	Announcement of October 4 Community Update meeting
TASC Meeting Date Selection	09/26/18	Sent to TASC list	Distribution of Doodle Poll to select Fall meeting date

SUBJECT / EVENT	DATE	AUDIENCE	TOPIC(S)
TASC Fall Meeting Announcement	10/18/18	Sent to combined TASC/CLC List	— Announcement of November 6 combined TASC / CLC meeting. — Request for RSVPs. Distribution of ARBOR study Guide
TASC Fall Meeting RSVP Reminder	10/29/18	Sent to combined TASC/CLC List	— Reminder of November 6 combined TASC / CLC meeting. — Request for RSVPs. Distribution of ARBOR study Guide
TASC ARBOR Document Distribution	10/31/18	Sent to combined TASC/CLC List	Distribution of Habitat Restoration Overview and ARBOR Objectives document developed for TYG2 discussion to TASC / CLC group ahead of meeting
TASC ARBOR PPT Distribution	11/05/18	Sent to combined TASC/CLC List	Distribution of PPT to be reviewed at upcoming meeting to combined TASC / CLC group
December Site Assessment Community Discussion Announcement	11/19/18	Sent to entire TYG2 mailing list	Announcement of community discussion on site assessment
December Site Assessment Community Discussion Reminder	12/03/18	Sent to entire TYG2 mailing list	Reminder of upcoming community discussion on site assessments
TYG2 December Follow-up	12/21/18	Sent to entire TYG2 mailing list	— Recap of Dec. 5 community discussion on site assessments and announcement of materials available online. — Announcement of Environmental Site Assessments report available online.
TYG2 January 2019 Update	01/31/19	Sent to entire TYG2 mailing list	— Notification of SMMC grant award, recap of Dec. 5 community discussion on site assessments and reminder of materials available online. — Reminder of Environmental Site Assessments report available online.
TASC March 2019 Meeting Announcement	02/25/19	Sent to combined TASC/CLC List	Announcement of upcoming ASC meeting
TYG2 March 2019 Monthly Update	03/01/19	Sent to entire TYG2 mailing list	— Notification of unplanned use of site — Notification of future construction date of TYG2 Pedestrian bridge — Announcement of US EPA Cleanup grant award — Reminder of Phase II Environmental Site Assessment Report available online
TASC March 2019 Meeting Reminder	03/04/19	Sent to combined TASC/CLC List	Reminder of upcoming TASC meeting
Grand Opening - Albion Riverside Park	03/21/19	Sent to entire TYG2 mailing list	Notification of groundbreaking of nearby park
TYG2 Dust Suppression and Groundwater Monitoring Update	03/28/19	Sent to entire TYG2 mailing list	Notification of dust suppression application and groundwater monitoring services to be performed at and near the site

SUBJECT / EVENT	DATE	AUDIENCE	TOPIC(S)
TYG2 Dust Suppression Reschedule	04/11/19	Sent to entire TYG2 mailing list	Notification of reschedule of dust suppression application to late date within the month
ASC April 2019 Meeting Announcement	04/16/19	Sent to combined TASC/CLC List	Announcement of ASC meeting
ASC April 2019 Meeting Reminder	04/23/19	Sent to combined TASC/CLC List	Reminder of upcoming ASC meeting
Community Discussion / Workshop Announcement: Spring 2019 TYG2 River Park Project	04/29/19	Sent to entire TYG2 mailing list	Announcement of upcoming workshop
Reminder: Community Discussion / Workshop Announcement: Spring 2019 TYG2 River Park Project	05/08/19	Sent to entire TYG2 mailing list	Reminder of upcoming workshop
TYG2 May 2019 Workshop Follow- up	05/28/19	Sent to entire TYG2 mailing list	Notification of materials posted online from workshop and recap of activities
TY Ped Bridge Groundbreaking	06/07/19	Sent to entire TYG2 mailing list	Notification of groundbreaking and invitation to ceremony

Figure 1. Taylor Yard G2 Outreach Map



Taylor Yard G2 Outreach Map Locations

LOCATION	ADDRESS	CITY	ZIP
Cypress Park Neighborhood Council District			
Lupita's Restaurant	2634 Idell S	Los Angeles	90065
Frame Monster Design Laboratory	586 W Ave 28	Los Angeles	90065
San Jose Market	2600 Idell St	Los Angeles	90065
Yum Yum Donuts	2633 N Figueroa St	Los Angeles	90065
Big Saver Foods	2619 N Figueroa St	Los Angeles	90065
Cypress Recreation Center	2630 Pepper Ave	Los Angeles	90065
Sung Sam Korean Catholic Church	1230 N San Fernando Rd	Los Angeles	90065
Rio de Los Angeles State Park	1900 N San Fernando Rd	Los Angeles	90065
Cafe Nela	1906 Cypress Ave	Los Angeles	90065
Tres Palmas	2910 Division St	Los Angeles	90065
Restaurante Tierra Caliente	1217 Cypress Ave	Los Angeles	90065
Cypress Park Branch Library	1150 Cypress Ave	Los Angeles	90065
Cypress Park Community Center	929 Cypress Ave	Los Angeles	90065
Michel Party Supplies & Floreria	1120 Cypress Ave	Los Angeles	90065
Genesis Restaurante	901 Cypress Ave	Los Angeles	90065
Divine Savior Roman Catholic Church	610 Cypress Ave	Los Angeles	90065
Florence Nightingale Middle School	3311 N Figueroa St	Los Angeles	90065
Antigua Coffee House	3400 N Figueroa St	Los Angeles	90065
Maria's Restaurant	3401 N Figueroa St	Los Angeles	90065
La Abeja Restaurant	3700 N Figueroa St	Los Angeles	90065
Loreto Street Elementary School	3408 Arroyo Seco Ave	Los Angeles	90065
Glassell Park Neighborhood Council District			
Sotomayor Learning Academies	2050 N San Fernando Rd	Los Angeles	90065
Tacos La Fonda	2135 1/2, N San Fernando Rd	Los Angeles	90065
Donut Factory	2225 N San Fernando Rd	Los Angeles	90065
Patra's Charbroiled Burgers	2319 N San Fernando Rd	Los Angeles	90065
Out of the Closet - Glassell Park	2425 N San Fernando Rd	Los Angeles	90065
Renaissance Arts Academy	2558 N San Fernando Rd	Los Angeles	90065
ABC Rehearsal Studio	2575 N San Fernando Rd	Los Angeles	90065
Super King Market	2716 N San Fernando Rd	Los Angeles	90065
Lupita's Tamales	3027 N San Fernando Rd	Los Angeles	90065
Alliance For College Ready	2930 Fletcher Dr	Los Angeles	90065
Alliance Environmental Science And Technology High School	2930 Fletcher Dr, Los Angeles	Los Angeles	90065
Los Feliz Charter School for the Arts	2709 Media Center Dr	Los Angeles	90065
Irving STEAM Magnet School	3010 Estara Ave	Los Angeles	90065
Fletcher Drive Elementary School	3350 Fletcher Dr	Los Angeles	90065
El Ranchito Market	3293 Fletcher Dr	Los Angeles	90065
Tacos La Estrella	3415 Fletcher Dr	Los Angeles	90065

LOCATION	ADDRESS	CITY	ZIP
Glassell Park Recreation Center Complex	3650 Verdugo Rd	Los Angeles	90065
Glassell Senior Citizen Center	3650 Verdugo Rd	Los Angeles	90065
Lemon Poppy Kitchen	3324 Verdugo Rd	Los Angeles	90065
St Bernard Church	2500 W Ave 33	Los Angeles	90065
St. Bernard Catholic School	3254 Verdugo Rd	Los Angeles	90065
Glassell Park Early Education Center	3003 Carlyle St	Los Angeles	90065
Glassell Park Elementary School	2211 W Ave 30	Los Angeles	90065
ABC Donuts	3027 N San Fernando Rd	Los Angeles	90065
Atwater Village Neighborhood Council District			
El Buen Gusto Restaurant	3140 Glendale Blvd	Los Angeles	90039
Curry King	2830 Fletcher Dr	Los Angeles	90039
Bangkok Grill Thai Food	2770 Fletcher Dr	Los Angeles	90039
Fosters Freeze	2760 Fletcher Dr	Los Angeles	90039
Bowtie Project	2780 W Casitas Ave	Los Angeles	90039
Vince's Market	3250 Silver Lake Blvd	Los Angeles	90039
Elysian Valley Neighborhood Council District			
Marsh Park	2944 Gleneden St	Los Angeles	90039
Elysian Valley Recreation Center	1811 Ripple St	Los Angeles	90039
Elysian Valley Community Garden	1816 Blake Ave	Los Angeles	90039
The Klub Gymnastics	1683 Blake Ave	Los Angeles	90031
Dorris Place Elementary School	2225 Dorris Pl	Los Angeles	90031
St. Ann Catholic Church - Iglesia de Santa Ana - Nhà thờ Công Giáo	2302 Riverdale Av	Los Angeles	90031
Latvian Evangelical Lutheran	1927 Riverside Dr	Los Angeles	90039
Latvian Community Center	1955 Riverside Dr	Los Angeles	90039
Allesandro Children's Center	2210 Riverside Dr	Los Angeles	90039
Cafecito Organico	3528 Larga Ave	Los Angeles	90039
1st Impression Dance Studios	3001 Gilroy St	Los Angeles	90039
Salazar	2490 Fletcher Dr	Los Angeles	90039
Rick's Drive In & Out	2400 Fletcher Dr	Los Angeles	90039
Astro Family Restaurant	4019, 2300 Fletcher Dr	Los Angeles	90039
Spoke Bicycle Cafe	3050 N Coolidge Ave	Los Angeles	90039
Lincoln Heights Neighborhood Council District			
Maritsa's Mexican Restaurant	2657 Pasadena Ave	Los Angeles	90031
Lincoln Heights Branch Library	2530 Workman St	Los Angeles	90031
Los Angeles Boys' & Girls' Club	2635 Pasadena Ave	Los Angeles	90031

Table 3. Taylor Yard G2 December 5, 2018 Business Outreach: Location and Date of Flyer and Information Distribution

NAME	NAME OF BUSINESS/ SCHOOL/ CHURCH	DATE	NOTES
Rene Ponce	Cypress Recreation Center	11/26/18	
Rene Ponce	Cafe Nela	11/28/18	
Rene Ponce	Lupita's Restaurant	11/28/18	
Rene Ponce	Frame Monster Design Laboratory	11/28/18	
Rene Ponce	Cypress Recreation Center	11/28/18	
Rene Ponce	Rio de Los Angeles State Park	11/28/18	
Rene Ponce	Tres Palmas	11/28/18	
Rene Ponce	Restaurante Tierra Caliente	11/28/18	
Paola Machan	Cypress Park Branch Library	11/28/18	
Paola Reyes	Cypress Park Community Center - Centro del Pueblo	11/28/18	
Rene Ponce	Genesis Restaurante	11/28/18	
Rene Ponce	Lupitas Market	11/28/18	
Rene Ponce	Divine Saviour Roman Catholic Church	11/28/18	
Rene Ponce	Florence Nightingale Middle School	11/28/18	
Rene Ponce	Antigua Coffee House	11/28/18	
Rene Ponce	Maria's Restaurant	11/28/18	
Rene Ponce	Loreto Street Elementary School	11/28/18	
Rene Ponce	Club House - Parks and Rec	11/28/18	
Rene Ponce	Mi Tienda Meats	11/28/18	
Rene Ponce	Cypress Liquor Store	11/28/18	
Rene Ponce	Taylor Yard River Park Housing	11/28/18	
Rene Ponce	Audubon Center at Debs Park	11/28/18	
Rene Ponce	Starbucks - Figueroa	11/28/18	
Rene Ponce	Tacos La Fonda	11/28/18	
Rene Ponce	Donut Factory	11/28/18	
Rene Ponce	Patra's Charbroiled Burgers	11/28/18	
Rene Ponce	Out of the Closet - Glassell Park	11/28/18	
Rene Ponce	Renaissance Arts Academy	11/28/18	
Rene Ponce	ABC Rehearsal Studio	11/28/18	
Rene Ponce	Lupita's Tamales	11/28/18	
Rene Ponce	Alliance For College Ready	11/28/18	
Rene Ponce	Alliance Environmental Science And Technology High School	11/28/18	

NAME	NAME OF BUSINESS/ SCHOOL/ CHURCH	DATE	NOTES
Rene Ponce	Los Feliz Charter School for the Arts	11/28/18	
Rene Ponce	Irving STEAM Magnet School	11/28/18	
Rene Ponce	Fletcher Drive Elementary School	11/28/18	
Rene Ponce	El Ranchito Market	11/28/18	
Rene Ponce	Tacos La Estrella	11/28/18	
Rene Ponce	Glassell Park Recreation Center Complex	11/28/18	
Rene Ponce	Glassell Park Youth Center	11/28/18	
Rene Ponce	Glassell Park Elementary School	11/28/18	
Rene Ponce	Glassell Senior Center	11/28/18	
Rene Ponce	Lemon Poppy Kitchen	11/28/18	
Rene Ponce	St Bernard Church	11/28/18	
Rene Ponce	St. Bernard Catholic School	11/28/18	
Rene Ponce	Habitat Coffee	11/28/18	
Rene Ponce	Curry King	11/28/18	
Rene Ponce	Bangkok Grill Thai Food	11/28/18	
Rene Ponce	Fosters Freeze	11/28/18	
Rene Ponce	El Amoroso	11/28/18	
Rene Ponce	Lincoln Heights Branch Library	11/28/18	
Rene Ponce	Maracas Cafe & Catering	11/28/18	
Rene Ponce	The Heights Deli & Bottle Shop	11/28/18	

Table 4. Taylor Yard G2 January Meetings Outreach Log

NAME	MEETING NAME AND LOCATION	NUMBER OF ATTENDEES	DATES
Irma Muñoz	Glassell Park Neighborhood Council	30 People	01/16/19
Paola Machan	Greater Cypress Park Neighborhood Council	15 People	01/09/19
Irma Muñoz / Hector Benavides	Elysian Valley Neighborhood Council	18 People	01/10/19
Irma Muñoz / Hector Benavides	Atwater Valley Neighborhood Council	27 People	01/11/19
Paola Reyes/Ivette Gonzalez	Loreto Street Elementary	20 People	01/17/19
Paola Reyes	Northeast Consortium Meeting	20 People	01/18/19
Paola Reyes	ELAC Parents Meeting at Nightingale Middle School	15 People	01/18/19
Ivette Gonzalez/Paola Machan	CPR Workshop for Parents-Fletcher Drive Elementary School	20 People	01/18/19
Ivette Gonzalez/Paola Machan	Rio de Los Angeles Senior Park Community Leader Guillermo Reyes	18 People	01/18/19
Hector Benavides	Lincoln Heights Neighborhood Council	50 People	01/18/19
Paola Reyes/Ivette Gonzalez	Cypress Park Community Center- Coffee with Cops	10 people	01/19/19
Paola Reyes/Ivette Gonzalez	Taylor Yard Senior Housing-Fitness Class	7 people	01/19/18

Table 5. Taylor Yard G2 January Business Outreach: Location and Date of Flyer and Information Distribution

NAME	NAME OF BUSINESS/ SCHOOL/ CHURCH	DATE	NOTES
Paola Reyes	The Klub Gymnastics	01/15/19	
Paola Reyes	King Taco	01/16/19	Spoke to Jose
Paola Reyes	Cypress Community Center	01/16/19	
Paola Reyes/Ivette	Nightingale Middle School	01/17/19	
Paola Reyes/Ivette	Antigua Cafe	01/17/19	
Paola Reyes/Ivette	Cypress Park Branch Library	01/17/19	
Paola Reyes	Cypress Best Burgers	01/17/19	
Paola Reyes	Maria's Restaurant	01/17/19	
Paola Reyes	Amigos Market	01/17/19	
Paola Reyes	Frame Monster	01/17/19	
Paola Reyes	Donut Factory	01/17/19	
Paola Reyes/Ivette Gonzalez	Cypress Park Recreation Center	01/17/19	
Paola Reyes/Ivette Gonzalez	Sung Sam Korean Catholic Church	01/17/19	Spoke with Agnes. Father Yang
Paola Reyes/Ivette Gonzalez	Rio de Los Angeles State Park	01/17/19	
Paola Reyes	Tacos La Fonda	01/17/19	
Paola Reyes	Patra's Charbroiled Burgers	01/17/19	
Paola Reyes/Ivette Gonzalez	Everybody's Gym	01/17/19	
Paola Reyes/Ivette Gonzalez	Glassell Park Recreation Center	01/17/19	
Paola Reyes/Ivette Gonzalez	Glassell Senior Center	01/17/19	
Paola Reyes/Ivette Gonzalez	Lemon Poppy Kitchen	01/17/19	
Paola Reyes/Ivette Gonzalez	Verdugo Coin Laundry	01/17/19	
Paola Reyes/Ivette Gonzalez	Verdugo Bar	01/17/19	
Paola Machan	Lupita's Restaurant	01/17/19	
Paola Machan	San Juan Market	01/17/19	
Paola Machan	Yum Yum Donuts	01/17/19	
Paola Machan	Big Saver Foods	01/17/19	
Paola Machan	Skate Board	01/17/19	
Paola Machan	Taqueria	01/17/19	
Paola Machan	Sotomayor Academies	01/17/19	
Paola Reyes	Cafecito Organico	01/18/19	
Paola Reyes	Spoke Bicycle Coffee	01/18/19	
Paola Reyes	Elysian Valley Recreation Center	01/18/19	

NAME	NAME OF BUSINESS/ SCHOOL/ CHURCH	DATE	NOTES
Paola Machan/Ivette	Cafe Nela	01/18/19	
Paola Machan/Ivette	Lupita's Tamales	01/18/19	
Paola Machan/Ivette	ABC Donuts	01/18/19	
Paola Machan/Ivette	Super King Market	01/18/19	
Paola Machan/Ivette	Bangkok Grill Thai Food	01/18/19	
Paola Machan/Ivette	Foster Freeze	01/18/19	
Paola Machan/Ivette	Salazar	01/18/19	
Paola Machan/Ivette	Alliance Environmental Science and Technology High School	01/18/19	
Paola Machan/Ivette	El Ranchito Market	01/18/19	
Paola Machan/Ivette	Irving STEAM Magnet School	01/18/19	
Paola Machan/Ivette	Fletcher Drive Elementary School	01/18/19	
Paola Machan/Ivette	St. Bernard's Catholic Church	01/18/19	
Paola Machan/Ivette	Out of the Closet-Glassell	01/18/19	
Paola Reyes/Ivette	River Park Housing	01/19/19	
Paola Reyes/Ivette	Taylor Yard Senior Housing	01/19/19	Spoke with Denise de la Rosa
Paola Reyes/Ivette	River Park Sales Housing	01/19/19	
Hector Benavides	Lincoln Heights Branch Library	01/19/19	Spoke with Shirley Ly
Hector Benavides	Los Angeles Boys & Girls Club	01/19/19	Spoke with Claudia
Hector Benavides	Alliance College-Ready Middle Academy	01/19/19	Spoke with Gigi Longoria
Hector Benavides	Martita's Mexican Restaurant	01/19/19	Spoke with Delmy
Paola Machan	Divine Saviour Catholic Church	01/18/19	
FOLAR	Atwater Public Library	01/19/19	
FOLAR	Atwater Barber Shop	01/19/19	
FOLAR	Kopper Keg Liquor Mart	01/19/19	
FOLAR	Alias Books	01/19/19	
FOLAR	Atwater Psychics	01/19/19	
FOLAR	Jackknife Records	01/19/19	
FOLAR	Kaldi Coffee	01/19/19	
FOLAR	New Way Nails Spa	01/19/19	
FOLAR	Oeno Vino	01/19/19	
FOLAR	Boba Loca	01/19/19	
FOLAR	Out of the Closet	01/19/19	

NAME	NAME OF BUSINESS/ SCHOOL/ CHURCH	DATE	NOTES
FOLAR	Silver Frog	01/19/19	
FOLAR	Salvare Antiques	01/19/19	
FOLAR	Ricks	01/19/19	
FOLAR	Astro	01/19/19	
FOLAR	Home	01/19/19	
FOLAR	Gus’s Tacos	01/19/19	
FOLAR	Yoly’s Beauty Shop	01/19/19	
FOLAR	Divine Saviour Roman Catholic Church	01/19/19	
FOLAR	Genesis Restaurante	01/19/19	
FOLAR	Restaurante Tierra Caliente	01/19/19	
FOLAR	Antigua Bread	01/19/19	

Table 6. MDLT Taylor Yard G2 January 2019 E-Mail Outreach

From	To	Organization or Affiliation	Date	Notes
Paola Machan	Joe Linton	Streetblog LA	01/17/19	Requesting him to share on his blog
Paola Machan	Jesse Rosas		01/17/18	Community Member
Paola Machan	LAROSAH Group	LAROSAH	01/17/19	Nine organizations in a coalition for parks space and housing
Ivette Gonzalez	Anthony Parker	Alliance Environmental Club	01/18/19	AP Science Teacher, and advisor of environmental club

Table 7. MDLT Taylor Yard G2 January 2019 Social Media Postings

Platform	Date	Approximate Reach
Facebook-shared City of LA Bureau of Engineering	01/17/19	65 people
Facebook – shared IG Flyer poster	01/17/19	139 people
Instagram Flyer Post	01/17/19	25 people
Instagram Direct Message with Flyer Invitation	01/18/19	92 people
Email Blast	01/19/19	63 people
Email Blast	01/19/19	6 people
Instagram Post-Reminder of Tour Site	01/19/19	20 people

Table 8. Taylor Yard G2 February and March 2019 Meetings Outreach Log

Date	Name of Meeting	Meeting Name and Location	Number in Audience	Notes (Highlights of Meeting and General Comment)
03/02/19	Elena Gimenez	Cypress Park Basketball game	4	Visited the Cypress Park Recreational Center and met Elena, the Park Advisory Board President
03/02/19	Cynthia Orozco	Cypress Park Recreational Office	4	Cynthia Orozco is the manager of the recreational park. She invited me to their monthly meetings and referred me to parents that are active in the community. She made copies of some of the outreach G2 informational sheets I had so she can keep at her office. She also made a comment about the yellow/brownish water that comes out of the park's sink. She mentioned she would like for someone to test the quality of the water.
03/02/19	Carlos/Denia Bishop	Cypress Park Recreational Offices	2	They are a married couple, who have lived in the community since Rio De Los Angeles was under construction. They were on the stakeholder's list and would attend community meetings regarding the development of the park. Their MAIN concerns are the transparency of the budgeting. They would LOVE to see an informational handout with a chart that clearly lists the amount of each step in the process, where the money is coming from and who is handling the money.
03/09/19	St. Bernard Church	Bulletin board/Mass presentation meeting	2	I met with Mary, the office employee at St. Bernard, and we established permission to speak at their Sunday mass & also provided the opportunity for us to a printed section on their bulletin with info on G2 and Mujeres de la Tierra as the outreach teach team associated with the project.
03/09/19	Grupo de Oracion	St. Bernard Church	2	Spoke to Felix Lazaro about who Mujeres de la Tierra is and how long we have been in his community and how we are devoted to informing them about the latest new in the G2 project. He invited us to his reading meetings. He spoke of the tragic death of the student at Sotomayor and offered to lead a prayer circle in honor of his death.
03/10/19	Spring Cleaning Rummage Sale	St. Bernard Church	1	Met Marge while she was posting flyers by the church and she invited us to make speeches at the meetings and to attend the Glassell Park's events to spread awareness on G2 project.
03/10/19	St. Bernard Church	Office speech meeting	3	I was able to meet with the women at the offices of St. Bernard. I met Vivian Boyle, the manager but spoke more in depth with Mary Trujillo. She wrote a permit for me to be able to make speeches at all their masses on Sundays.
02/25/19	Alliance of River Communities	ARC, Rio De Los Angeles	20	Community Meeting

DATE	NAME OF MEETING	MEETING NAME AND LOCATION	NUMBER IN AUDIENCE	NOTES (HIGHLIGHTS OF MEETING AND GENERAL COMMENT)
03/04/19	Anahuak Coaches Meeting	Los Angeles River Center and Gardens	30	Local Soccer Coach Meeting
03/07/19	Water Science Club	Renaissance Arts Performing Arts School	20	Students Interested in Contamination and volunteer work
03/07/19	Stakeholders Meeting	1149 S Broadway LA. CA.		
03/12/19	Cypress Park Neighborhood Council	Cypress Park and Recreation Center	30	Public Comment for G2
03/14/19	Atwater Neighborhood council	Christs Church at Griffith Park Community room 3825 Edenhurst Ave 90039	15	Public Comment for G2
03/16/19	Coffee and Birdwatching with Assembly member	Audubon at Debs Park	30	Spoke with Wendy Carrillo. She has awareness of G2 and supports the project
03/17/19	Lummis Day Event w/ Gabrieleno Band of Mission Indians and Hathaway Sycamores	Los Angeles River Center and Gardens	50	Tim Brick w/ arroyo Seco' interested in partnering on a project Also met with Chief Ernie P Salas- of Gabrieleno Band of Mission Indians Also Spoke with Representatives
03/20/19	Upper La River Tributary Revitalization	La Zoo Auditorium	25	Friends of the La River Spoke with George Balteria of North East Trees supports project
03/26/19	Indigenous Wellness Collective. Potluck	LA River Center and Garden	20	Made an announcement about the importance of the community's involvement and feedback in this project. Belen mentioned a women's workshop/ Fundraiser at East side Cafe, April 20th 3pm Monterey Park. Cynthia left her contact on file and Guillermo the elder who led the potluck was supportive of our awareness
03/24/19	GPIA Rummage Sale	Glassell Park Senior Center	10	Made the Acquaintance of Marge Pain and Donald Nollar OF Glassell Park Improvement Asc. who I Have Communicated with about being involved in projects together (Voter Center Placement Project) and G2 Taylor Yard
03/30/19	Cesar Chavez Day of Service and Celebration	La River Center and Gardens		

DATE	NAME OF MEETING	MEETING NAME AND LOCATION	NUMBER IN AUDIENCE	NOTES (HIGHLIGHTS OF MEETING AND GENERAL COMMENT)
03/30/19	Albion Riverside Park Opening	1739 Albion Street LA CA 90031		While attending the event I took time to socialize and connect with the community. Speaking with Gil Cedillo and his staff. Who offered their support for our work on the G2 Project I Also Met with Luis Rincon Community Engagement Coordinator and Park Ranger of La State historic Park. Michael Montes a Member of the Park Activity Board (PAB) As Well as Sedrick V Mitchell and Dolores Mejia who also work in the Community Engagement Division for state of CA Department of Parks and Recreation

Table 9. Taylor Yard G2 Outreach Summary Notes for Period February 15, 2019-March 22, 2019

ACTIVITIES	DESCRIPTION	PROGRESS/ OUTCOME
Individual Meetings with community leaders/opinion makers	Host ten one-on-one meetings with identified community leaders/opinion makers	**Irma Muñoz has lead 4 one-on-one meetings with the following community leaders:** — Ismael Berver, Principal at Dorris Place Elementry. — Mr. Berver is very excited to participate in any way and will host a small meeting with parents that attend during next assembly meeting. A meeting with staff and faculty is also being considered. — Carrie Sutkin, Atwater Village Community Organizer. Ms. Sutkin's concerns include: Flood control, Lack of transparency in project, Homelessness, decisions made without public input. — Raul Macias, President Anahuak Youth Soccer Associations. Mr. Macias major concerns are sports fields available for his kids, lack of transparency in the project, timely updates on the current status of the project, possible health-related impact to the children that play in adjacent fields. — Kristin Puich, Principal at Sotomayor Center for Arts and Science. Ms. Puich has expressed concerns about communications to the school about the project and clarity on who oversees Site Assessment information. **Future Meeting:** — Father Estrada, Priest at the Historic Church of the Epiphany and leader in the Chicano rights movement. — Julia Metzer, Clock shop Director — Art Camarillo, Veterans Collaborative Chair — Rudy Ortega, Tribal President, Fernandeño Tataviam Band of Mission Indians

ACTIVITIES	DESCRIPTION	PROGRESS/ OUTCOME
Targeted Community Canvassing: Fieldwork	Mapping neighborhoods to assess areas where community members meet and identify demographics. Identify ten "nontraditional" community leaders who are highly regarded and are active influencers in the local neighborhoods	**Small Business Canvassing:** — 126 location have agreed to share information about Taylor Yard G2. Follow-up with project information is need once available (46 local businesses, 7 churches, 3 farmer markets, 3 libraries, 15 parks/community center/ gathering locations, 32 restaurants, 20 schools). **Comments and Outcomes** — All locations requested more information about the project and upcoming meetings. Follow-up visits to all locations are required with one-pager about Taylor Yard G2 and public meeting announcement. **Identified 4 community leaders that will help share information with their groups:** — Carlos and Denia Bishop – Cypress Park Recreation/ Stakeholder Group for Rio de los Angeles Park — Elena Gimenez – Cypress park advisory board president/basketball team rep — Felix Lazaro – Grupo de Oracion St. Barnard Church — Fernando Avila – Los Angeles Soccer Club **Comments and Outcomes:** — Concerned about transparency and budget. — Would love to see an informational handout with a chart that provides details of the $ amount for each step of the process, and where the money is coming from and who is handling the money.
Targeted Community Canvassing: Neighborhood Meetings	Attend neighborhood planned meetings to provide updates about Taylor Yard G2. i.e., Neighborhood Council Meetings, Alliance Meetings, etc.	**Neighborhood Council Meetings:** — Attended 2 neighborhood council meetings (Cypress Park 03/12/19, Atwater Village 03/14/19) — Note: Glassell Park NC and Elysian Valley were canceled for March — ARC Alliance meeting 02/25/19 (15 attended) — Anahuak Coaches Meeting 03/04/19 (30 attended) **Comments and Outcomes:** — Information, plans and other pertinent details about the project is limited — Have not heard about the project since last year, want frequent updates — Concerned about site assessment that occurred last summer and plans for remediation of the site. Overall worried about the health impacts on the community, especially children

ACTIVITIES	DESCRIPTION	PROGRESS/ OUTCOME
Targeted Community Canvassing: Churches	Engage church clerks and follow-up to distribute information about Taylor Yard G2 such as flyers/meeting announcement at their Sunday services.	**Participation at Sunday Mass:** — On Sunday, March 17, St. Bernard Catholic Church invited MDLT to give an announcement after 3 of their Sunday masses. Over 300 people attended service. All received a fact sheet about Taylor Yard G2 with general information about the project. **Comments and Outcomes:** — Attendants are interested in having more Taylor Yard G2 information and timely notice of future public meetings and participation opportunities. — Church provided the opportunity to print Taylor Yard G2 information in a section on their weekly bulletin.
Small Group Community Meetings	Host 6 small group meetings with community members/community group identified at community assessment with the purpose to provide updates and history of the project and engage participation for G2 project.	Presentation to Water Science Club at Renaissance Performing Arts School. 20 attendees. All received Taylor Yard G2 factsheet and a small history of the site. **Comments and outcomes:** — Students are interested in receiving more information about Taylor Yard G2 and project timeline — Students are interested in learning more about the contamination on the site and are interested in volunteering with the project.
Small Group River Tours	Mujeres de la Tierra will lead three small group River tours with community members to learn more about LA River History and G2 Site. An opportunity to engage and inspire the community	Mujeres de la Tierra led two LA River tours with the community group to engage them regarding the history of the River and projects that are being considered along the LA River including G2 — Unidos por Nela tour on February 22, total participants 11 (in Spanish) — North East Consortium. March 21, Total Participants 9 (in English) **Comments and Outcomes:** — Groups are interested in receiving more Taylor Yard G2 information and timely notice of future meeting to share with community members.
Outreach Plan for the Following Week		
Targeted Community Canvassing: Fieldwork	Identify “unique” gathering spaces	Mujeres outreach team will identify and list unique areas where community members gather such as food trucks/taco trucks, and laundromats.
Targeted Community Canvassing: Schools	Meet with parent groups and administrative staff	Mujeres outreach team will meet with and provide the list of the parent groups at local schools

ACTIVITIES	DESCRIPTION	PROGRESS/ OUTCOME
Community events:	Identify community events and secure participation to promote Taylor Yard G2.	Upcoming community events: — Indigenous Wellness Collective – Community Potluck. Tuesday, March 26, 2019 — Mujeres de la Tierra - Cesar Chavez Day of Community Service and Celebration, Saturday, March 30 — St. Bernard Catholic Church - Charlas Cuaresmales – April 14,15,16,17

Table 10.Taylor Yard G2 Outreach Summary Notes for Period March 23, 2019-April 7, 2019

Activities	Description	Progress/Outcomes
Targeted Community Canvassing: Fieldwork	Mapping neighborhoods to assess areas where community members meet and identify demographics. Identify ten "nontraditional" community leaders who are highly regarded and are active influencers in the local neighborhoods	**Small Business Canvassing:** — 30 new location have agreed to share information about Taylor Yard G2. Follow-up with project information is needed once available. — All locations requested more information about the project and upcoming meetings. Follow-up visits are needed to all locations with one-pager about Taylor Yard G2 and public meeting announcement. **Identified 5 community leaders that will help share information with their groups:** — Zeus Coliba– Hosts a youth basketball team — Gretchen Guzman – local garden owner, interested in River and trash due to runoffs. — Angella Desma – Student at Sotomayor and Highland Park Farmers Market Vendor — Rolando Benitez – Father of Children that play soccer at Rio de los Angeles, wants to be more involved — Rodelio – Resident of Cypress Apartment Complex, wants to know more information about G2 **Comments and Outcomes:** — All are interested in learning more about the project but require more information, need flyers and meeting invitation to follow up.

ACTIVITIES	DESCRIPTION	PROGRESS/OUTCOMES
Targeted Community Canvassing: Neighborhood Meetings	Attend neighborhood planned meetings to provide updates about Taylor Yard G2. i.e., Neighborhood Council Meetings, Alliance Meetings, etc.	— 03/16/19 – Coffee and Birdwatching with Assembly member Wendy Carrillo (30 Attendees), staff is supportive of project. — 03/17/19 Lummis Day Event (50 Attendees) — 03/24/19 GPIA Rummage Sale, Glassell Park Senior Center – (10 Attendees) — 03/26/19 Indigenous Wellness Collective Putlock (20 Attendees) — 03/30/19 -Albion Riverside Park Opening, with the tricycle — 04/01/19 - Anahuak Coaches Meeting (30 Attendees) — 04/05/19 - Rio de los Angeles State Park Campfire (30 Attendees) — 04/06/19 – NELAFA – Rio de los Angeles Event (45 Attendees) — 04/06/19 – CPNC Elections, briefed candidates on Taylor Yard G2 River Park Project. **Comments and Outcomes:** — Spoke with Councilman Gil Cedillo at Albion Riverside Park Opening. Staff is supportive and will publish any update or flyer on the weekly bulletin — Provided information about dust suppressant at Taylor Yard G2 at Coaches meetings. General questions about what the Dust Suppressant was and if it was safe for their kids to be out in the park while the application was being made.
Outreach Plan for the Following Week		
Targeted Community Canvassing: Fieldwork	Identify "unique" gathering spaces	Mujeres outreach team will identify and list unique areas where community members gather such as food trucks/taco trucks, and laundry mats.
Targeted Community Canvassing: Schools	Meet with parent groups and administrative staff	Mujeres outreach team will meet with and provide the list of the parent groups at local schools
Community events:	Identify community events and secure participation to promote Taylor Yard G2.	Upcoming community events: — Neighborhood Council Meeting: Cypress Park (04/09/19), Elysian Valley (04/10/19), Atwater Village (04/11/19) and Glassell Park (04/16/19) — Earth Day Event at Los Angeles State Historic Park — ARC Alliance Meeting 04/15/19 — Kizh Nation – San Gabriel Band of Mission Indians Storytelling - 04/16/19 — Egg Hunt at Rio de los Ángeles – 04/19/19 — FoLAR River Cleanup – 04/20/19 — Dia de los Niños – 04/27/19

Table 11. Taylor Yard G2 Outreach Summary Notes for Period April 22, 2019-May 5,2019

ACTIVITIES	DESCRIPTION	PROGRESS/OUTCOMES
Organizational/ Community Meetings	Host 6 small group meetings to nontraditional groups to increase involvement and attendance	— Presentation at PUC Santa Rosa to parent group on 04/25. Provided One pager and upcoming community meeting flyer. Total attendees, - 15 — Centro del pueblo – Parent Group for Mental Health Awareness on 05/01 – Total Attendees 16
Targeted community canvassing/conversations	Promote approved event information to engage neighborhood participation and increase neighborhood attendance	**Schools:** — 19 Schools in Glassell Park, Cypress Park and Elysian Valley have agreed to share information about Taylor Yard G2. Provided one pager information and re-visit with meeting poster is needed. All have agreed to share with their parents and student body. **One-on-one Canvassing:** — Distributed one pager to Glassell Park and Cypress park neighbors 101 contacts in English and 41 monolingual contacts in Spanish. Refer to attached contact list — Businesses and public spaces: — Visited over 20 business to leave one pager for G2 **Identified 3 community leaders that will help share information with their groups:** — Maria Isabel Macias– participates in different parent groups across Cypress park and Glassell park — Nicole Kelly – Programming director at WCCW **Comments and Outcomes:** — All are interested in learning more about the project but require more information and will share information with their constituents.

ACTIVITIES	DESCRIPTION	PROGRESS/OUTCOMES
Targeted Community Canvassing: Neighborhood Meetings	Attend neighborhood planned meetings to provide updates about Taylor Yard G2. i.e., Neighborhood Council Meetings, Alliance Meetings, etc.	Attended the following meetings — 4/9/19 Cypress Park Neighborhood Council — 4/11/19 Atwater N.C. + Metrolink Community Meeting — 4/13/19 Earth day at La State Park+ Casitas Development Meeting. — Glassell Park neighborhood council — 4/17/19 Possible BOE Meeting — 4/19/19 - Community Reading at Bowtie Event + Egg hunt at Rio park — ARC Alliance Meeting 04/15/19 — Kizh Nation – San Gabriel Band of Mission Indians Storytelling - 04/16/19 — Egg Hunt at Rio de los Ángeles – 04/19/19 — FoLAR River Cleanup – 04/20/19 – over 500 people — Dia de los Niños – 04/27/19 - Over 300 participants — 04/30/19 – Attended Indigenous Wellness Collective event – 30 Attendees — 5/4/19 Casitas project meeting, — 5/3/19 La state historic park campfire **Comments and Outcomes:** — 20 Contacts Left from earth day event. — Alfonso Ruiz Field Rep Wendy Carrillos expressed interest in support — Bob Ramirez - El Rio Veterans expressed interest and will invite to next event
Outreach Plan for the Following Week		
Targeted Community Canvassing: Door-to-Door Canvassing	Distribute Public meeting invitation to identified Business corridors and homes	Distribute 200- 500 door hangers' door to door to strategically planned homes and business.

ACTIVITIES	DESCRIPTION	PROGRESS/OUTCOMES
Targeted Community Canvassing: Schools	Meet with parent groups and administrative staff	Re-Visit the following 19 Schools to invite to public meeting on 05/18: — Los Feliz Charter School for the Arts — Alliance for College Ready — Adams Forge — Renaissance Arts Academy — St. Bernard Catholic School — Glassell Park Elementary School — Sotomayor Center for Arts and Science — Studio Middle School — Alliance Tannenbaum Family Tech High School — Aragon Elementary School — Divine Savior Elementary — Florence Nightingale Middle School — Loreto Elementary School — Dorris Place Elementary — Fletcher Drive Elementary — Irving STEAM Magnet School — Isana Octavia Charter School — PUC Santa Rosa
Community events:	Identify community events and secure participation to promote Taylor Yard G2.	Upcoming community events: — Neighborhood Council Meeting: Cypress Park (05/14/19), Elysian Valley (05/8/19), Atwater Village (05/09/19) and Glassell Park (04/21/19) — Sindicato de inquilinos – (05/08/19 — Spanish speaker group - 05/29/19 Individual Meeting with Community Leaders — Julia Meltzer -05/08/19 — Rudy Ortega – 05/10/19

Appendix C Community Survey Summary Report

G2 TAYLOR YARD RIVER PARK PROJECT

G2 TAYLOR YARD RIVER PARK PROJECT

Community Survey Summary Report • August 2018

G2 TAYLOR YARD RIVER PARK PROJECT

COMMUNITY SURVEY SUMMARY REPORT

TAYLOR YARD G2 RIVER PARK PROJECT

CITY OF LOS ANGELES

DATE: AUGUST 2018

PREPARED FOR: BUREAU OF ENGINEERING
CITY OF LOS ANGELES

BY: WSP
SUITE 800
444 SOUTH FLOWER STREET
LOS ANGELES, CA 90071

TABLE OF CONTENTS

FIGURES

APPENDICES

1 EXECUTIVE SUMMARY

On behalf of the Bureau of Engineering, City of Los Angeles (the City), WSP USA Inc. (WSP) is submitting this summary of the results for the Taylor Yard G2 River Park Project (Project) community survey. The purpose of the survey was to obtain community input regarding park concepts. This summary is structured per the detailed scope of work provided in the Task Order Solicitation (TOS) No. 13 prepared by the City of Los Angeles Department of Public Works Bureau of Engineering (BOE) in June 2017.

The Taylor Yard G2 River Park Parcel, is located in northeast Los Angeles near the intersection of the Golden State Freeway (Interstate 5) and the Glendale Freeway (State Route 2). The site is bounded to the west by the Los Angeles River, to the east by Rio De Los Angeles State Park, the State-owned Taylor Yard G1 Bowtie Parcel to the north and a Metrolink maintenance facility to the south. The City is proposing open space recreational reuse of the former railroad maintenance and fueling station.

The primary purpose of the Project as stated by the City is: to advance revitalization of the Los Angeles River through development of a site remediation strategy and concept designs for phased development (interim and long term uses) of the site. The other purposes are to perform near-term remediation required for interim uses on the site, and build interim uses on the site. Beyond these purposes there are a multitude of additional project objectives, opportunities and constraints identified in TOS No. 13 and other planning documents that must be achieved.

In early 2018 BOE administered a print and online survey focused on gathering the community's input and ideas on design components for site development and implementation of the Project. The survey, provided in English and Spanish, contained twenty-three (23) questions which were a combination of multiple choice, yes/no, and open-ended questions. English and Spanish versions of the survey are provided in Appendix A.

The community was informed that the survey results would be used to help the design team understand the type of park features and activities most important to the community in this new park, and guide the design of interim and long term uses at the site.

The survey was made available on January 24, 2018 at a Community Meeting/Preliminary Design Workshop. Approximately 300 community members attended this public meeting. Shortly thereafter, the survey was made available online on the Project website. It was further distributed via the Project's e-mail contact database (approximately 750 individuals), through promotions by Project partners and the City's social media platforms. Originally, the survey response time frame was scheduled from January 24, 2018 through March 1, 2018, however, due to high demand, BOE extended the response deadline to March 9, 2018.

Of the 1,321 responses, 31 were collected in Spanish. Full summary results can be found in Appendix B.

Input received shows a clear desire for a more natural and passive type of a park that provides opportunities for walking, engaging with nature and play. As part of the park design effort, flexible spaces will likely be considered to accommodate multiple uses, such as a meadow or plaza spaces which might be used for picnicking, play or events, as well as habitats and connection to the river.

The community clearly understands the importance of the site and the location on the Los Angeles River as access to the River and a focus on the history of the River ranked very high. For sustainability elements, the use of native plant material, biofiltration and water capture and storage were the top elements selected.

Overall, the robust amount of input provided by the community gave the Project team clear insight into community expectations and desires for features, activities, and uses for the site. The responses will be actively referenced to guide the design team and BOE throughout the Project planning and design process. This is further detailed in a design considerations memo in Appendix D.

2 LOCATION OF SURVEY RESPONDENTS

Zip code data were collected to allow BOE to track the responses to specific community areas. Of the 1,321 responses, 290 individual responses (or 22% of the total response pool) were reported within the 90065 zip code, which is immediately adjacent and east of the Project. Approximately 500 additional surveys were gathered from zip codes within a 3.5-mile radius of the Project. When combined with the 90065 zip code, 59% of total responses received were reported from within a 3.5 mile radius of the Project (Figure 1). Overall, 189 unique zip codes were represented, showing a citywide interest in the Project and broad engagement. A larger regional area map of responses received as well as a full listing of represented zip codes can be found in Appendix C.

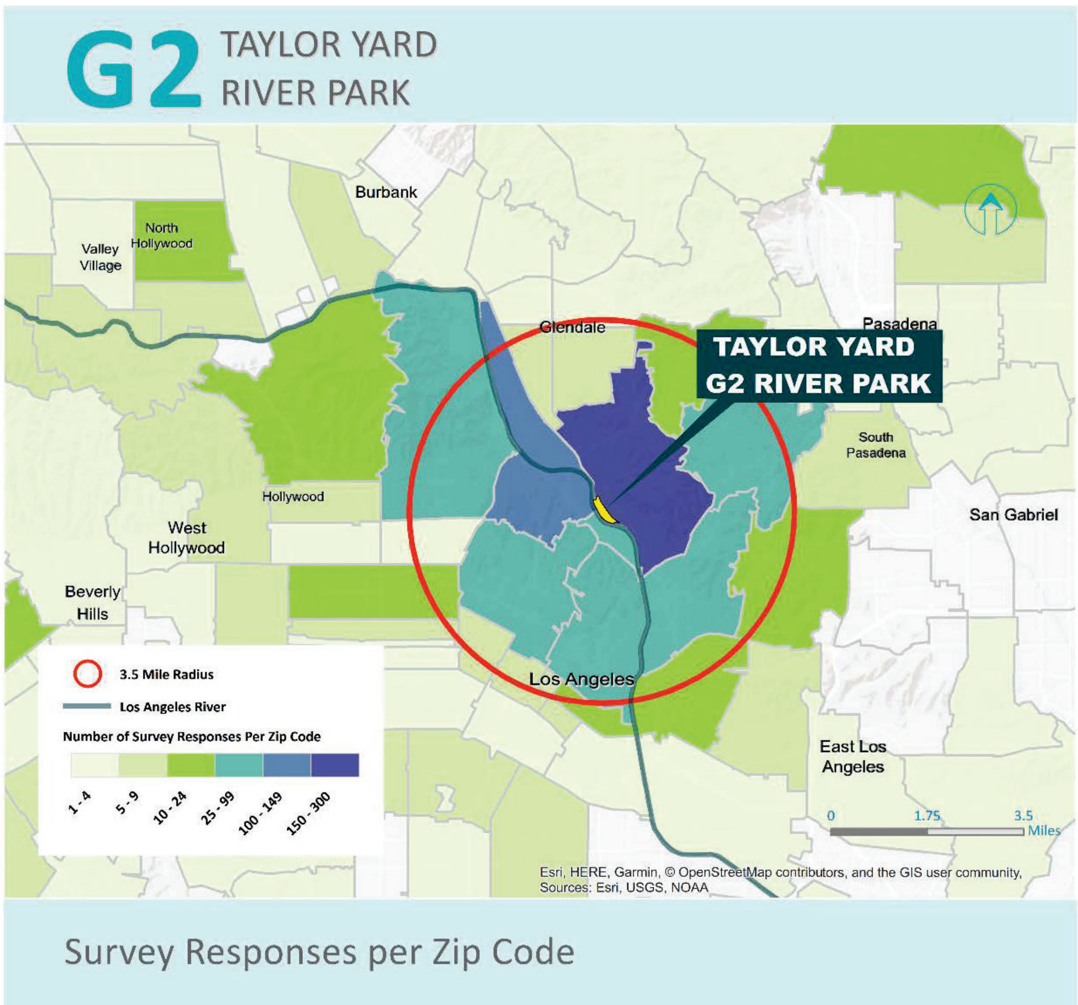


Figure 1: Survey Responses per Zip Code (3.5 Mile Radius)

3 SURVEY RESULTS

Overall, the survey results provide insight into current views and uses for parks and open spaces as well as desired uses at the Project. Importantly, the survey provides the design team clear direction to move forward with design of the interim and long-term uses. This is further detailed in a design consideration memo in Appendix D. The following discussion summarizes key findings. Figures are also provided which display survey results.

3.1 KEY FINDINGS

— **Nature -** Respondents have a high interest in natural components; open space; trails and habitat. The survey found that users of existing parks often went to those facilities for the same natural elements (access to nature 64%, walking/hiking trails 53%, scenic views 25%, and habitat areas 22%).

— **Recreation -** Outdoor recreation including walking / jogging and cycling ranked high, both as activities respondents currently undertake in parks (53% and 23%, respectively), as well as activities that they would like to experience at the Project (60% and 46%).

— **Los Angeles River -** Respondents overwhelmingly reported familiarity with the Los Angeles River with 84% reported having visited the River. For questions focused on River interaction and education, results showed a strong interest in these features being included.

— **Consistent Results –** When survey findings were viewed from a high-level (complete results) versus a focused level (3.5-mile radius from the G2 parcel), the results were statistically consistent among both sets of respondents, indicating that community priorities among the public are largely consistent with those of the community immediately surrounding the G2 parcel.

3.2 RESULTS WITHIN A 3.5-MILE RADIUS

As mentioned in section 3, the majority of survey responses were tracked to the area immediately surrounding the G2 parcel. To determine if the respondents nearest the G2 parcel were giving similar feedback as those in the overall survey, the Project team condensed the data to reflect only responses received within a 3.5-mile area (Appendix E). Overall, the responses received were consistent with those of the full response pool, and there were no statistically significant differences. Aside from the selection of responses below, the difference was no more than three percentage points on all selections. The differences included:

- Question 15, 17% of respondents in the overall survey listed “Movies” as important, while 20.3% of respondents within the 3.5-mile radius considered it important.
- Question 16, 37.4% of respondents considered “Café/Restaurants” as important structures, while 41.9% of respondents within the 3.5-mile radius considered them important.
- Question 19, 34.9% of respondents in the overall survey listed “Connection to Bowtie and Rio de Los Angeles” as important, while 39.7% of respondents within the 3.5-mile radius considered it important.
- Question 20, 55.3% of respondents in the overall survey listed “Native Planting” as important, while 58.7% of respondents within the 3.5-mile radius considered it important.

For responses to the open-ended questions 22 and 23 which addressed which site uses MUST and MUST NOT be included in the park, the following observations were found:

- For site uses that MUST be included in the park, the largest reported response involved “River Access” with approximately 12% of respondents incorporating some form of this language within their answers. “Nature” and “Trails” followed with approximately 11% and 8% of respondents respectively reporting the desire for these uses.
- For site uses that MUST NOT be included in the park, the largest responses included “Housing” and “Commercial” uses which garnered 19% and 17% of total responses, respectively.

4 CURRENT PARK INTERACTION

Key to a successful park planning and design process is the engagement of the community to ensure that their needs are being met and that the design is representative of current recreational needs. Therefore, the first seven survey questions focused on determining a respondent's current interaction with parks including their frequency of park visits (see Figure 2 and Figure 3); favorite parks in California and the United States; and preferred park features and uses (see Figure 4).

4.1 CURRENT PARK VISITS (TIME)

Figure 2 and Figure 3 present the results regarding timeframe for park visits. Respondents reported a preference leaning towards weekends over weekdays with 64% reporting weekends compared to 36% for weekdays. Respondents also reported morning hours as the most common time to visit with 42% reporting morning, 36% reporting around noon and 22% evenings.

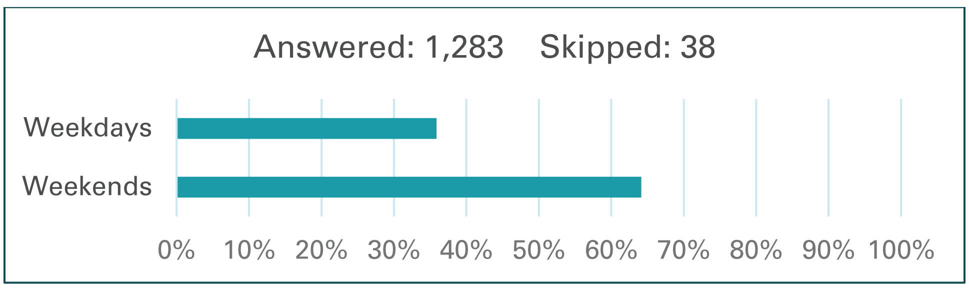


Figure 2: Park Visits – Day of Week

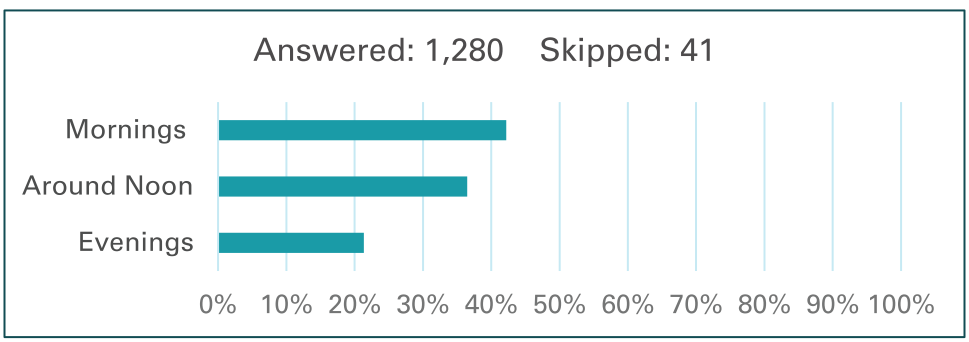


Figure 3: Park Visits – Time of Day

Open-ended questions were included to determine most frequented parks; favorite parks within and outside of the City of Los Angeles. Common responses to each question are as follows:

- In general, which parks or public spaces do you enjoy visiting the most now? List up to three (1,242 total responses)
  - Griffith Park - 498 responses, 40%
  - Elysian Park – 198 responses, 11%
  - Echo Park – 122 responses. 10%
  - Rio de Los Angeles State Park – 104 responses, 8%
- Do you have a favorite park in Los Angeles? (1,000 total responses)
  - Griffith Park - 268 responses, 27%
  - Echo Park – 53 responses, 5%
  - Vista Hermosa Park – 43 responses, 4%
- Do you have a favorite park in the Country or in the world? (886 total responses)
  - Central Park – 120 responses, 14%
  - National Parks – 83 responses, 9%
  - Yosemite National Park – 78 responses, 9%
  - Golden Gate Park – 37 responses, 4%

4.2 FAVORITE PARK FEATURES

Respondents were asked to select their top three favorite park features. Sixty-four percent selected access to nature, followed closely by 53% that chose walking and hiking trails. The remaining features, as referenced in Figure 4, attracted less than 25%.

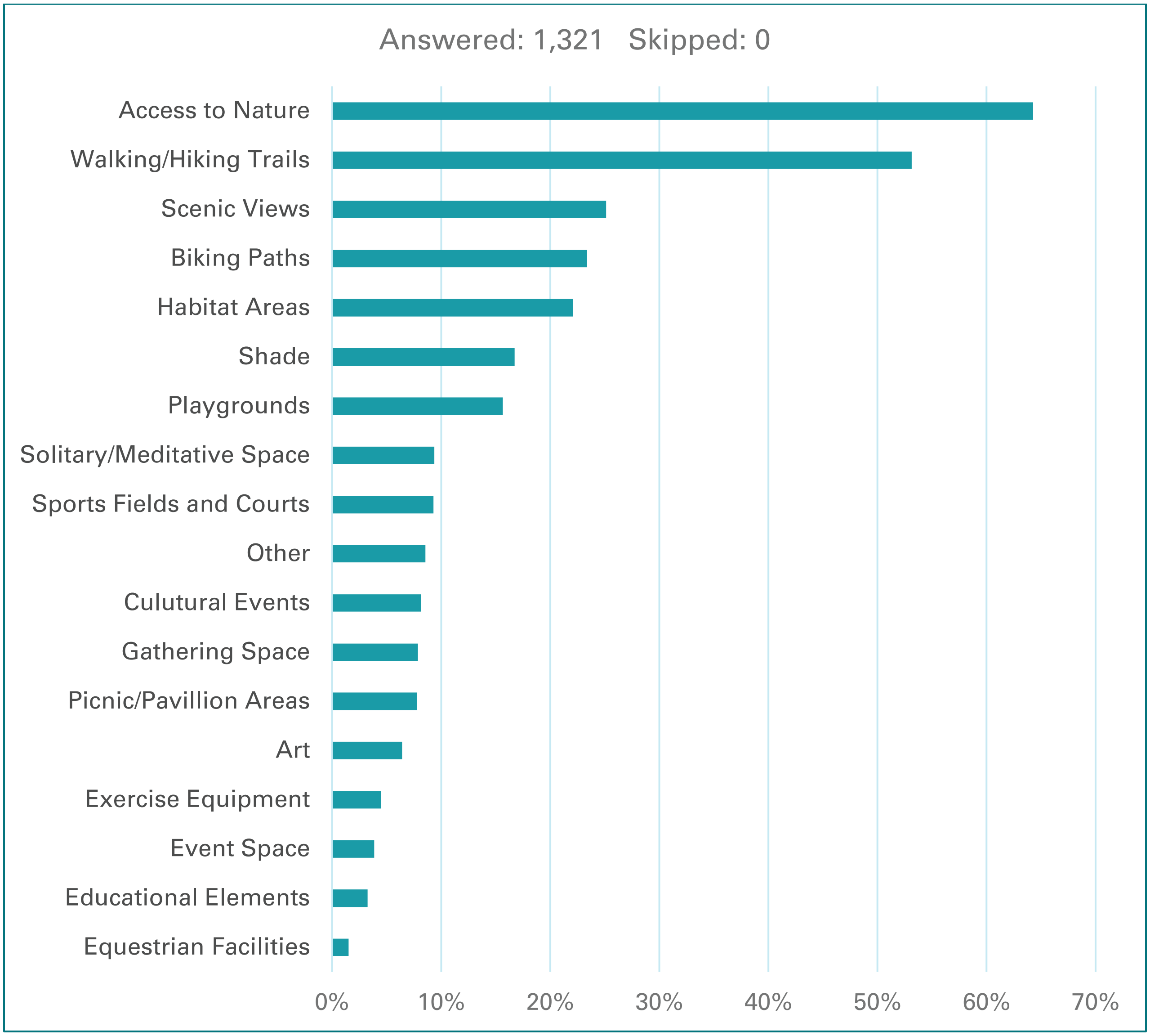


Figure 4: Favorite Park Features

5 ACTIVITIES/FEATURES FOR PARK DESIGN

The remainder of the survey focused on gathering information that would reveal a respondent's desire for design and uses of the Project. Collectively, input received showed a clear desire for more natural, passive type uses that would provide opportunities for walking, engaging with nature and play. Flexible spaces, such as a meadow which might be used for picnicking, recreation or events were also highly desired. Seven survey questions requested a respondent's preference for various types of potential activities and features. Respondents were asked to select their three among the choices offered. These results are summarized in Figures 5 through 12

5.1 ACTIVITIES/RECREATION ELEMENTS

For activities and recreation elements, results showed a large preference towards natural park features as well as pedestrian infrastructure for recreational outdoor activities (Figure 5). Specifically, *Walking/Running/Jogging* garnered the highest response rate as 60% of respondents selected this option. *Children's Nature/Adventure Play* was selected by 40%, followed by *Meadow and Picnicking* in the mid-30% range.

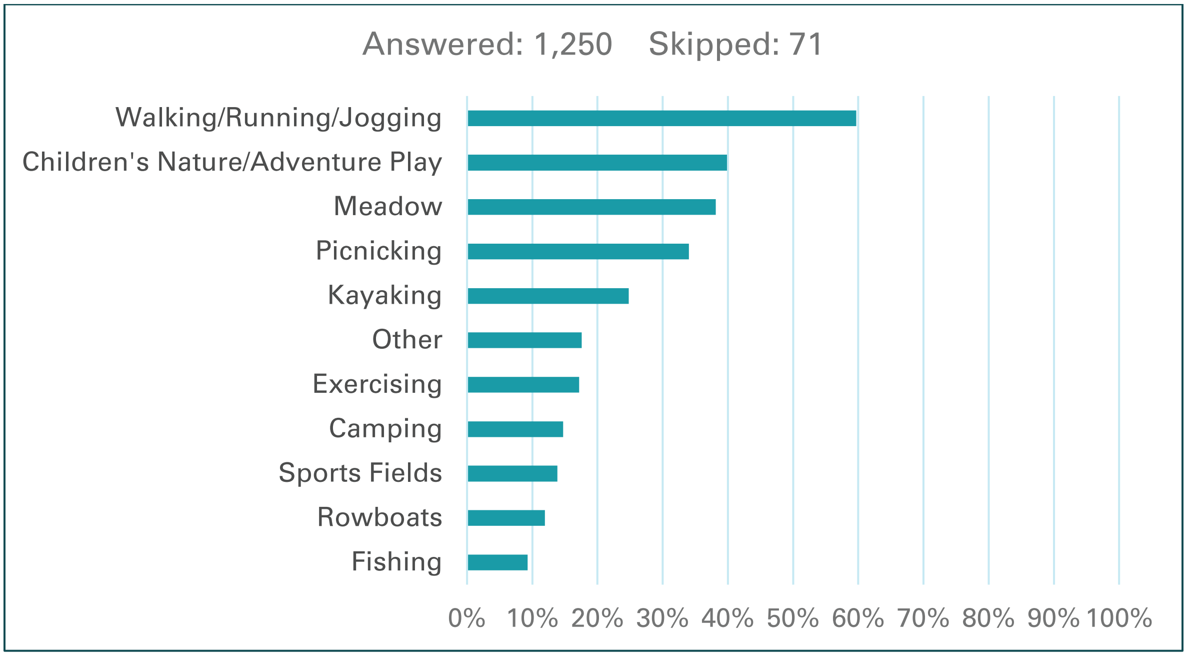


Figure 5: Recreation Elements

5.2 SOCIAL/EVENTS/EVENT SPACES

For the Social/Events/Event Spaces category, *Performances, Farmers Markets and Cultural Events* gathered more than 30% response rate with *Cultural Events* ranking the highest at 38%. Although there was a wide range of choices, only *Movies, Exercise/Fitness/Sports Competitions*, and *Other* fell below the 20% mark as displayed in Figure 6.

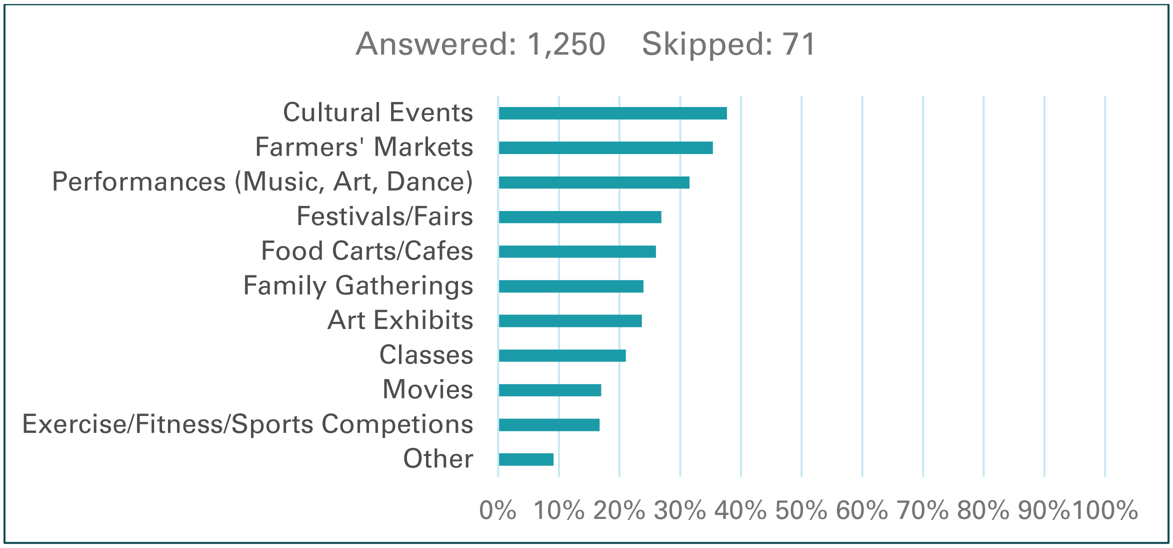


Figure 6: Social Events

5.3 STRUCTURES

Regarding Structures, *Restrooms* were a notably high selection with 63% requesting these types of facilities (Figure 7). A significant drop followed with *Nature Centers* being selected by 48% of respondents and *Café/Restaurants* following with 37%. There was a wide range of selections for this question with *Art Center, Workshops, Maker Spaces, Community Centers, Innovation Centers,* and *Other* falling below 15% of responses.

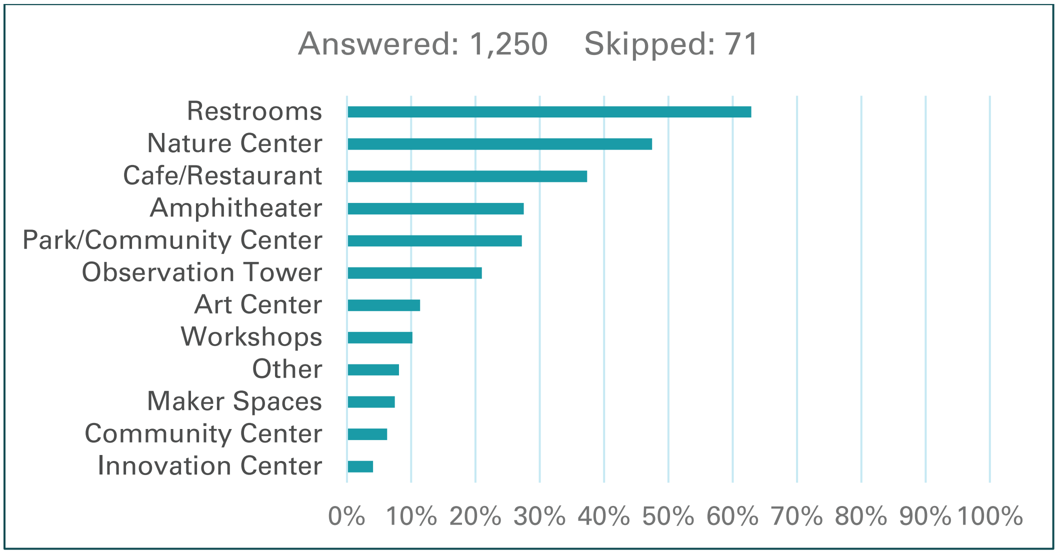


Figure 7: Structures

5.4 EDUCATIONAL ELEMENTS

The community clearly understood the historical importance of the site and the location on the Los Angeles River. Specifically, for types of Educational Elements, *River History* was overwhelmingly the most frequent selection with 44% of respondents requesting this type of feature (Figure 8).

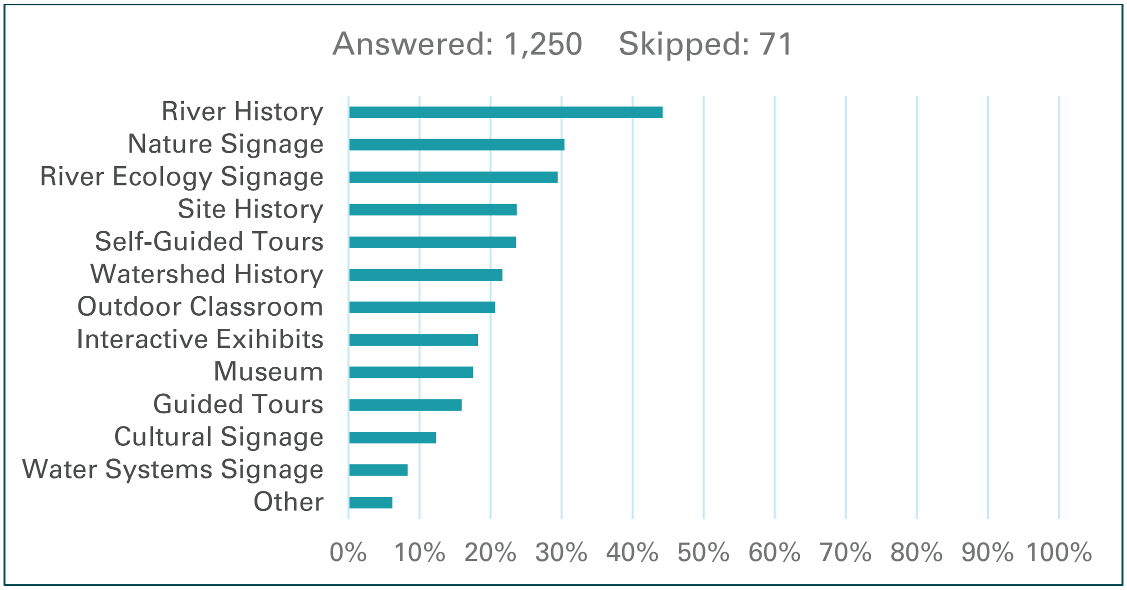


Figure 8: Educational Elements

5.5 NATURAL SPACE/WILDLIFE HABITAT

As displayed in Figure 9, *River Access* and *Trails* were the highest requested Natural Space with both garnering just over 40%.

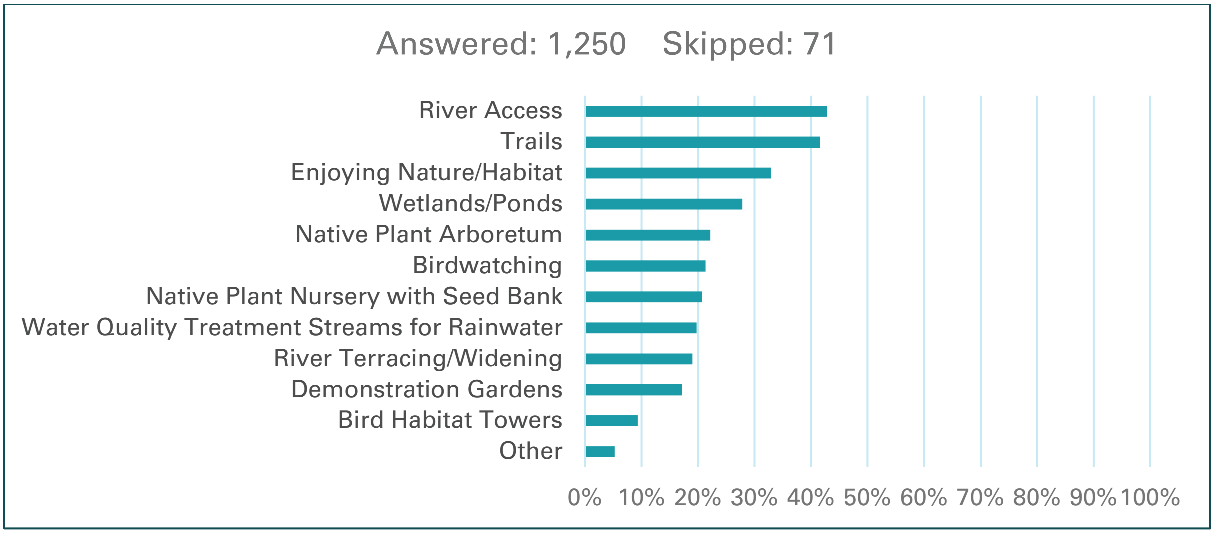


Figure 9: Natural Space/Wildlife Habitat

5.6 MOBILITY/ACCESS/COMFORT

Forty-seven percent of respondents reported *Walking/Bicycle Paths* as desired features for the park, with 35% requesting connections to the Bowtie Parcel and the Rio de Los Angeles State Park. Shade Structures and Parking also appeared in high demand as all were selected by at least 25% of respondents.

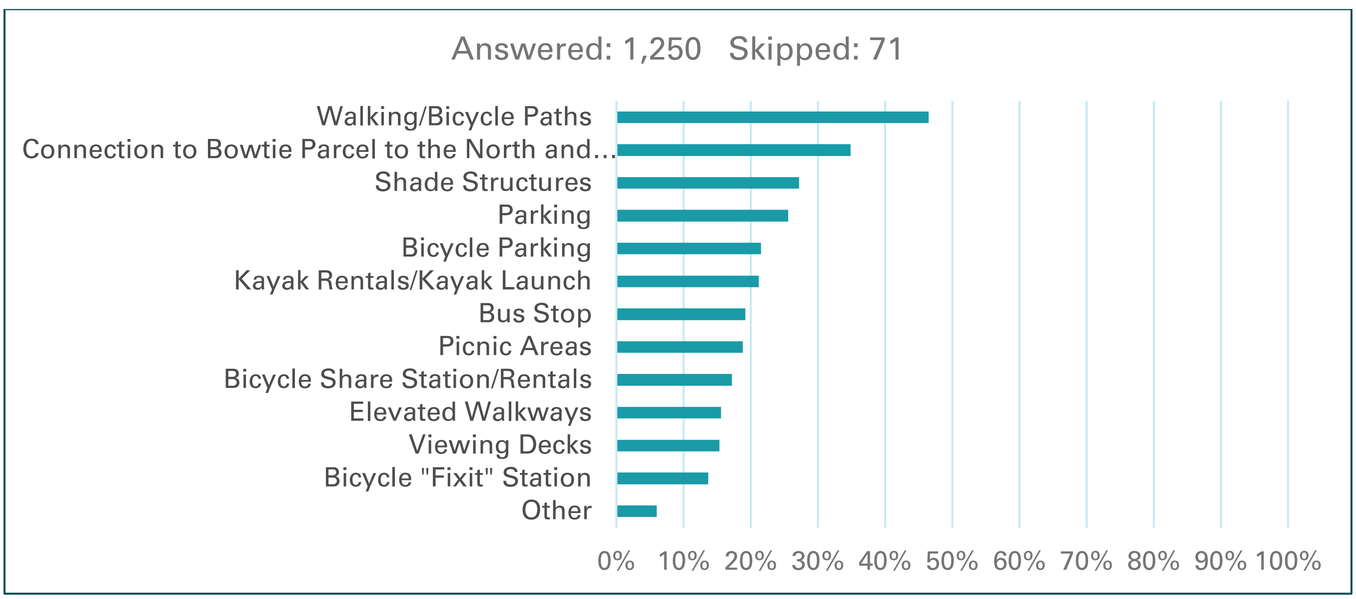


Figure 10: Mobility/Access/Comfort

5.7 SUSTAINABILITY ELEMENTS

Of the eight Sustainability Elements referenced in the survey, *Native Planting and Biofiltration* were requested by over 50% of respondents (Figure 11).

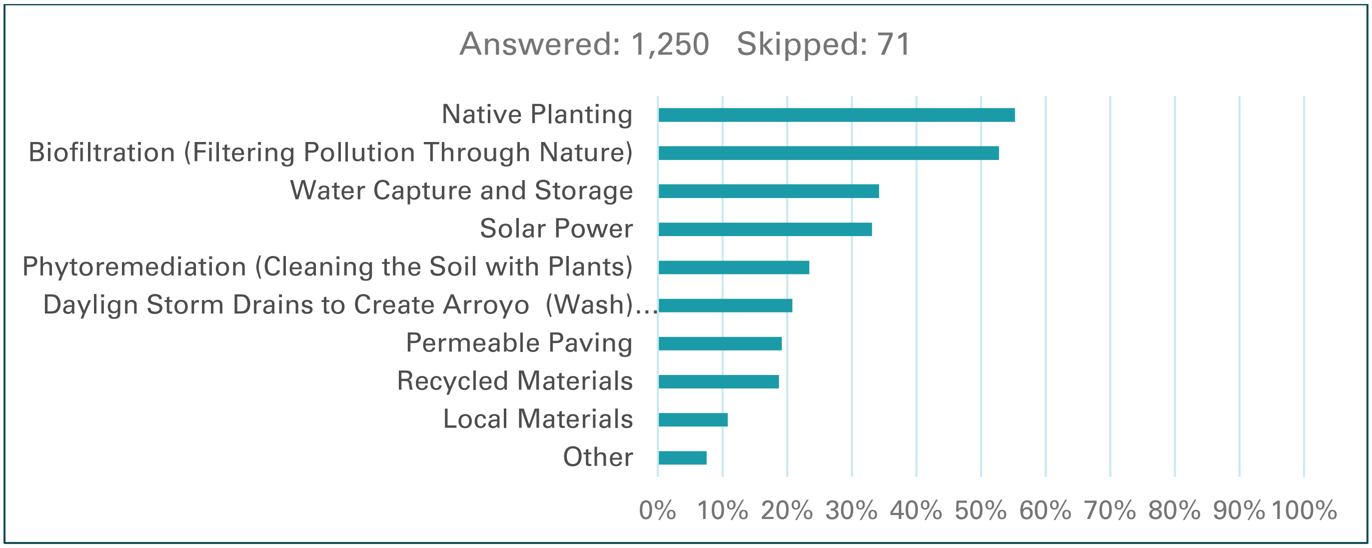


Figure 11: Sustainability Elements

6 SITE USES

The final questions of the survey focused on site uses including revenue generating uses (Figure 12) and open-ended questions for what the site MUST and MUST NOT be used for (Appendix B). Results showed support for event and performance spaces and workshops. There was a lack of support for housing and commercial spaces at the site.

6.1 REVENUE GENERATING USES

More than double the amount (67%) of respondents reported *Event Spaces* as preferable revenue-generating uses compared to *Commercial Spaces* (28%) or *Multi-Family Housing* (23%). *Performance Facilities,* and *Innovation Center/Workshops* appeared as favorable options as both were at or above 50%.

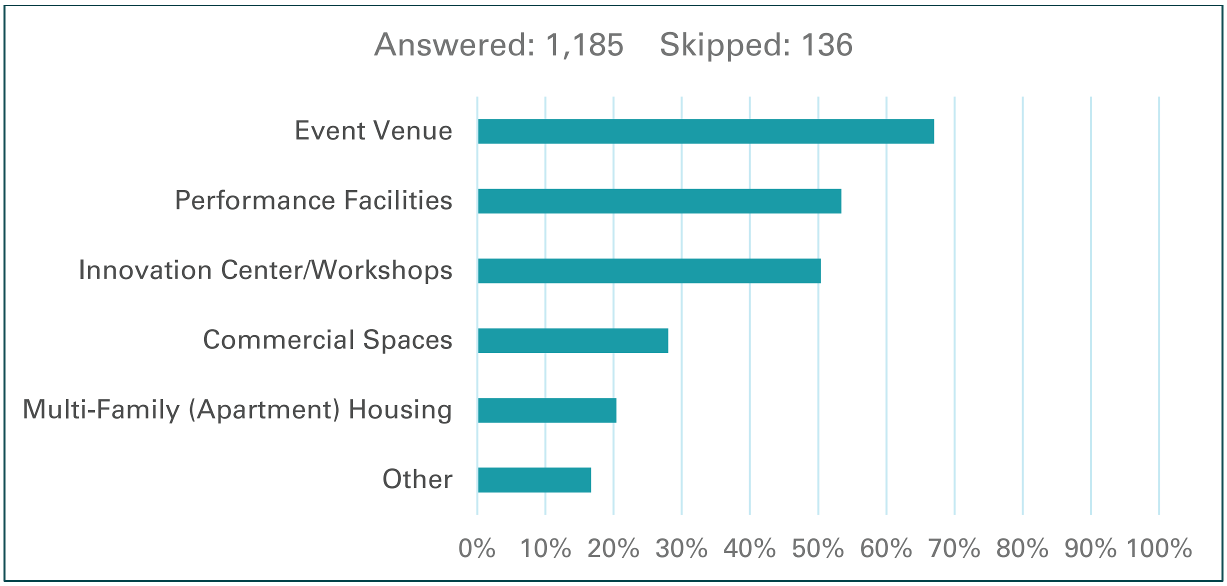


Figure 12: Revenue Generating Preferences

APPENDIX A

COMMUNITY SURVEY (ENGLISH/SPANISH)

G2 TAYLOR YARD RIVER PARK PROJECT

Community Feedback Survey

(Optional) Name: ______________________________ E-mail: ______________________________
Phone: (_____)______-_______________ Zip Code: __________

The Taylor Yard G2 River Park Project, which is being designed by the City of Los Angeles, Bureau of Engineering, will be a large public park (approximately 42 acres) adjacent to the Los Angeles River. One of the primary goals for the project is to restore a large area of native-plant habitat within the site, with a connection to the LA River, to benefit the health of the river and its surroundings. We would like to hear from you to find out what you would like to see and do in the new park. Please complete the following survey and share with us your thoughts and ideas!

1. In general, which parks or public open spaces do you enjoy visiting most often now? (list up to three)

____

____

____

2. How do you get there? (check all that apply)
[ ] Bike
[ ] Public transportation
[ ] Vehicle
[ ] Walk
[ ] Other (please describe)
____

3. Do you most often go:
[ ] Alone
[ ] With friends
[ ] With family
[ ] Other (please describe)
____

4. When do you most often visit the park?
[ ] Weekdays
[ ] Weekends

5. What time of day do you most often visit parks?
[ ] Mornings
[ ] Around noon
[ ] Evenings

6. Do you have a favorite park:
in Los Angeles?

____

in the country or in the world?

____

7. Which park features do you enjoy and use the most?(select your top three)
[ ] Access to nature
[ ] Art
[ ] Biking paths
[ ] Cultural events
[ ] Educational elements
[ ] Equestrian facilities
[ ] Event space
[ ] Exercise equipment
[ ] Gathering space
[ ] Habitat areas
[ ] Playground
[ ] Picnic/pavilion areas
[ ] Scenic views
[ ] Shade
[ ] Solitary/meditative space
[ ] Sports fields and courts
[ ] Walking/hiking trails
[ ] Other (please describe)
____

8. Have you visited the Los Angeles River?
[ ] Yes
[ ] No

9. If yes to #8, where do you access the River?

____

10. What do you do there?
[ ] Bike
[ ] Bird watch
[ ] Fish
[ ] Kayak
[ ] Picnic
[ ] Walk/jog
[ ] Other (please describe)
____

Which activities/features would you like to see in the Taylor Yard G2 River Park? (please select your top three from each category)

11. Activities/Recreation Elements
[ ] Camping
[ ] Children's nature/adventure play
[ ] Exercising
[ ] Fishing
[ ] Kayaking
[ ] Meadow
[ ] Picnicking
[ ] Sports fields
[ ] Walking/running/jogging
[ ] Other______________________

12. Social/Events/Event Spaces
[ ] Art exhibits
[ ] Classes
[ ] Cultural events
[ ] Exercise/fitness/sports competitions
[ ] Family gatherings
[ ] Farmers markets
[ ] Festivals/fairs
[ ] Food carts/cafes
[ ] Movies
[ ] Performances
☐ Music ☐ Art ☐ Dance
[ ] Other ______________________

13. Structures
[ ] Amphitheater
[ ] Art center
[ ] Café/restaurant
[ ] Innovation center
[ ] Nature center
[ ] Workshops
[ ] Maker spaces
[ ] Observation tower
[ ] Park/community center
[ ] Restrooms
[ ] Other ______________________

14. Educational Elements
[ ] Guided tours
[ ] History
☐ Of the site ☐ Of the River
☐ Of the watershed
[ ] Interactive exhibits
[ ] Interpretive signage
[ ] Museum
[ ] Outdoor classroom
[ ] Self-guided tours
[ ] Other ______________________

15. Natural Space/Wildlife Habitat
[ ] Birdwatching
[ ] Demonstration gardens
[ ] Enjoying nature/habitat/views
[ ] Habitat (bird) towers
[ ] Native plant arboretum
[ ] Native plant nursery with seed bank
[ ] River access
[ ] River terracing/river widening
[ ] Trails
[ ] Water quality treatment streams for rainwater
[ ] Wetlands/ponds
[ ] Other ______________________

16. Mobility/Access/Comfort
[ ] Bicycle "fixit" station
[ ] Bicycle parking
[ ] Bicycle rentals/bicycle share station
[ ] Bus stop
[ ] Connection to Bowtie parcel to the north and Rio de Los Angeles State Park to the east
[ ] Elevated walkways
[ ] Kayak rentals/kayak launch
[ ] Parking
[ ] Paths - walking and/or bicycle
[ ] Picnic areas
[ ] Shade structures
[ ] Viewing decks
[ ] Other ______________________

17. Sustainability Elements
[ ] Biofiltration (filtering pollution through nature)
[ ] Daylight storm drains to create arroyo (wash) tributaries
[ ] Local materials
[ ] Native planting
[ ] Recycled materials
[ ] Solar power
[ ] Phytoremediation (cleaning the soil with plants)
[ ] Permeable paving
[ ] Water capture and storage
[ ] Other ______________________

18. For the Taylor Yard G2 River Park, what kind of revenue generating site uses would you support to sustain long-term operations and maintenance? (select all that apply)
[ ] Commercial spaces
[ ] Event venue
[ ] Innovation center/workshops
[ ] Multi-family (apartment) housing
[ ] Performance facilities
[ ] Other (please describe)

19. What site use do you think MUST be included in the future park?

____

20. What site use do you think MUST NOT be included in the future park?

____

21. Who do you think has great ideas about the park's future potential that has not yet been involved in this process?

____

PLEASE NOTE:
Completed surveys will be accepted until **March 1, 2018**

You may also fill out the survey online at **www.TaylorYardG2.com**

You can also mail the survey to:
Lyndsay Naish
City of Los Angeles
1149 S. Broadway, 6th Floor
Mail Stop 538
Los Angeles, CA 90015

G2 TAYLOR YARD RIVER PARK PROJECT

Community Feedback Survey

Comments:

Thank you for your input!

G2 TAYLOR YARD RIVER PARK PROJECT

Encuesta Comunitaria

(Opcional) Nombre: ______________________________ E-mail: ______________________________

Teléfono: (_____)______-________________ Código Postal: __________

El proyecto llamado en inglés: Taylor Yard G2 River Project que está siendo diseñando por el Buró de Ingeniería de la Ciudad de Los Ángeles será un parque público de grandes dimensiones (aproximadamente 42 acres — 17 hectáreas) adyacente al Río de Los Ángeles. Uno de los principales objetivos de este proyecto es restaurar una gran área del sitio con un hábitat de plantas nativas que solían encontrarse en la zona para beneficiar la salud del río y sus alrededores. Nos gustaría escuchar de su opinión sobre que le gustaría ver y hacer en este nuevo parque. Por favor complete la siguiente encuesta y comparta con nosotros su opinión e ideas.

1. En general ¿Que parques o espacios públicos usted disfruta visitar con más frecuencia? (Crea una lista de hasta tres)

____

____

____

2. ¿Cómo llega usted a estos parques/sitios? (Seleccione todas las que correspondan)
- [ ] Bicicleta
- [ ] Transporte público
- [ ] Vehículo privado
- [ ] Caminando
- [ ] Otro (especifique) ________________

3. Cuando visita usted estos parques/sitios, usted acude ...
- [ ] Solo
- [ ] Con amigos
- [ ] Con familia
- [ ] Otro (especifique) ________________

4. ¿Cuándo visita estos parques/sitios?
- [ ] Entre semana
- [ ] Fines de semana

5. ¿A qué hora del día visita con más frecuencia estos lugares?
- [ ] Por las mañanas
- [ ] Al medio día
- [ ] Tardes/Noche

6. ¿Tiene usted un parque favorito en Los Ángeles?

____

¿En el país o en algún otro lugar en el mundo?

____

7. ¿Qué amenidades de un parque usted disfruta más?(Seleccione todas las que correspondan)
- [ ] Acceso a la naturaleza
- [ ] Arte
- [ ] Ciclovías
- [ ] Eventos culturales
- [ ] Elementos educativos
- [ ] Espacios ecuestres
- [ ] Espacios para eventos
- [ ] Máquinas de ejercicio
- [ ] Espacios de reunión
- [ ] Áreas de hábitat natural
- [ ] Áreas de juegos infantiles
- [ ] Áreas para picnic
- [ ] Vistas escénicas
- [ ] Áreas de sombra natural
- [ ] Espacios de meditación
- [ ] Canchas deportivas
- [ ] Senderos para caminar o correr
- [ ] Otros (especifique) ________________

8. ¿A visitado el Río de los Ángeles?
- [ ] Sí
- [ ] No

9. Si responde Sí a la pregunta #8 ¿Por dónde accede al Río de Los Ángeles?

____

10. ¿Qué hace cuando visita el Rio Los Ángeles?
- [ ] Andar en bici
- [ ] Observar aves
- [ ] Pescar
- [ ] Kayak
- [ ] Picnic
- [ ] Caminar/Correr
- [ ] Otro (especifique) ________________

¿Qué actividades/amenidades le gustaría ver en el proyecto Taylor Yard River Park? (Por favor seleccione sus 3 opciones preferidas en cada categoría)

11. Actividades recreativas
- [ ] Campamentos / Área de acampar
- [ ] Actividades de aventura para niños
- [ ] Ejercicio
- [ ] Pesca
- [ ] Kayak
- [ ] Prado
- [ ] Picnic
- [ ] Campos deportivos
- [ ] Caminar/correr/trotar
- [ ] Otro ____________________

12. Elementos y programación cultural/social
- [ ] Exhibiciones de arte
- [ ] Clases para el público en general
- [ ] Eventos culturales
- [ ] Ejercicio/deportes/competencias
- [ ] Reuniones familiares
- [ ] Mercados de frutas y verduras
- [ ] Carros de comida / Cafés
- [ ] Películas
- [ ] Eventos
  - ☐ Música ☐ Arte ☐ Baile
- [ ] Otro ____________________

13. Infraestructura
- [ ] Anfiteatro
- [ ] Centro de arte
- [ ] Café/ Restaurant
- [ ] Centro de innovación
- [ ] Centro de Ciencias Naturales
- [ ] Talleres
- [ ] Espacios de creatividad
- [ ] Torre de observación
- [ ] Centro comunitario
- [ ] Baños
- [ ] Otro ____________________

14. Elementos y programación educativa
- [ ] Visitas guiados
- [ ] Historia acerca de
  - ☐ El sitio ☐ El río
  - ☐ El agua y la hidrología del sitio
- [ ] Exhibiciones interactivas
- [ ] Señalización interpretativa
- [ ] Museo
- [ ] Salón de clases al aire abierto
- [ ] Tours auto guiados
- [ ] Otro ____________________

15. Espacios naturales y hábitat para especies silvestres
- [ ] Observación de aves
- [ ] Jardines educativos
- [ ] Espacios para disfrutar l el hábitat natural y las vistas
- [ ] Torres de hábitat (aves)
- [ ] Jardín botánico de árboles nativos (arboreto)
- [ ] Vivero de plantas nativas y banco de semillas
- [ ] Accesos al rio
- [ ] Terrazas fluviales / ensanchamiento del río
- [ ] Senderos
- [ ] Arroyos para la lluvia y tratamiento del agua
- [ ] Pantanos / estanques
- [ ] Otro ____________________

16. Accesos, movilidad y confort
- [ ] Taller para bicicletas
- [ ] Estacionamiento de bicicletas
- [ ] Alquiler de bicicletas y estación de bicicletas compartidas
- [ ] Parada de autobús
- [ ] Conexión con el sitio adyacentes Bowtie Parcel al norte y Parque Estatal Río de Los Ángeles
- [ ] Senderos elevados
- [ ] Alquiler de Kayaks y estación de salida de kayaks
- [ ] Estacionamiento
- [ ] Vías para caminar y/o andar en bici
- [ ] Áreas de picnic
- [ ] Estructuras que den sombra
- [ ] Terrazas de observación al sitio
- [ ] Otro ____________________

17. Elementos de sostenibilidad
- [ ] Bio filtración (filtración de la contaminación a través de la naturaleza)
- [ ] Drenajes de lluvia para creación de arroyos
- [ ] Materiales locales
- [ ] Materiales reciclados
- [ ] Energía solar
- [ ] Fitorremediación (limpieza de la tierra con plantas)
- [ ] Pavimento permeable
- [ ] Captura y almacenamiento de agua
- [ ] Otro ____________________

18. ¿Qué tipo de actividad sugiere usted que es necesaria para ayudar a establecer las operaciones a largo plazo del parque y el mantenimiento del mismo? (Seleccione todas las que correspondan)
- [ ] Espacios comerciales
- [ ] Lugar para eventos
- [ ] Centro de innovación/talleres
- [ ] Área de uso habitacional/ multifamiliar
- [ ] Instalaciones para eventos
- [ ] Otros (especifique)______

19. ¿Qué tipo de uso crees que DEBE ser incluido en el parque?

____

20. ¿Qué tipo de uso crees que NO DEBE de ser incluido en este parque?

____

21. ¿Quién crees que tiene buenas ideas sobre el potencial futuro del parque que aún no ha estado involucrado en esto proceso?

____

POR FAVOR TOME EN CUENTA:
Se aceptarán encuestas completadas hasta **el 1 de marzo de 2018**

También puede encontrar la encuesta en línea en el sitio: **www.TaylorYardG2.com**

También puede enviar su encuesta por correo a: Lyndsay Naish
City of Los Angeles
1149 S. Broadway, 6th Floor
Mail Stop 538
Los Angeles, CA 90015

G2 TAYLOR YARD RIVER PARK PROJECT

Encuesta Comunitaria

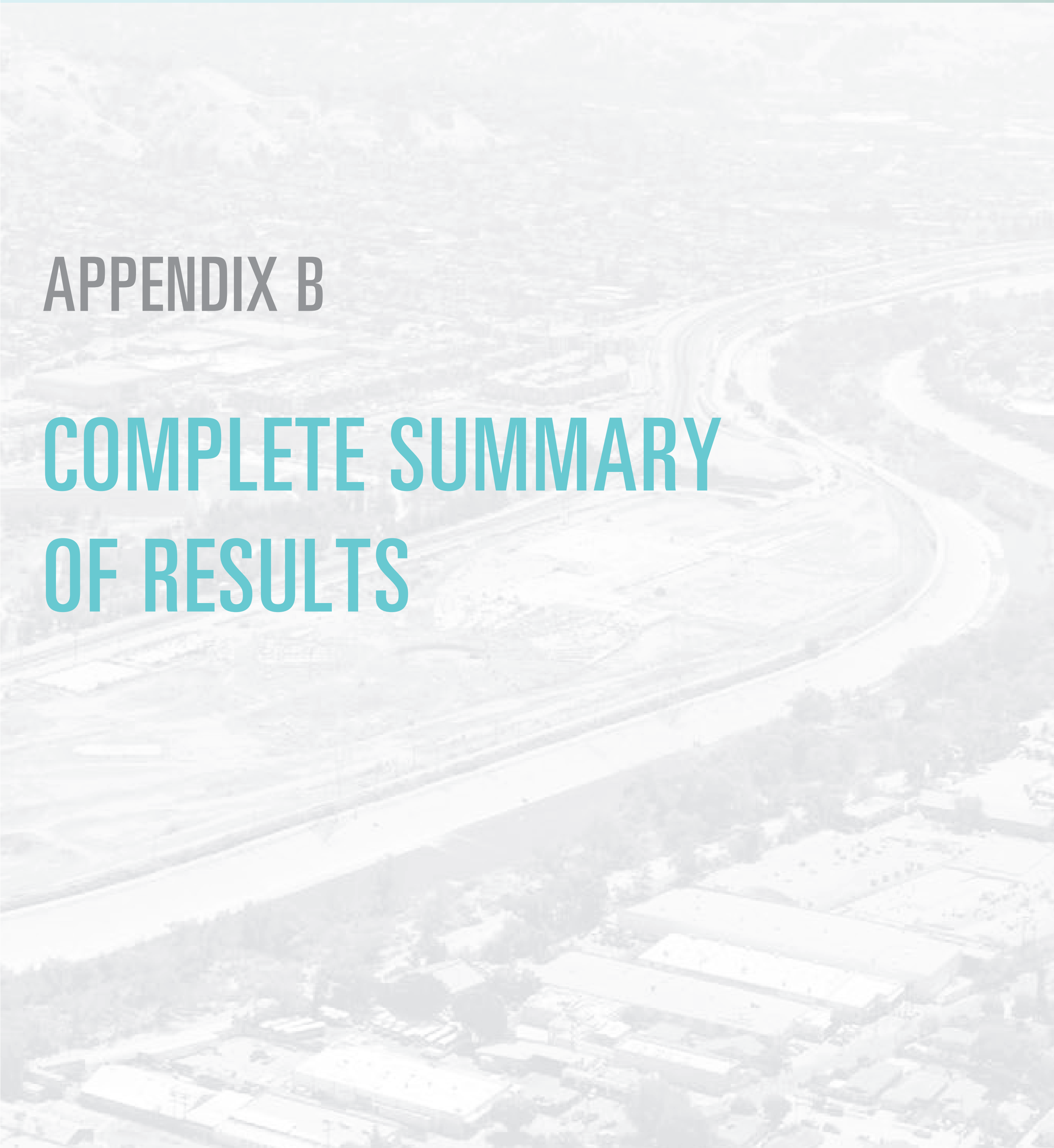
Comentarios:

¡Gracias por su aporte!

G2 TAYLOR YARD RIVER PARK PROJECT

APPENDIX B

COMPLETE SUMMARY OF RESULTS



Q1 Contact Information (Optional)

Answered: 822 Skipped: 499

ANSWER CHOICES	RESPONSES	
Name	97.57%	802
Company	0.00%	0
Address	0.00%	0
Address 2	0.00%	0
City/Town	0.00%	0
State/Province	0.00%	0
ZIP/Postal Code	0.00%	0
Country	0.00%	0
Email Address	87.47%	719
Phone Number	67.76%	557

Q2 Zip Code (Required)

Answered: 1,321 Skipped: 0

Q3

In general, which parks or public open spaces do you enjoy visiting most often now (list up to three)?

Answered: 1,242 Skipped: 79

RESPONSES (1,242) TEXT ANALYSIS TAGS (0)

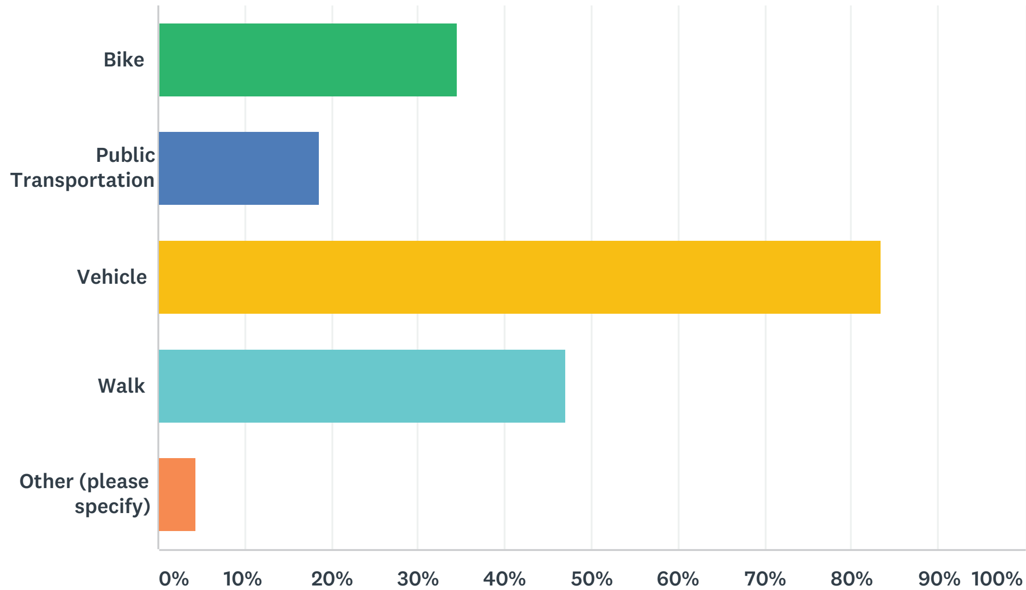
Cloud View List View

Showing top 10 words and phrases

Griffith Park	40.10%	498
Elysian Park	10.87%	135
Echo Park	9.82%	122
Rio de los Angeles	8.37%	104
Debs Park	5.23%	65
Santa Monica	4.67%	58
Historic Park	4.43%	55
Vista Hermosa	4.03%	50
River Bike Path	3.78%	47
Glassell Park	3.46%	43

Q4 How do you get there (please check all that apply)?

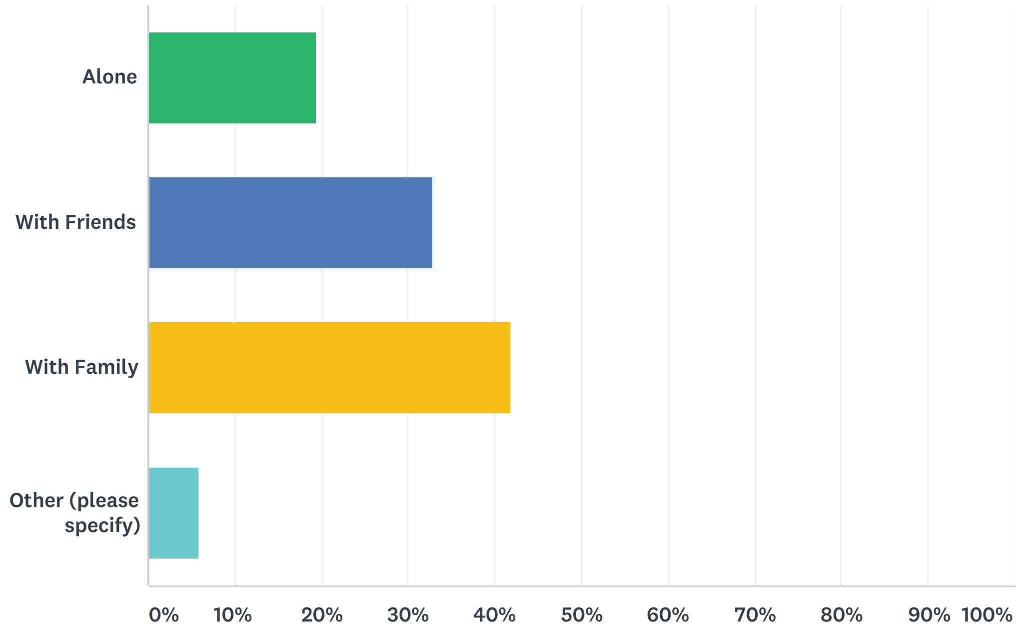
Answered: 1,290 Skipped: 31



ANSWER CHOICES	RESPONSES	
Bike	34.50%	445
Public Transportation	18.68%	241
Vehicle	83.49%	1,077
Walk	46.98%	606
Other (please specify)	4.34%	56
Total Respondents: 1,290		

Q5 Do you most often go:

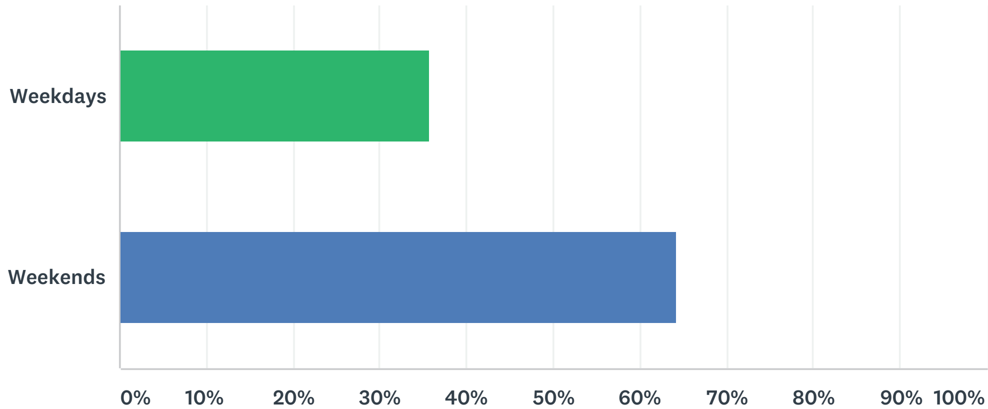
Answered: 1,292 Skipped: 29



ANSWER CHOICES	RESPONSES	
Alone	19.43%	251
With Friends	32.82%	424
With Family	41.80%	540
Other (please specify)	5.96%	77
TOTAL		1,292

Q6 When do you most often visit the parks?

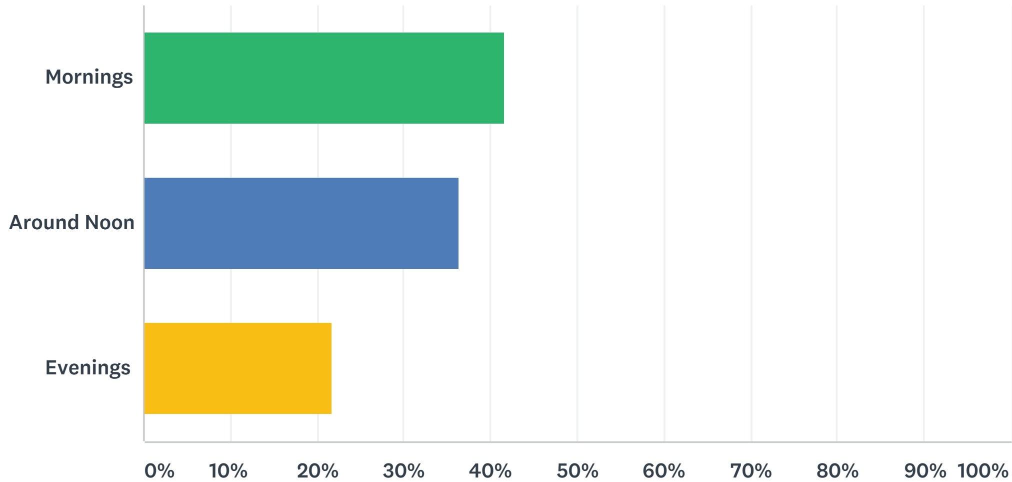
Answered: 1,283 Skipped: 38



ANSWER CHOICES	RESPONSES	
Weekdays	35.85%	460
Weekends	64.15%	823
TOTAL		1,283

Q7 What time of day do you most often visit parks?

Answered: 1,280 Skipped: 41



ANSWER CHOICES	RESPONSES	
Mornings	41.72%	534
Around Noon	36.48%	467
Evenings	21.80%	279
TOTAL		1,280

Q8

Do you have a favorite park in Los Angeles (if yes, please specify)?

Answered: 1,000 Skipped: 321

RESPONSES (1,000) TEXT ANALYSIS TAGS (0)

Cloud View List View

Showing top 10 words and phrases

Griffith Park	26.80%	268
Echo Park	5.30%	53
Vista Hermosa	4.30%	43
Elysian Park	3.80%	38
Rio de los Angeles	2.70%	27
Canyon	1.90%	19
River	1.80%	18
Historic Park	1.70%	17
Cypress Park	1.30%	13
Debs Park	1.20%	12

Q9

Do you have a favorite park in the Country or in the World (if yes, please specify)?

Answered: 886   Skipped: 435

RESPONSES (886)   TEXT ANALYSIS   TAGS (0)

Cloud View   List View

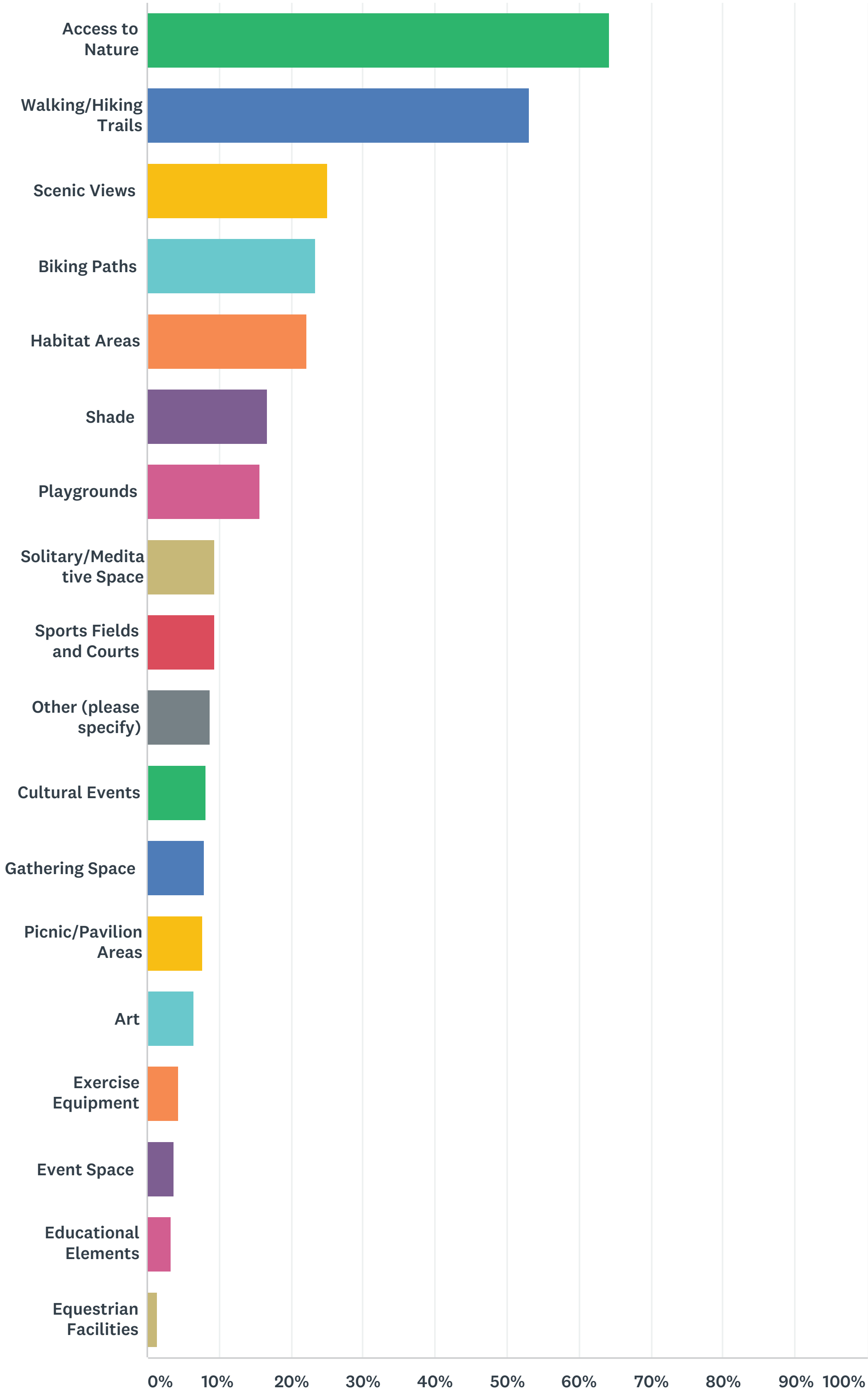
Showing top 10 words and phrases

Central Park	13.54%	120
National Park	9.37%	83
Yosemite	8.80%	78
Golden Gate Park	4.18%	37
High Line	3.05%	27
Gardens	2.93%	26
New York	2.82%	25
Griffith Park	2.14%	19
Paris	2.14%	19
London	2.03%	18

Q10 Which park features do you enjoy and use the most (please select your top three)?

Answered: 1,321 Skipped: 0

Taylor Yard G2 River Park Project Community Survey

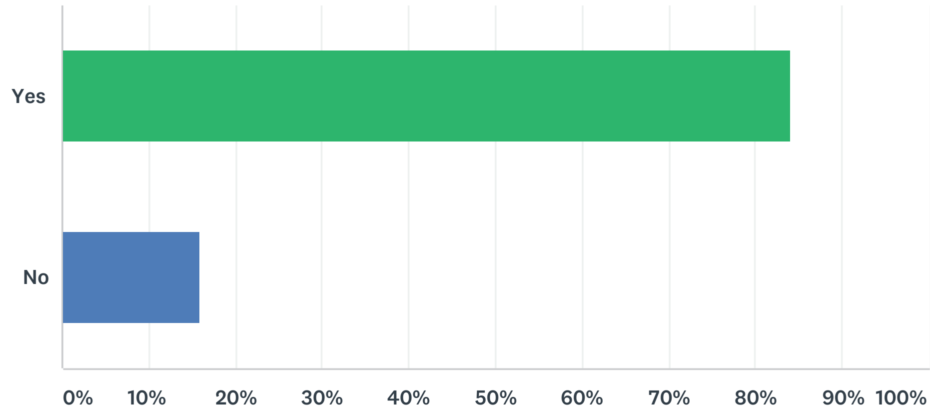


ANSWER CHOICES	RESPONSES	
Access to Nature	64.27%	849

Walking/Hiking Trails	53.14%	702
Scenic Views	25.13%	332
Biking Paths	23.39%	309
Habitat Areas	22.10%	292
Shade	16.73%	221
Playgrounds	15.67%	207
Solitary/Meditative Space	9.39%	124
Sports Fields and Courts	9.31%	123
Other (please specify)	8.71%	115
Cultural Events	8.18%	108
Gathering Space	7.87%	104
Picnic/Pavilion Areas	7.80%	103
Art	6.43%	85
Exercise Equipment	4.47%	59
Event Space	3.86%	51
Educational Elements	3.26%	43
Equestrian Facilities	1.51%	20
Total Respondents: 1,321		

Q11 Have you visited the Los Angeles River?

Answered: 1,288 Skipped: 33



ANSWER CHOICES	RESPONSES	
Yes	84.01%	1,082
No	15.99%	206
TOTAL		1,288

Q12

If yes to #11, where do you access the River?

Answered: 1,029   Skipped: 292

RESPONSES (1,029)   TEXT ANALYSIS   TAGS (0)

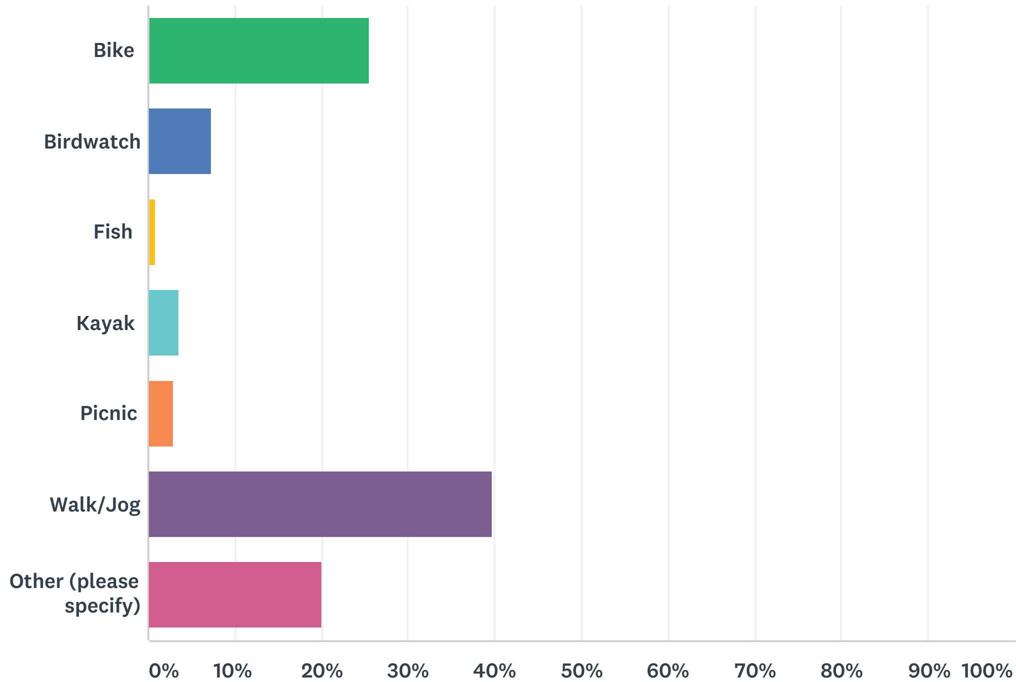
Cloud View   List View

Showing top 10 words and phrases

Park	18.46%	190
Frog Town	13.61%	140
Fletcher	9.52%	98
Bike Path	7.29%	75
Feliz	6.61%	68
Bow Tie	6.41%	66
Atwater Village	4.28%	44
Glendale Narrows	3.60%	37
River	3.60%	37
Elysian Valley	3.40%	35

Q13 What do you do at the River?

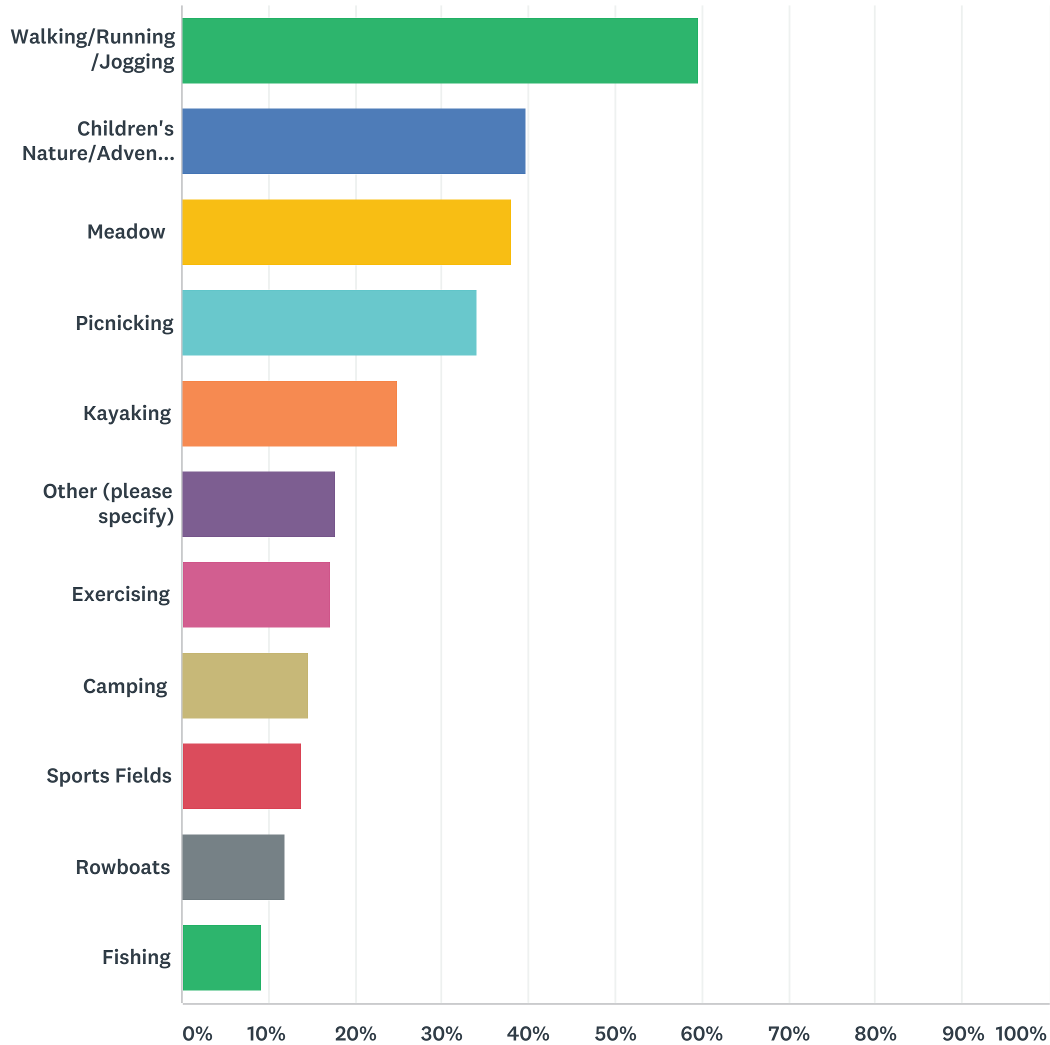
Answered: 1,125 Skipped: 196



ANSWER CHOICES	RESPONSES	
Bike	25.51%	287
Birdwatch	7.38%	83
Fish	0.80%	9
Kayak	3.56%	40
Picnic	3.02%	34
Walk/Jog	39.64%	446
Other (please specify)	20.09%	226
TOTAL		1,125

Q14 Activities/Recreation Elements

Answered: 1,250 Skipped: 71

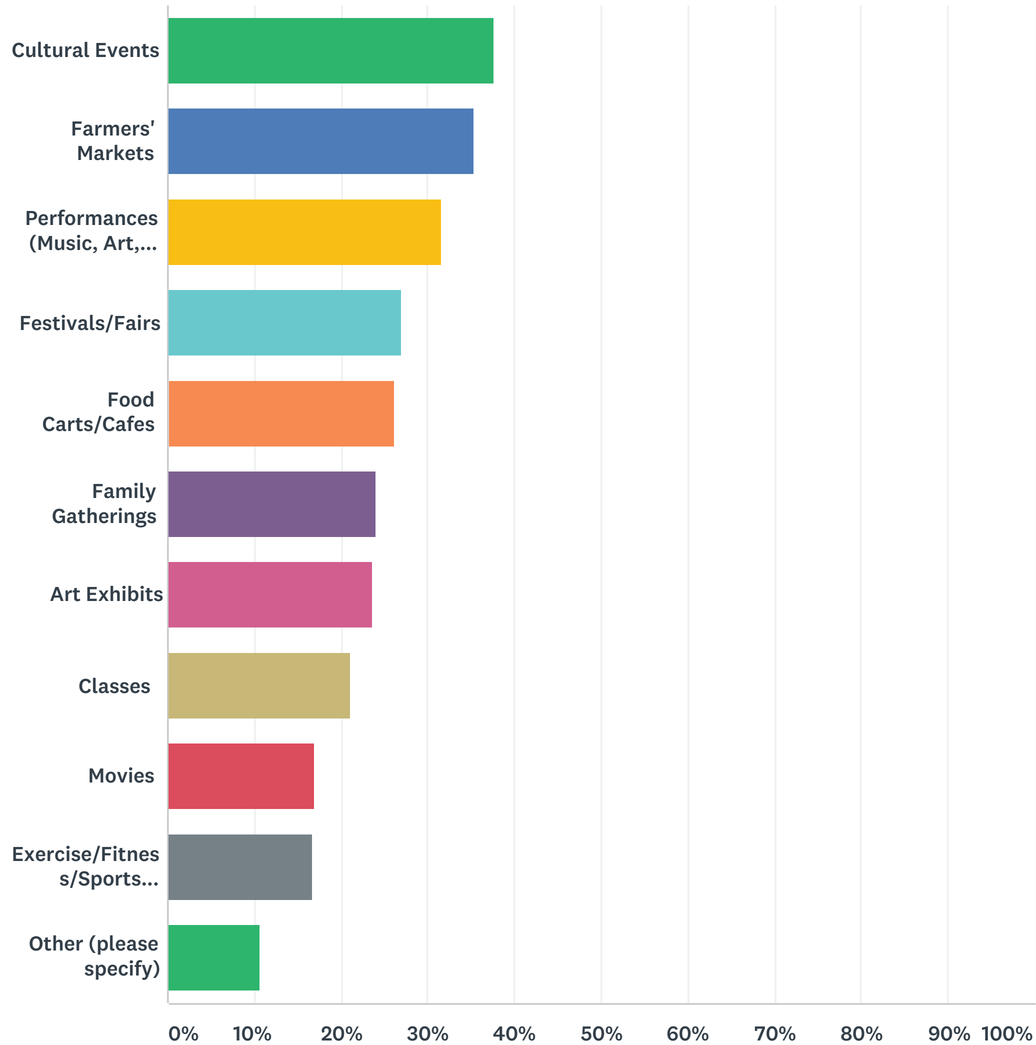


ANSWER CHOICES	RESPONSES	
Walking/Running/Jogging	59.68%	746
Children's Nature/Adventure Play	39.84%	498
Meadow	38.16%	477
Picnicking	34.00%	425
Kayaking	24.80%	310
Other (please specify)	17.84%	223
Exercising	17.20%	215
Camping	14.72%	184
Sports Fields	13.84%	173
Rowboats	11.92%	149

Fishing	9.28%	116
Total Respondents: 1,250		

Q15 Social/Events/Event Spaces

Answered: 1,250 Skipped: 71

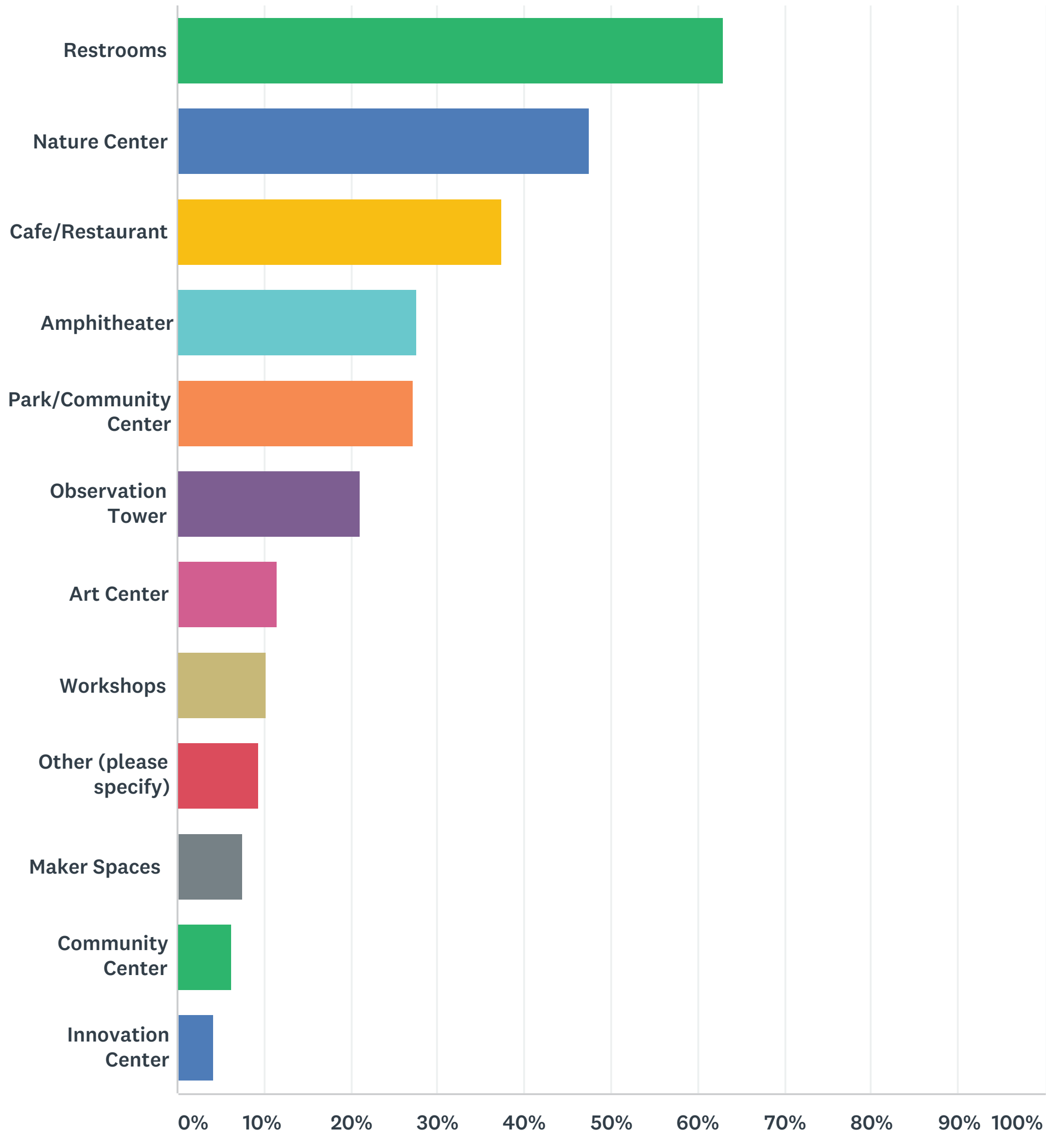


ANSWER CHOICES	RESPONSES	
Cultural Events	37.76%	472
Farmers' Markets	35.44%	443
Performances (Music, Art, Dance)	31.60%	395
Festivals/Fairs	26.96%	337
Food Carts/Cafes	26.08%	326
Family Gatherings	24.00%	300
Art Exhibits	23.68%	296
Classes	21.12%	264
Movies	17.04%	213
Exercise/Fitness/Sports Competions	16.80%	210

Other (please specify)	10.64%	133
Total Respondents: 1,250		

Q16 Structures

Answered: 1,250 Skipped: 71

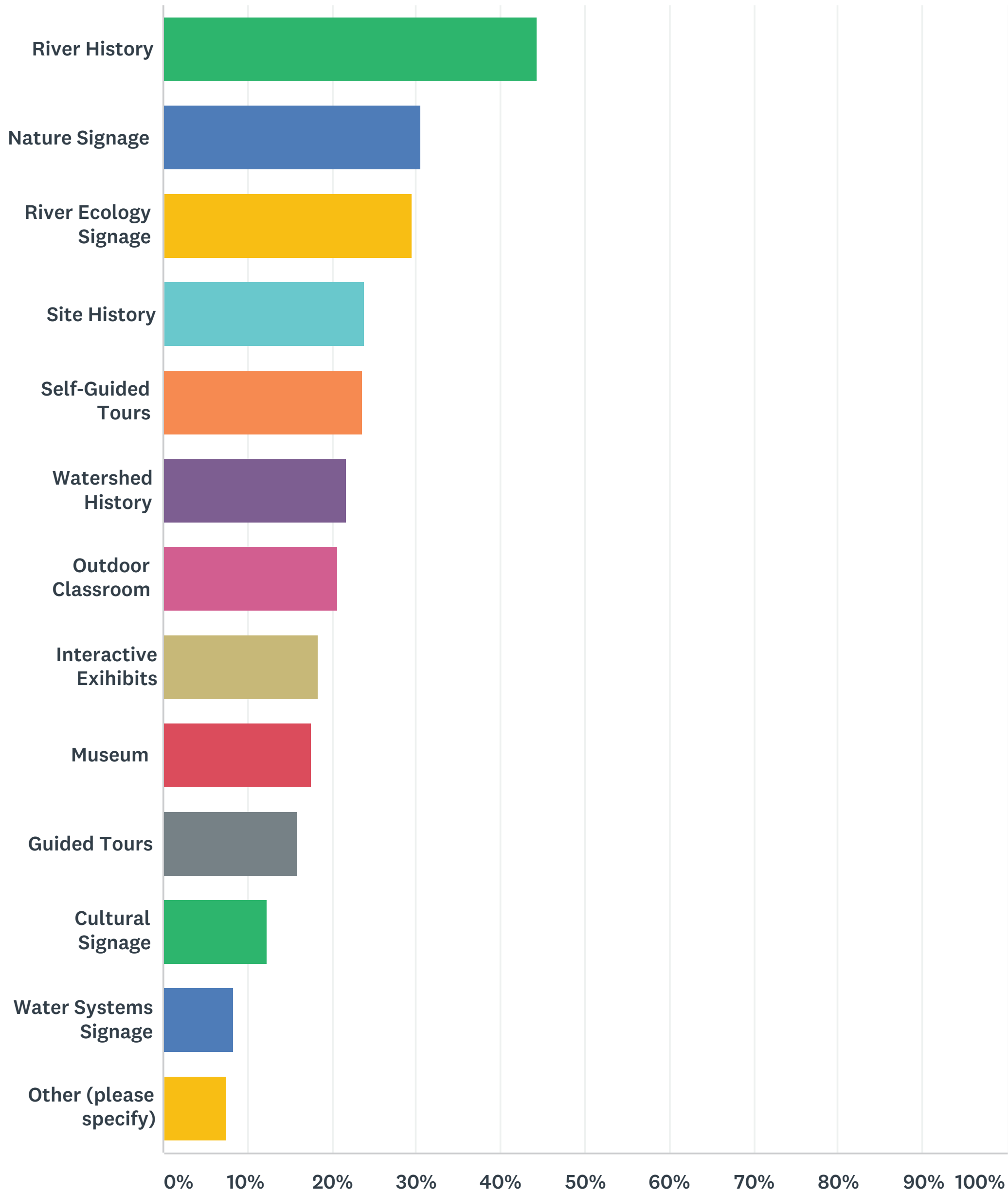


ANSWER CHOICES	RESPONSES	
Restrooms	62.96%	787
Nature Center	47.52%	594
Cafe/Restaurant	37.44%	468
Amphitheater	27.52%	344
Park/Community Center	27.28%	341
Observation Tower	21.04%	263
Art Center	11.44%	143
Workshops	10.24%	128

Other (please specify)	9.36%	117
Maker Spaces	7.52%	94
Community Center	6.32%	79
Innovation Center	4.16%	52
Total Respondents: 1,250		

Q17 Educational Elements

Answered: 1,250 Skipped: 71

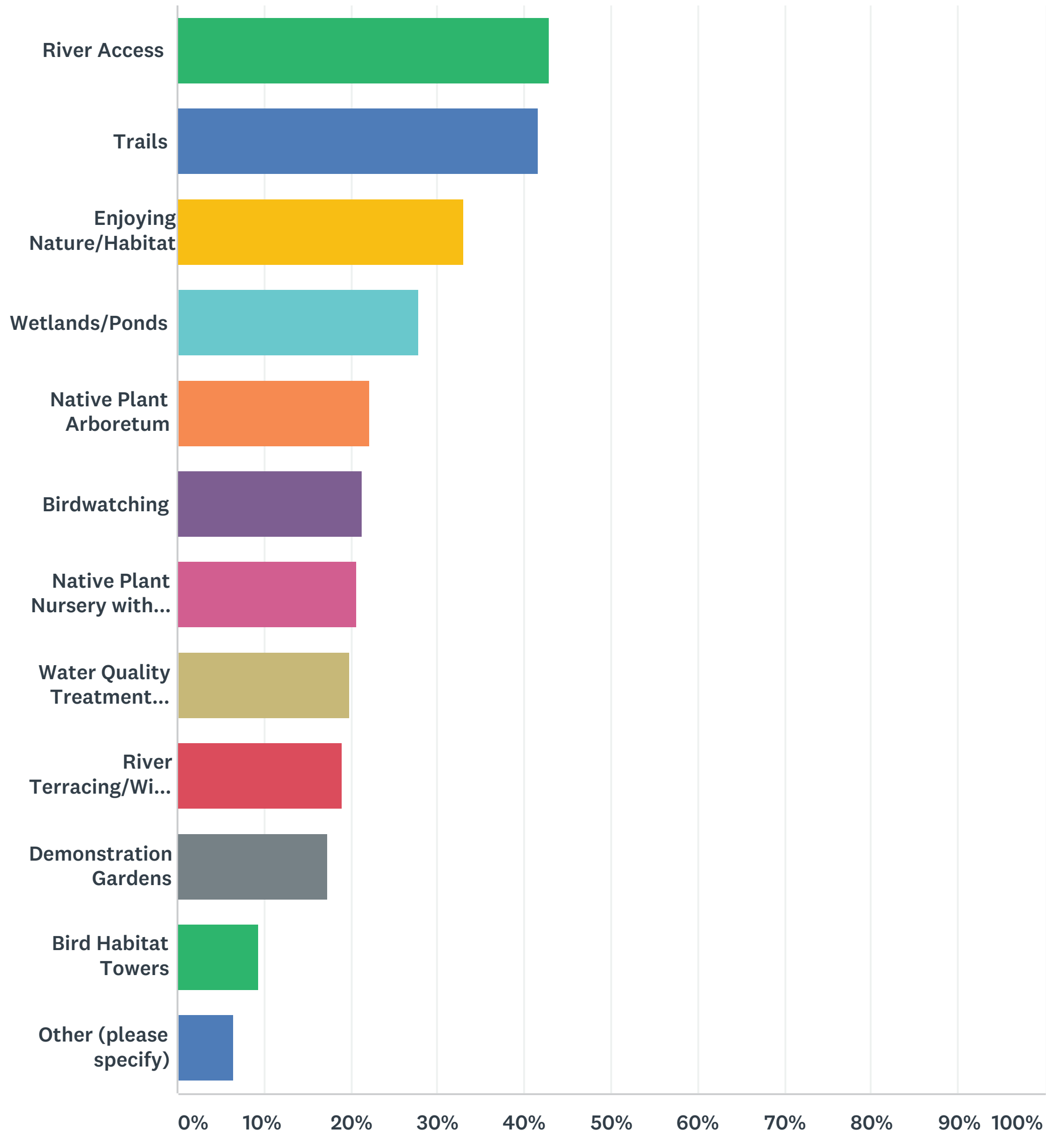


ANSWER CHOICES	RESPONSES	
River History	44.32%	554
Nature Signage	30.48%	381
River Ecology Signage	29.52%	369
Site History	23.76%	297
Self-Guided Tours	23.68%	296
Watershed History	21.76%	272

Outdoor Classroom	20.72%	259
Interactive Exihibits	18.32%	229
Museum	17.60%	220
Guided Tours	15.92%	199
Cultural Signage	12.40%	155
Water Systems Signage	8.40%	105
Other (please specify)	7.60%	95
Total Respondents: 1,250		

Q18 Natural Space/Wildlife Habitat

Answered: 1,250 Skipped: 71

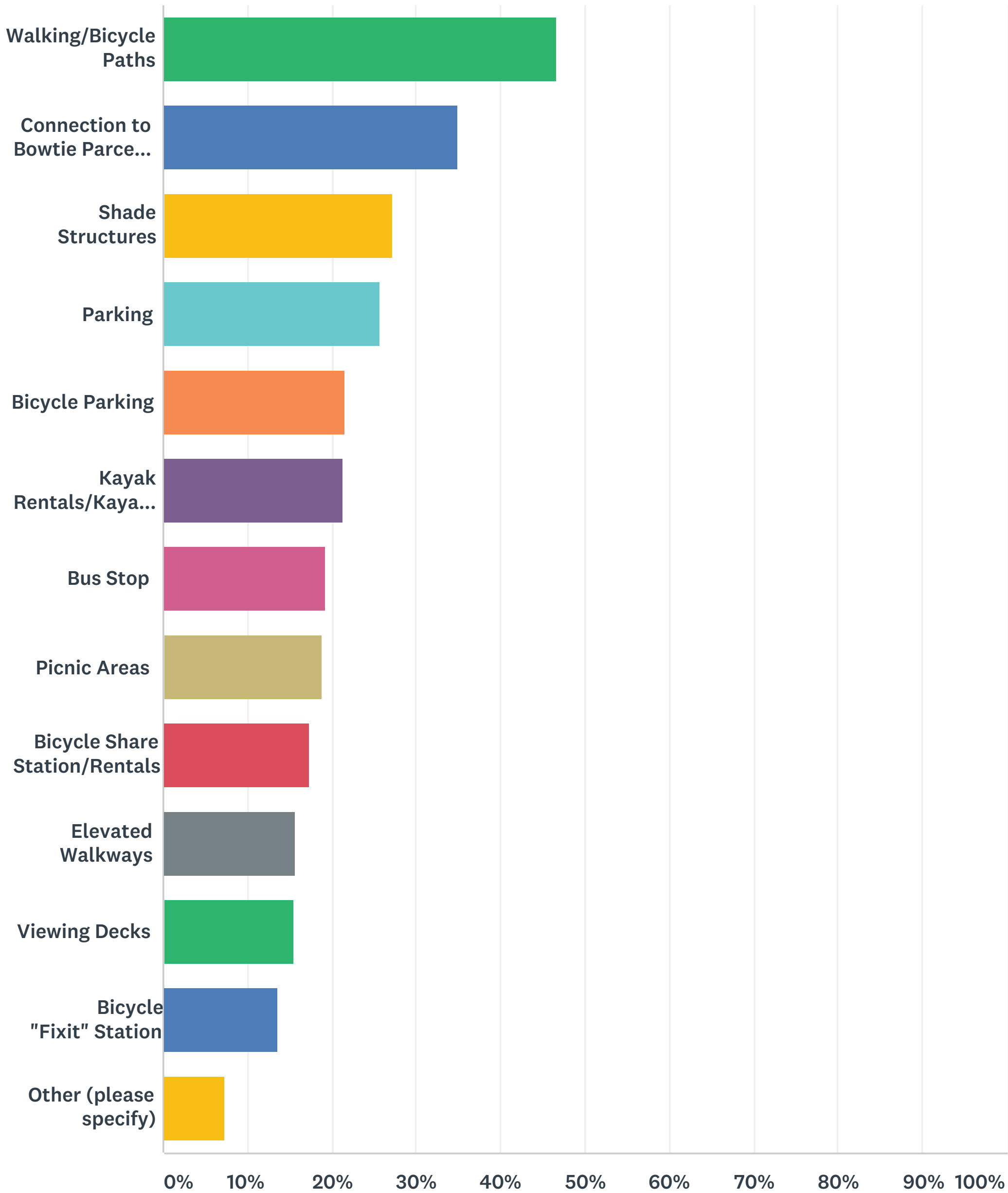


ANSWER CHOICES	RESPONSES	
River Access	42.88%	536
Trails	41.60%	520
Enjoying Nature/Habitat	32.96%	412
Wetlands/Ponds	27.92%	349
Native Plant Arboretum	22.24%	278
Birdwatching	21.36%	267
Native Plant Nursery with Seed Bank	20.80%	260
Water Quality Treatment Streams for Rainwater	19.84%	248

River Terracing/Widening	19.12%	239
Demonstration Gardens	17.28%	216
Bird Habitat Towers	9.44%	118
Other (please specify)	6.56%	82
Total Respondents: 1,250		

Q19 Mobility/Access/Comfort

Answered: 1,250 Skipped: 71

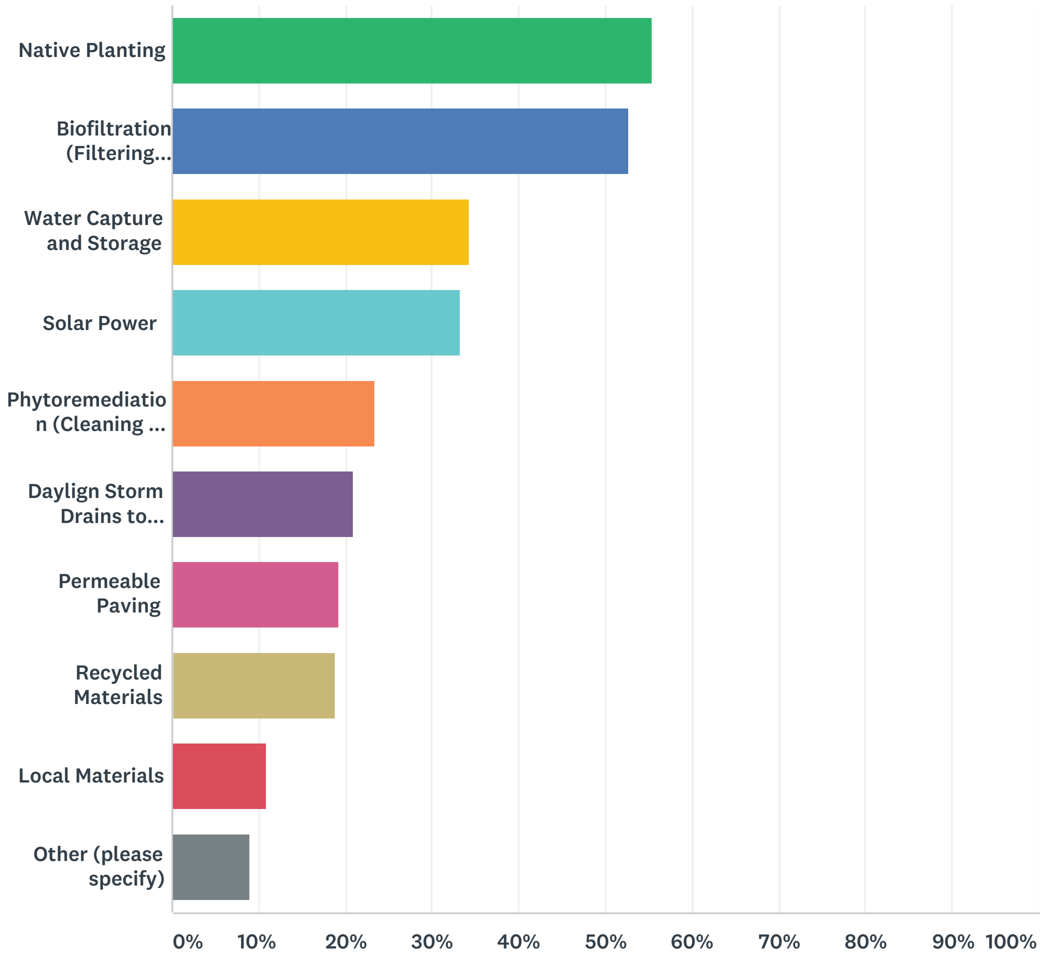


ANSWER CHOICES	RESPONSES	
Walking/Bicycle Paths	46.56%	582
Connection to Bowtie Parcel to the North and Rio de Los Angeles State Park to the East	34.96%	437
Shade Structures	27.28%	341
Parking	25.68%	321
Bicycle Parking	21.60%	270
Kayak Rentals/Kayak Launch	21.28%	266

Bus Stop	19.28%	241
Picnic Areas	18.88%	236
Bicycle Share Station/Rentals	17.28%	216
Elevated Walkways	15.68%	196
Viewing Decks	15.44%	193
Bicycle "Fixit" Station	13.68%	171
Other (please specify)	7.36%	92
Total Respondents: 1,250		

Q20 Sustainability Elements

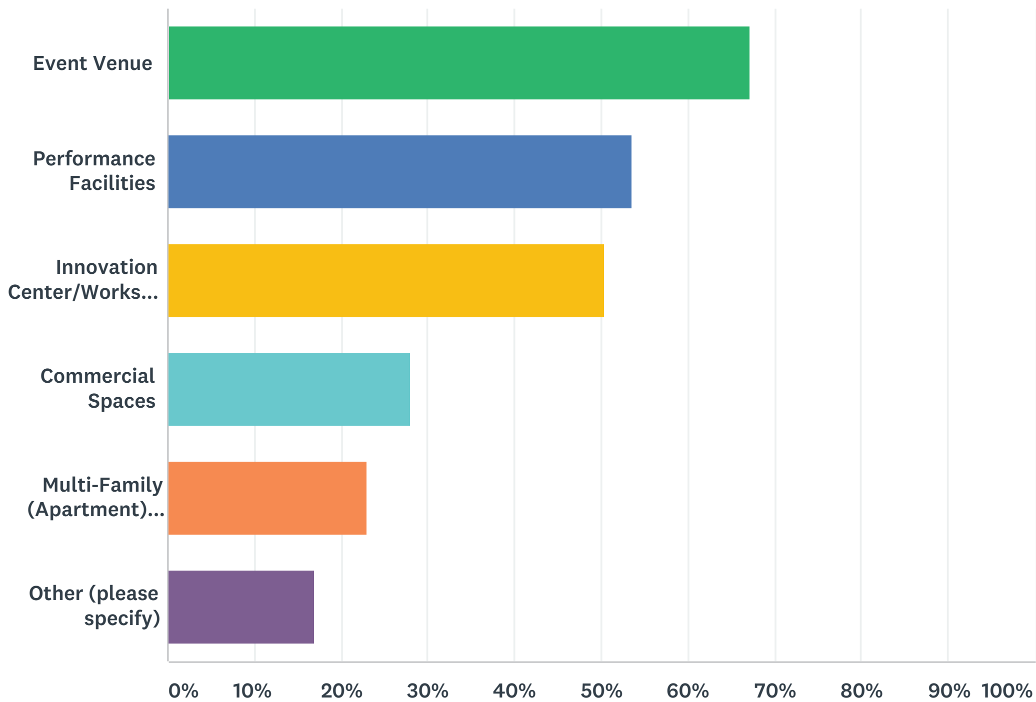
Answered: 1,250 Skipped: 71



ANSWER CHOICES	RESPONSES	
Native Planting	55.36%	692
Biofiltration (Filtering Pollution Through Nature)	52.80%	660
Water Capture and Storage	34.32%	429
Solar Power	33.20%	415
Phytoremediation (Cleaning the Soil with Plants)	23.52%	294
Daylign Storm Drains to Create Arroyo (Wash) Tributaries	20.88%	261
Permeable Paving	19.28%	241
Recycled Materials	18.80%	235
Local Materials	10.88%	136
Other (please specify)	8.96%	112
Total Respondents: 1,250		

Q21 For the Taylor Yard G2 River Park, what kind of revenue generating site uses would you support to sustain long-term operations and maintenance (please select all that apply)?

Answered: 1,185   Skipped: 136



ANSWER CHOICES	RESPONSES	
Event Venue	67.09%	795
Performance Facilities	53.50%	634
Innovation Center/Workshops	50.46%	598
Commercial Spaces	28.02%	332
Multi-Family (Apartment) Housing	23.04%	273
Other (please specify)	16.96%	201
Total Respondents: 1,185		

Q22

What site use do you think MUST be included in the future park?

Answered: 973   Skipped: 348

RESPONSES (973)   TEXT ANALYSIS   TAGS (0)

Cloud View | List View

Showing top 10 words and phrases

Nature	10.59%	103
Park	8.84%	86
Trails	7.30%	71
Space	7.19%	70
River Access	6.37%	62
Habitat	5.45%	53
Water	4.21%	41
Native Plants	3.49%	34
Restrooms	3.49%	34
Bike Path	2.77%	27

Q23

What site use do you think MUST NOT be included in the future park?

Answered: 865   Skipped: 456

RESPONSES (865)   TEXT ANALYSIS   TAGS (0)

Cloud View   List View

Showing top 10 words and phrases

Word	Percent	Count
Housing	19.08%	165
Commercial	18.15%	157
Park	6.94%	60
Fields	6.82%	59
Apartments	4.28%	37
Events	2.77%	24
Smoking	2.66%	23
Homeless	2.54%	22
Development	2.31%	20
River	1.73%	15

Q24

Who do you think has great ideas about the park's future potential that has not yet been involved in the process?

Answered: 598 Skipped: 723

RESPONSES (598) TEXT ANALYSIS TAGS (0)

Cloud View List View

Showing top 10 words and phrases

Park	8.03%	48
School	7.53%	45
Community	6.69%	40
Local	6.19%	37
River	4.01%	24
Involved	3.01%	18
Kids	3.01%	18
Angeles	2.84%	17
Children	2.34%	14
Ideas	2.34%	14

Q25

Any additional comments?

Answered: 449   Skipped: 872

RESPONSES (449)   TEXT ANALYSIS   TAGS (0)

Cloud View   List View

Showing top 10 words and phrases

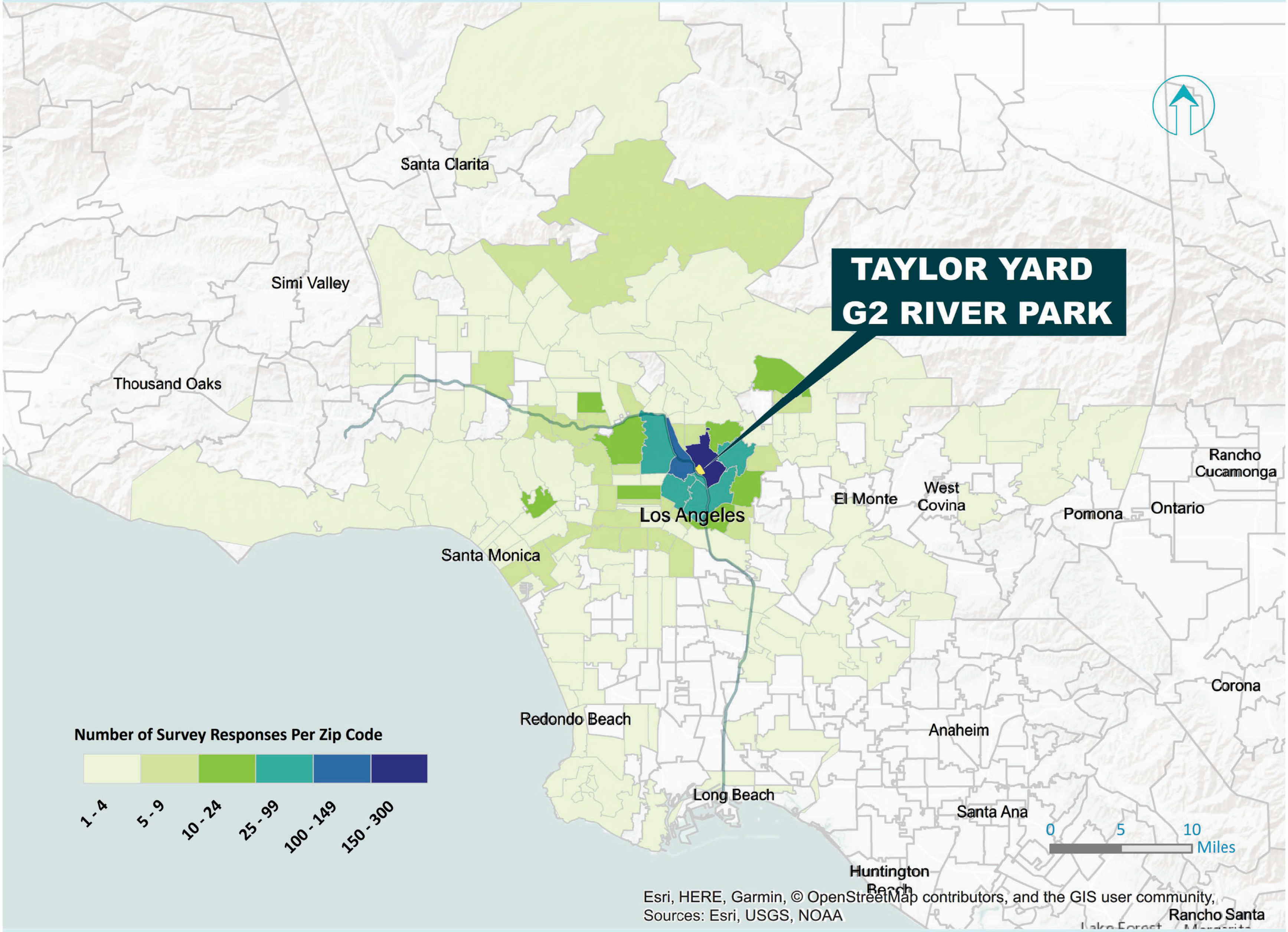
Word/Phrase	Percent	Count
Park	31.63%	142
River	20.27%	91
Space	13.81%	62
Nature	12.69%	57
Community	8.69%	39
Fields	5.35%	24
Native Plants	2.00%	9
Survey	2.00%	9
Good Luck	1.56%	7
Priority	1.56%	7

G2 TAYLOR YARD RIVER PARK PROJECT

APPENDIX C

SURVEY RESPONDENT MAP & ZIP CODES

G2 TAYLOR YARD RIVER PARK



Survey Responses per Zip Code

Zip	Responses
90065	288
90039	135
90042	70
90031	57
90026	51
90027	51
90012	30
90041	23
90024	19
90032	18

Zip	Responses
90068	13
90013	11
91001	11
90004	10
90033	10
91601	10
91604	9
90014	8
90019	8
90020	8

Zip	Responses
91030	8
91104	8
91205	8
90007	7
90034	7
90291	7
91423	7
91602	7
90017	6
90028	6

Zip	Responses
91105	4
91202	4
91206	4
91311	4
91403	4
91505	4
91607	4
91755	4
90005	3
90015	3

Zip	Responses
90035	3
90069	3
90230	3
90245	3
90250	3
90254	3
90278	3
90292	3
90302	3
90405	3

Zip	Responses
90731	3
91020	3
91101	3
91107	3
91201	3
91307	3
91316	3
91331	3
91344	3
91401	3

Zip	Responses
90814	2
91006	2
91106	2
91203	2
91208	2
91303	2
91325	2
91343	2
91352	2
91701	2

Zip	Responses
91702	2
91745	2
91775	2
90010	1
90025	1
90043	1
90044	1
90064	1
90067	1
90077	1

Zip	Responses
90086	1
90089	1
90095	1
90201	1
90212	1
90242	1
90265	1
90272	1
90274	1
90277	1

Zip	Responses
90808	1
90813	1
91011	1
91040	1
91042	1
91108	1
91207	1
91210	1
91214	1
91304	1

Zip	Responses
91324	1
91340	1
91345	1
91350	1
91356	1
91362	1
91390	1
91502	1
91504	1
91711	1

Zip	Responses
91733	1
91740	1
91741	1
91750	1
91764	1
91780	1
91786	1
91791	1
92603	1
92627	1

Zip	Responses
90046	6
90071	6
91406	6
90011	5
90016	5
90018	5
90036	5
90057	5
90063	5
90066	5

Zip	Responses
91204	5
91342	5
91506	5
90021	4
90029	4
90045	4
90048	4
90241	4
90404	4
91016	4

Zip	Responses
91402	3
91605	3
91606	3
91773	3
90003	2
90006	2
90008	2
90022	2
90023	2
90037	2

Zip	Responses
90038	2
90047	2
90049	2
90210	2
90232	2
90266	2
90275	2
90280	2
90403	2
90406	2

Zip	Responses
90281	1
90290	1
90401	1
90402	1
90409	1
90470	1
90501	1
90502	1
90505	1
90601	1

Zip	Responses
90603	1
90631	1
90638	1
90640	1
90650	1
90670	1
90720	1
90723	1
90740	1
90807	1

Zip	Responses
92651	1
92660	1
92780	1
92782	1
92805	1
92832	1
92833	1
94610	1
20065	1

APPENDIX D

DESIGN CONSIDERATIONS

MEMO

TO: The City of Los Angeles, Bureau of Engineering (BOE)

FROM: Jan Dyer, Studio MLA

SUBJECT: Taylor Yard G2 River Park Design Considerations

DATE: August 31, 2018

Meaningful, effective community engagement is essential to any design process. As a design team, we highly benefitted from the outreach process and community data gathered. Analysis of this data has led to significant outcomes that will serve as the basis for the design considerations for three schemes for the G2 Taylor Yard River Park. Important takeaways include a strong support for an environmental learning facility and cultural center providing access and connectivity via pedestrian and bicycle trails and paths. Ample areas for natural elements supporting native habitat and connections to nature, vistas and lookout points taking advantage of the site's setting along the river with 360 views to the surrounding hills and mountains also ranked high. A large outdoor gathering/performance space, food amenities ranging from food carts to cafes and farmer's markets, access to the river via kayaking while providing outdoor classrooms that support education were selected as key outdoor activities.

More specifically the following considerations are direct outputs from the community engagement process and will guide design decisions regarding park framework, program and amenities:

Park Enjoyability

Park features that are desired most by the community are access to nature, the incorporation of pedestrian and bicycle trails, lookouts, and areas for habitat. *Trees will* provide comfort and shade as well as ecological benefits

Activities and Recreation Elements

Essential recreational elements that promote health and stimulate informal play and experiential learning should be incorporated into the G2 Taylor Yard River park including areas for running, walking, nature play, meadows, picnicking and kayaking.

Event Spaces

There was strong feedback from the community to create spaces for social and cultural events. These include creating space for a farmer's market, a performance venue, festival areas, food carts, a café, art exhibitions and smaller areas for family gatherings and classrooms.

Structures

The community prefer structures that house the following amenities: restrooms, a nature center, a restaurant and/or café, an amphitheater, a community center and an observation tower. These could be housed in different configurations, in one or multiple buildings.

Educational Elements

The feedback from the community reflected strong support for environmental learning demonstrating the principles of natural cycles and processes. Educational elements including signage and other way-finding mechanisms with themes relating to the Los Angeles River and site history, nature, the Los Angeles River ecology, and the Los Angeles River Watershed will increase the community's connection with the natural environment. In addition, the site should provide spaces for outdoor classrooms and features to support self-guided tours.

Nature, Wildlife & Habitat

The site should preserve and enhance the natural resources associated with a River-adjacent Park including a broad range of environmental programming and amenities including habitat areas, wetlands, a native plant nursery and arboretum supported by access points to the Los Angeles River and trails that integrate nature, wildlife and habitat.

Mobility & Access

The team will work to create formal and informal multi-use, shared trails and paths for pedestrians and cyclists along the east side of the Los Angeles River and within the site to increase access to the river and recreational opportunities and link to the neighboring Bowtie Parcel and surrounding neighborhoods on both sides of the river. Additionally, the site should provide vehicular and bicycle parking.

Sustainable Elements

The community was in favor of including native planting, phytoremediation techniques, solar power, as well as several methods for capturing, storing and filtrating water including: biofiltration and the daylighting of site storm drains. By integrating a sustainable approach, the park should promote a more resilient future for Los Angeles highlighting sustainable building and landscape practice.

JAN DYER, PLA, ASLA
Principal
Director of Infrastructure Division

STUDIO-**MLA**
251 South Mission Road Los Angeles, California 90033

G2 TAYLOR YARD RIVER PARK PROJECT

APPENDIX E

COMPLETE SUMMARY OF RESULTS (3.5-MILE RADIUS)

Q Gont acl aGt rnm ca(nt Gp l a(nt c)A

s t we dnd: SG46C k N(l l d: SC%1%

ANSWER CHOICES	RESPONSES	
y ci d	97.5%8	092
o ni l ct /	4.448	4
s : : ndww	4.448	4
s : : ndwwC%	4.448	4
o (a TPne t	4.448	4
k acadTv mZ(t l d	4.448	4
ufv Tv nwac)G n: d	4.448	4
o nEt an'	4.448	4
h i c()Gs : : ndww	15.728	021
v bnt dGy Ei 3dm	74.648	265

Q%Cu(l Co n: dCCRdqE(nd: A

s t we dnd: S717C kN(l l d: S4

In general, which parks or public open spaces do you enjoy visiting most often now (list up to three)?

Answered: 754   Skipped: 33

RESPONSES (754)   TEXT ANALYSIS   TAGS (0)

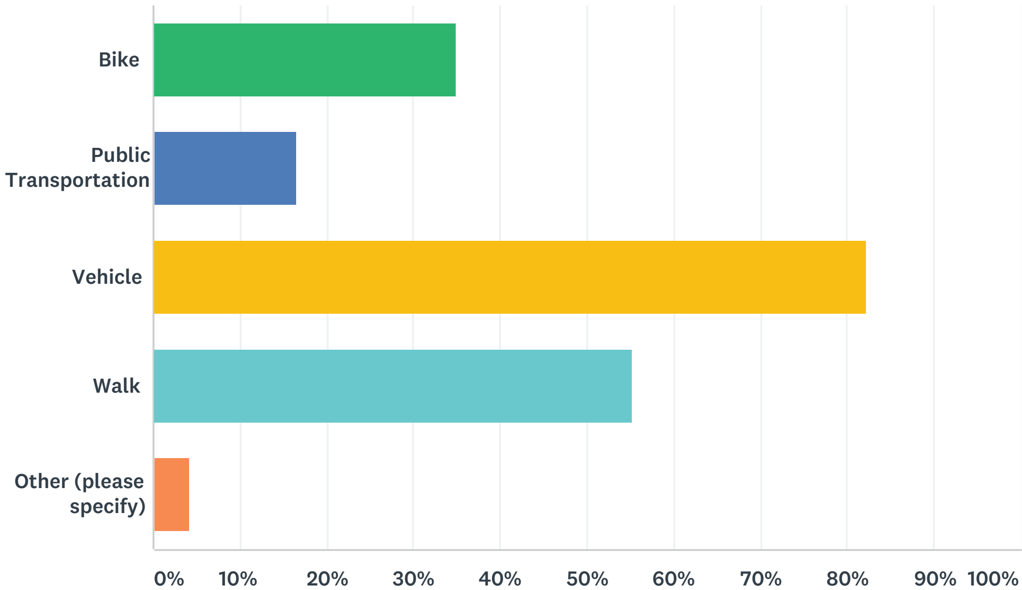
Cloud View   List View

Showing top 10 words and phrases

Elysian Park	15.65%	118
Echo Park	13.00%	98
Rio de los Angeles	11.67%	88
Debs Park	7.56%	57
Glassell Park	5.44%	41
Silver Lake Reservoir	5.17%	39
Historic Park	5.17%	39
Marsh Park	5.04%	38
Canyon	4.91%	37
Vista Hermosa	4.77%	36

Q0CHne CnC/nEC, daCabdmdCD)dcwdCbdl NCc))Cabcacl l)/ A?

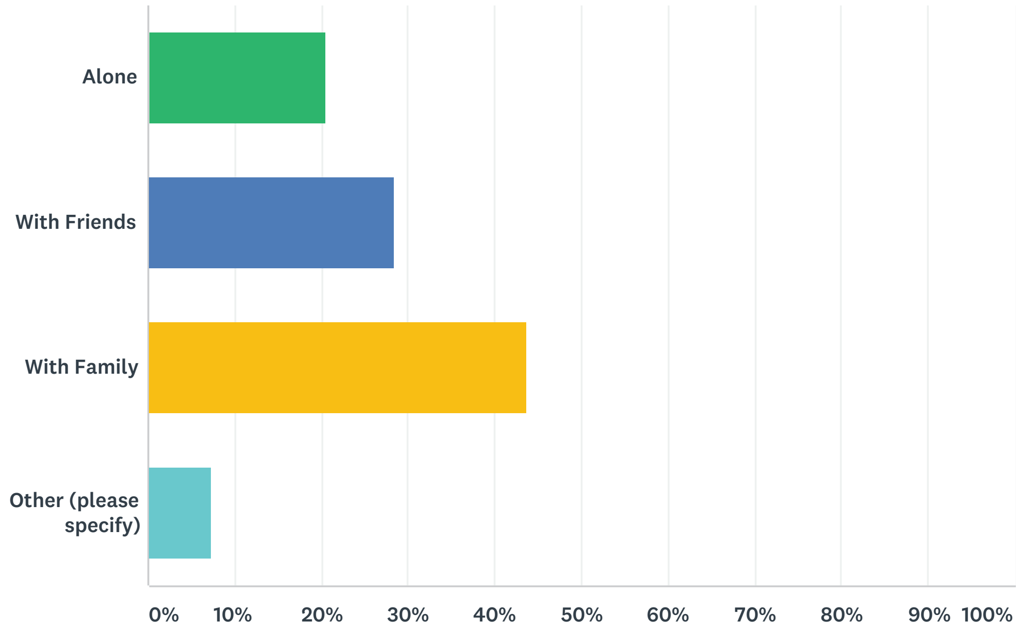
st wedmd: S07 C kN(l l d: SC5



ANSWER CHOICES	RESPONSES	
B(Nd	26.4%8	%74
v E3)(l CPmot wl nmaca(nt	5.078	%7
Vdb(l)d	1%%28	520
Wc)N	66.%68	0%5
p abdmCD)dcwdCwl dl (r/ A	0. 68	2%
Pnac)CRdwl nt : dt awS07		C

Q6ŒnCnEC nwaCradt ÇnS

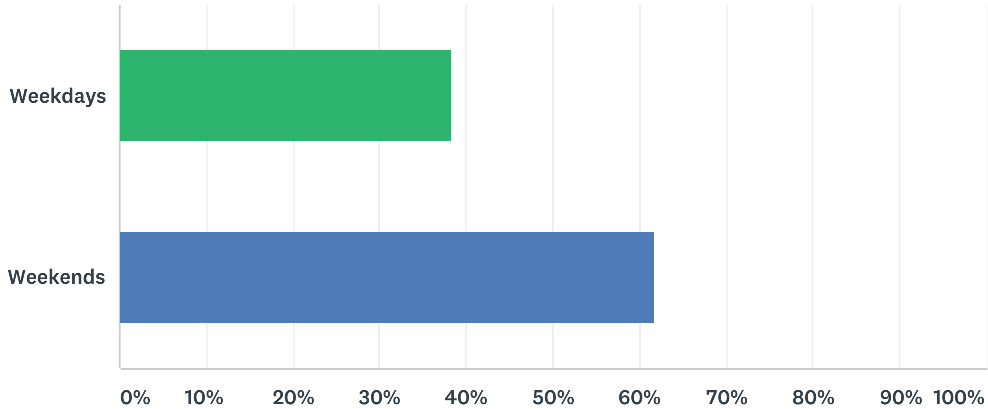
s t we dnd: S770C k N(l I d: SC2



ANSWER CHOICES	RESPONSES	
s)nt d	%4.608	69
W(abCFn(dt : w	%1.0%8	%%4
W(abCFci ()/	02.148	229
p abdnCD)dcwdCWl dl (r/ A	7.%08	65
Pp Ps L		770

Q50 Wbdt C nC nEC nwaCradt C(w(aCbdC cmNw?

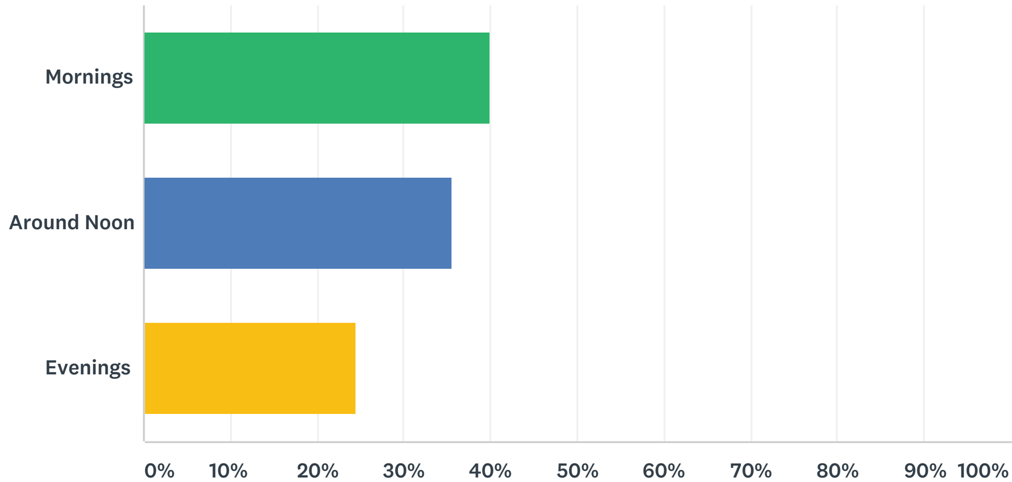
stwedmd: S750C kN(Il d: S%2



ANSWER CHOICES	RESPONSES	
WddN c/ w	21.%8	%9%
WddNdt : w	5 .718	07%
Pp Ps L		750

Q7OWbcaGi dOnrC c/ CnCnEC nwaOradt CZ(waC cmNw?

s t we dmd: S755C k N(l l d: S%



ANSWER CHOICES	RESPONSES	
Mnrh(t , w	29.968	245
s mEt : Q nnt	26.6 8	%7%
h Zdt (t , w	%0.608	11
Pp Ps L		755

Do you have a favorite park in Los Angeles (if yes, please specify)?

Answered: 631   Skipped: 156

RESPONSES (631)   **TEXT ANALYSIS**   TAGS (0)

Cloud View | **List View**

Showing top 10 words and phrases

Griffith Park	26.78%	169
Echo Park	6.81%	43
Vista Hermosa	5.07%	32
Elysian Park	4.28%	27
Rio de los Angeles	3.65%	23
River	2.22%	14
Cypress Park	2.06%	13
Historic Park	1.90%	12
Debs Park	1.74%	11
Trails	1.43%	9

Do you have a favorite park in the Country or in the World (if yes, please specify)?

Answered: 536 Skipped: 251

RESPONSES (536) TEXT ANALYSIS TAGS (0)

Cloud View List View

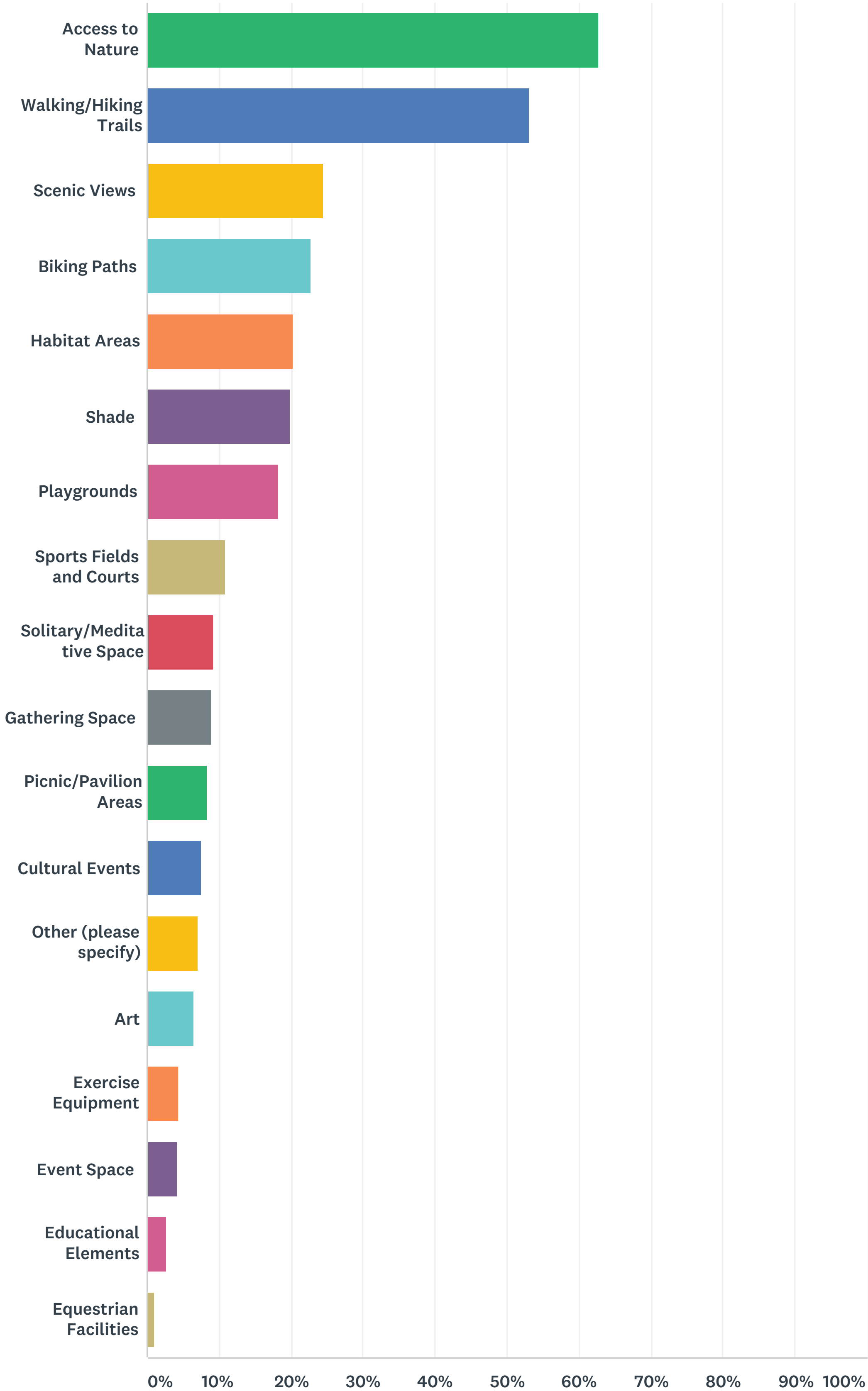
Showing top 10 words and phrases

Central Park	11.75%	63
National Park	10.07%	54
Yosemite	8.58%	46
Golden Gate Park	4.29%	23
High Line	3.36%	18
Gardens	3.17%	17
Paris	2.80%	15
New York	2.24%	12
Griffith Park	2.24%	12
Joshua Tree	2.05%	11

Q 40Wb(l bC cmNrdcaEmdwC nC nECdt jn/ Cct : CEwdCabdC nwaCD)dcwdCwd)dl a /nEmCanl CabmddA?

st wedmd: SC717C kN(l l d: SC4

Taylor Yard G2 River Park Project Community Survey

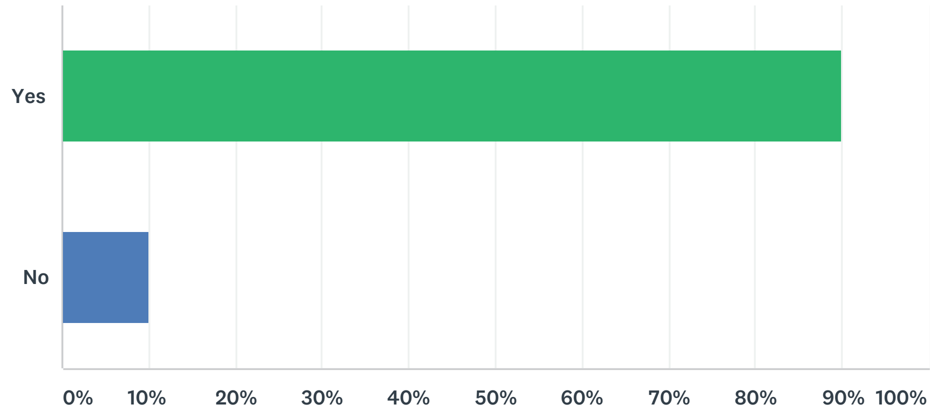


ANSWER CHOICES	RESPONSES	
s l l dwwGnCy caEnd	5%778	090

Wc)N(t , TH(N(t , OPmc()w	62.%08	0 9
k l dt (l OV(de w	%0.6%8	92
B(N(t , OV cabw	%%708	79
Hc3(acaGs mdcw	%4.%48	69
k bc: d	9.968	67
v)c/ , mEt : w	1. 78	02
k l nmawOF(d): wCct : Oo nEmaw	4.148	16
k n)(acm'TMd: (aca(ZdOk l cl d	9.%18	72
Gcabdm(t , Ok l cl d	1.198	74
v (l t (l Tv cZ()(nt Gs mdcw	1.298	55
o E)aEmo)OhZdt aw	7.648	69
p abdmOD)dcwdOWl dl (r/ A	7. %8	65
s ma	5.018	6
h xdmh(wdOhqE(l i dt a	0.068	26
h Zdt aOk l cl d	0. 98	22
h: El ca(nt c)Oh)di dt aw	%148	%%
h qEdwam(ct OFcl ()(a(dw	.4%8	1
Pnac)ORdwl nt : dt awS717		C

Q ©HcZdC nEZ(w(ad: GbdCLnwG t , d)dwCR(Zdm?

s t we dmd: S776C k N(l l d: SC %



ANSWER CHOICES	RESPONSES	
Ydw	19.908	597
y n	4.458	71
Pp Ps L		776

If yes to #11, where do you access the River?

Answered: 674 Skipped: 113

RESPONSES (674) TEXT ANALYSIS TAGS (0)

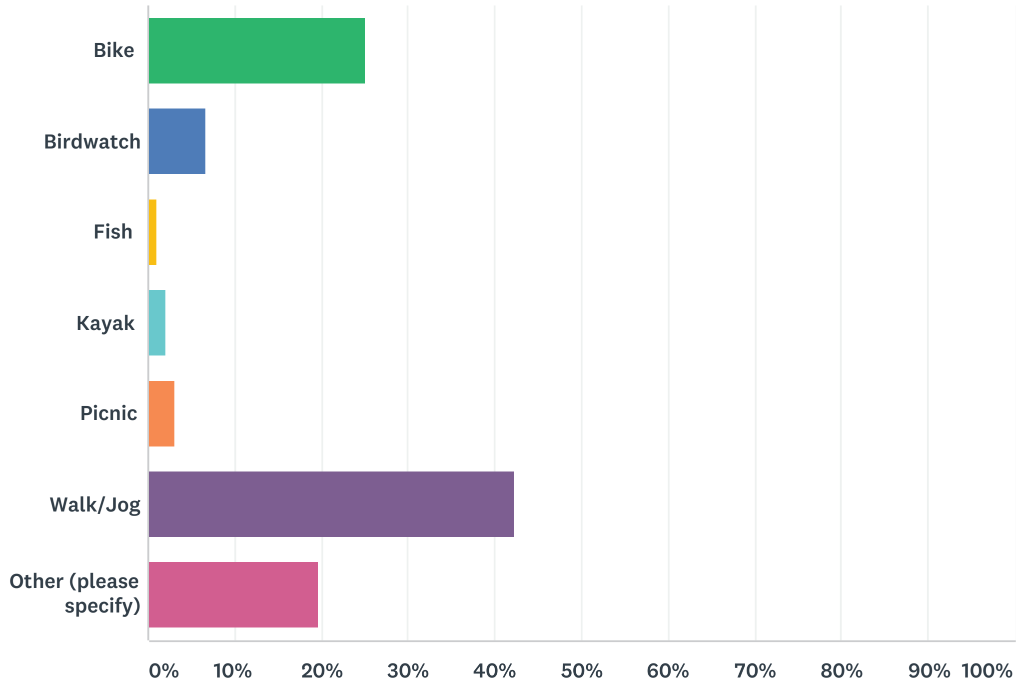
Cloud View List View

Showing top 10 words and phrases

Frog Town	15.13%	102
Fletcher	12.91%	87
Feliz	8.75%	59
Bow Tie	7.72%	52
Marsh Park	7.72%	52
Bike Path	6.23%	42
Atwater Village	5.34%	36
Elysian Valley	4.45%	30
River	3.56%	24
Street	3.26%	22

Q 20Wbca Cn Cn EC nCcaabdCR(Zdm?

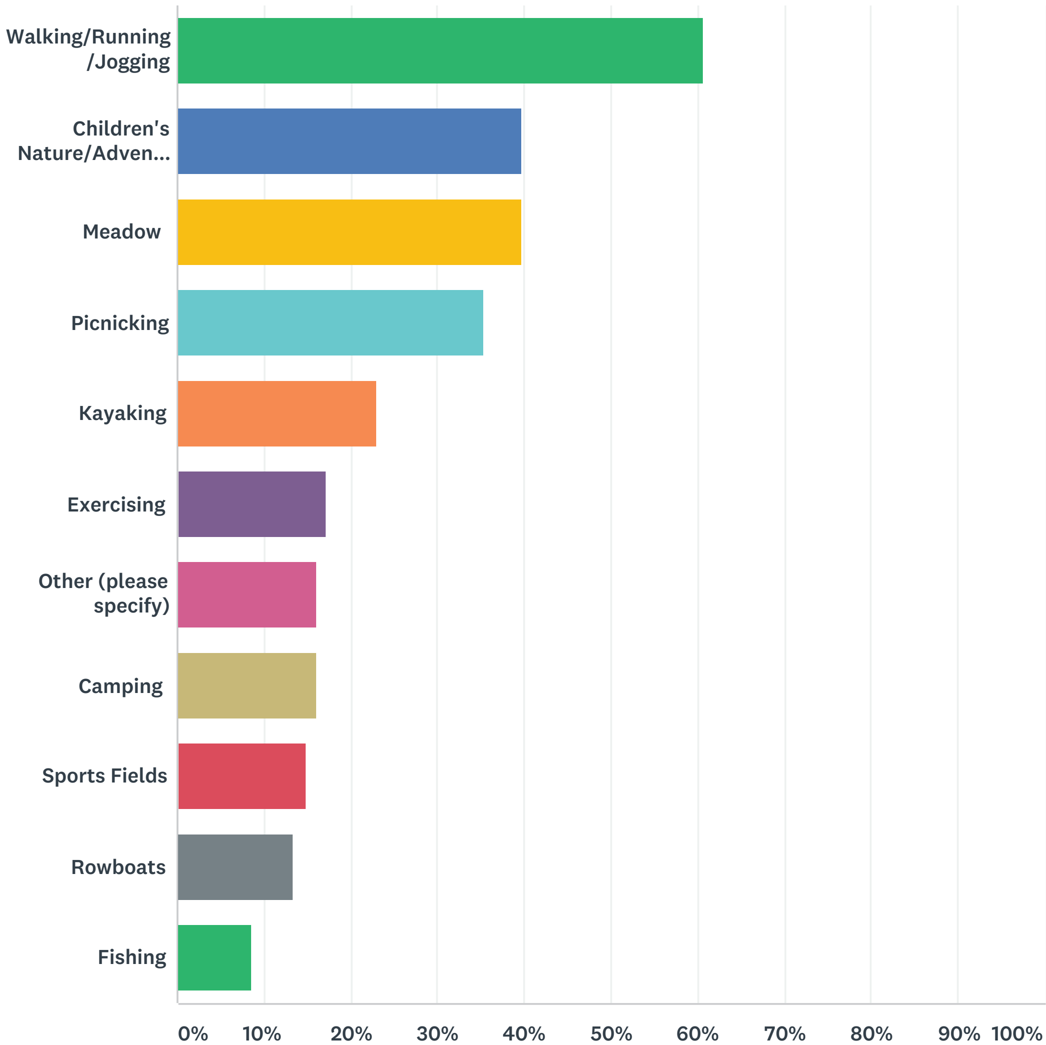
s t we dnd: S7 C kN(l l d: S75



ANSWER CHOICES	RESPONSES	
B(Nd	%6.408	71
B(me cd b	5.768	01
F(wb	4.918	7
Kc/ cN	% 8	6
v (l t (l	2.%28	%2
Wc)NTn,	0% 98	244
p abdnCD)dcwdOl dl (r/ A	9.598	04
Pp Ps L		7

Q 0Gs l a(Z(a(dwTRdl mdca(nt G(h)di dt aw

s t we dmd: S709C k N(l l d: S21

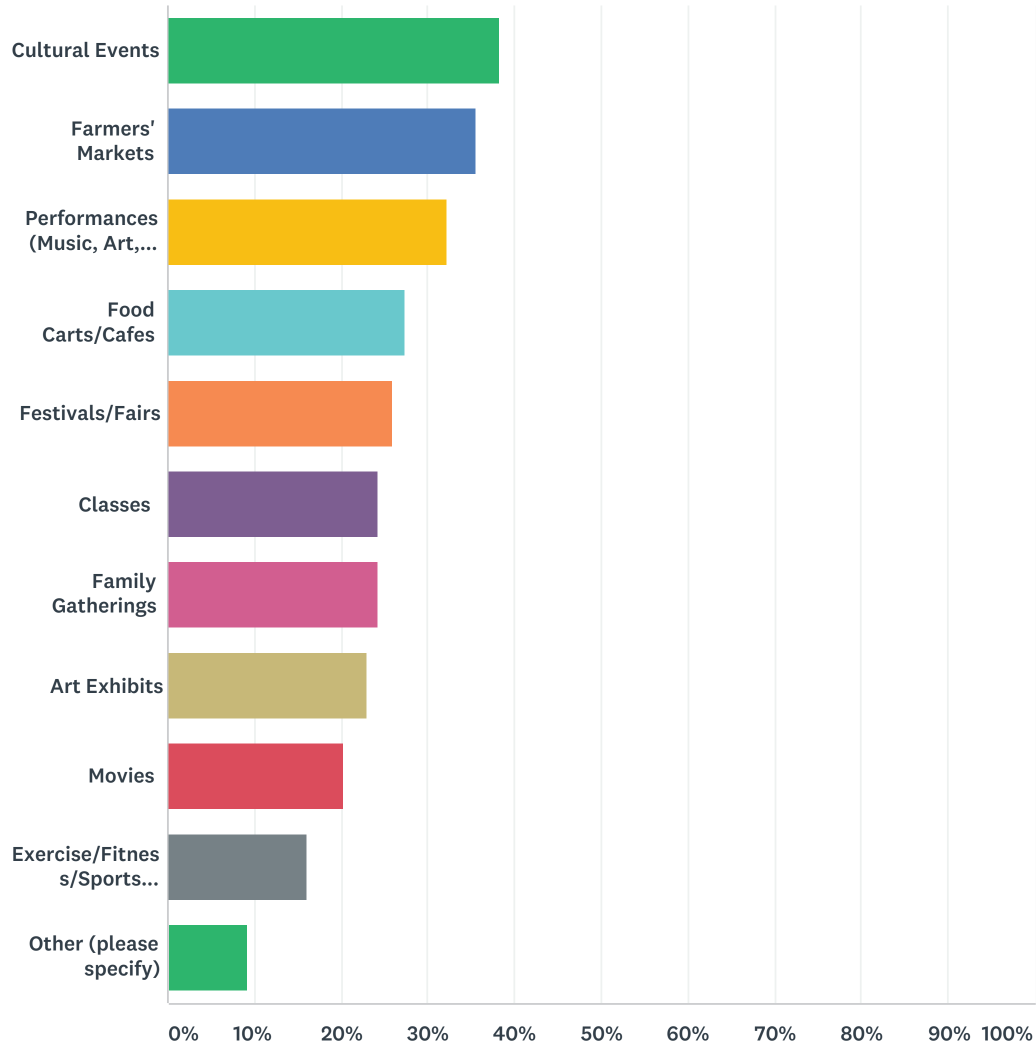


ANSWER CHOICES	RESPONSES	
Wc)N(t , TREt t (t , TJn, , (t ,	54.5 8	060
o b(): mdt 'wG) caEmdTs : Zdt aEmdO)c/	29.798	%91
Mdc: ne	29.798	%91
v (l t (l N(t ,	26.218	%56
Kc/ cN(t ,	%%958	7%
h xdmh(w(t ,	7.%%8	%9
p abdmOD)dcwdOl dl (r/ A	5. 68	%
o ci l (t ,	5.4%8	%4
k l nmawOF(d): w	0.1%8	
Rne 3ncaw	2.018	4

F(wb(t ,	1.518	56
Pnac)CRdwl nt : dt awS709		C

Q 6Ck nl (c)Th Zdt awTh Zdt aCk l cl dw

s t we dmd: S709C k N(l l d: S21

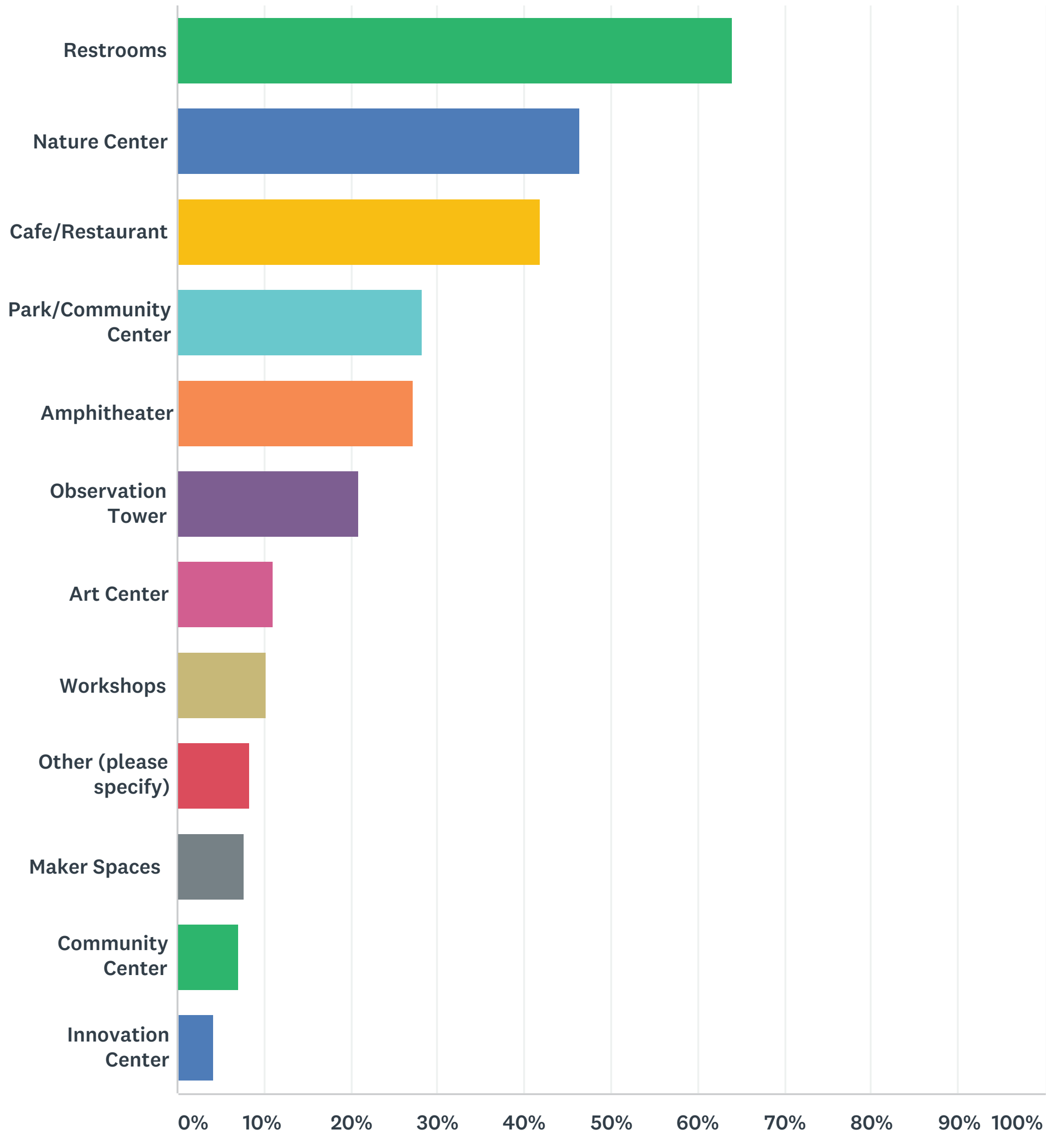


ANSWER CHOICES	RESPONSES	
o E)aEmo)Ch Zdt aw	21.2%8	%17
Fcm dmw'OMcmNdaw	26.568	%57
v dmmm ct l dwOMEw(l gS magDct l dA	2% 18	%0
Fnn: Go cmawTo crdw	%7.278	%46
Fdwa(Zc)wTFc(mw	%6.948	90
o)cwwdw	%0. 78	1
Fci ()/ CGcabdm(t , w	%0. 78	1
s maCh xb(3(aw	%%958	7%
MnZ(dw	%4.%98	6%
h xdm(wdTF(at dwwTk l nmawO ni l da(nt w	5. 68	%

p abdmOD)dcwdOd dI (r/ A	9.% 8	59
Pnac)ORdwl nt : dt awS709		C

Q 50k anEl aEndw

s t we dmd: S709C k N(l l d: S21

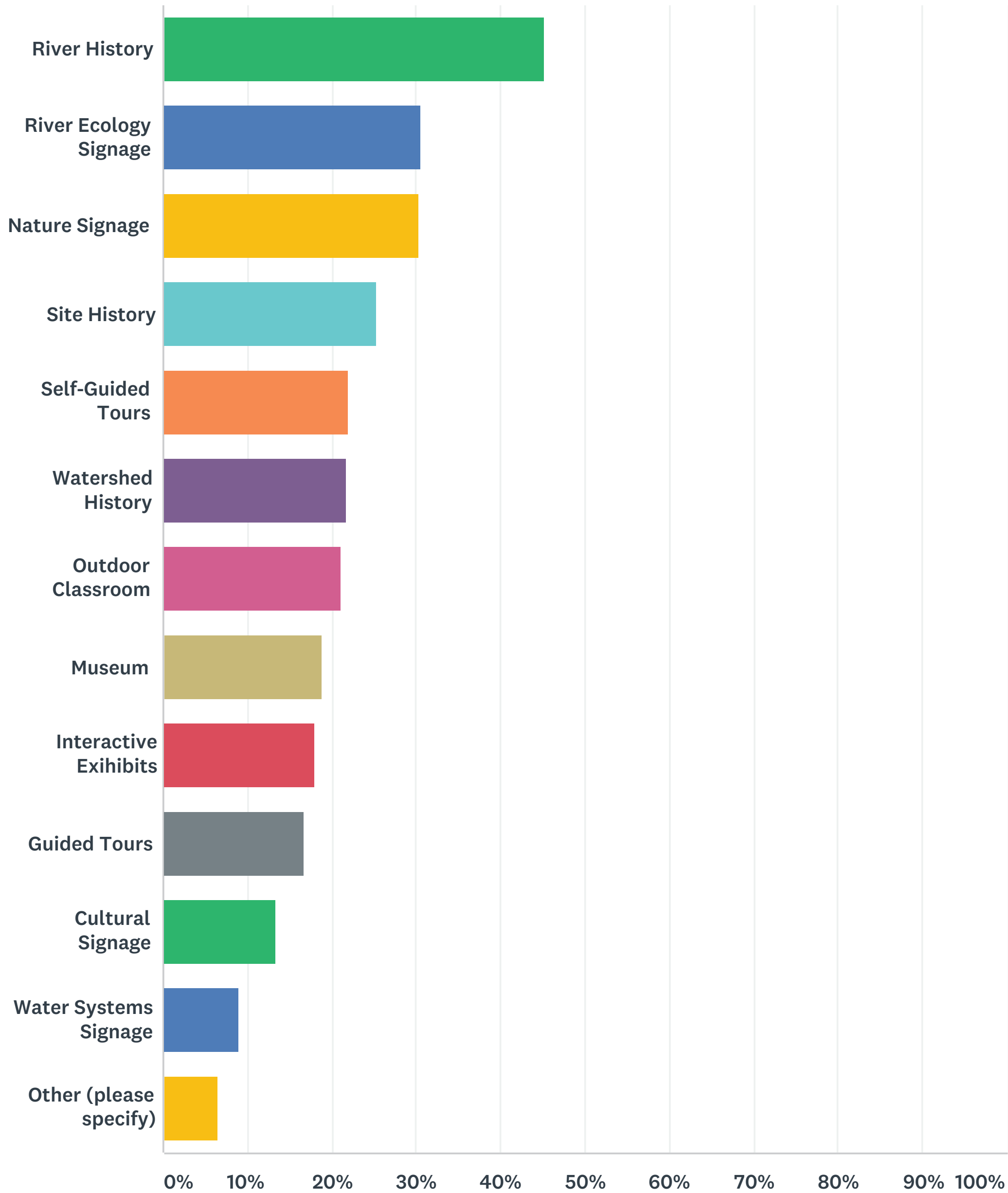


ANSWER CHOICES	RESPONSES	
Rdwamni w	52.968	079
y caEndGo dt adm	05.058	201
o crdTRdwacEnct a	0 .9%8	2 0
v cmNTo ni i Et (a Go dt adm	%1. 78	%
s i l b(abdcadm	%7.%08	%40
p 3wdmZca(nt CPne dm	%4.128	65
s maCo dt adm	.418	12
WnmNwbnl w	4.%18	77

p abdmOD)dcwdOl dl (r/ A	1.0 8	52
McNdmOk l cl dw	7.708	61
o ni i Et (a/ Go dt adm	7.% 8	60
ft t nZca(nt Go dt adm	0.%78	2%
Pnac)ORdwl nt : dt awS709		C

Q 7Ch: El ca(nt c)Ch)di dt aw

s t we dnd: S709C k N(I I d: S21

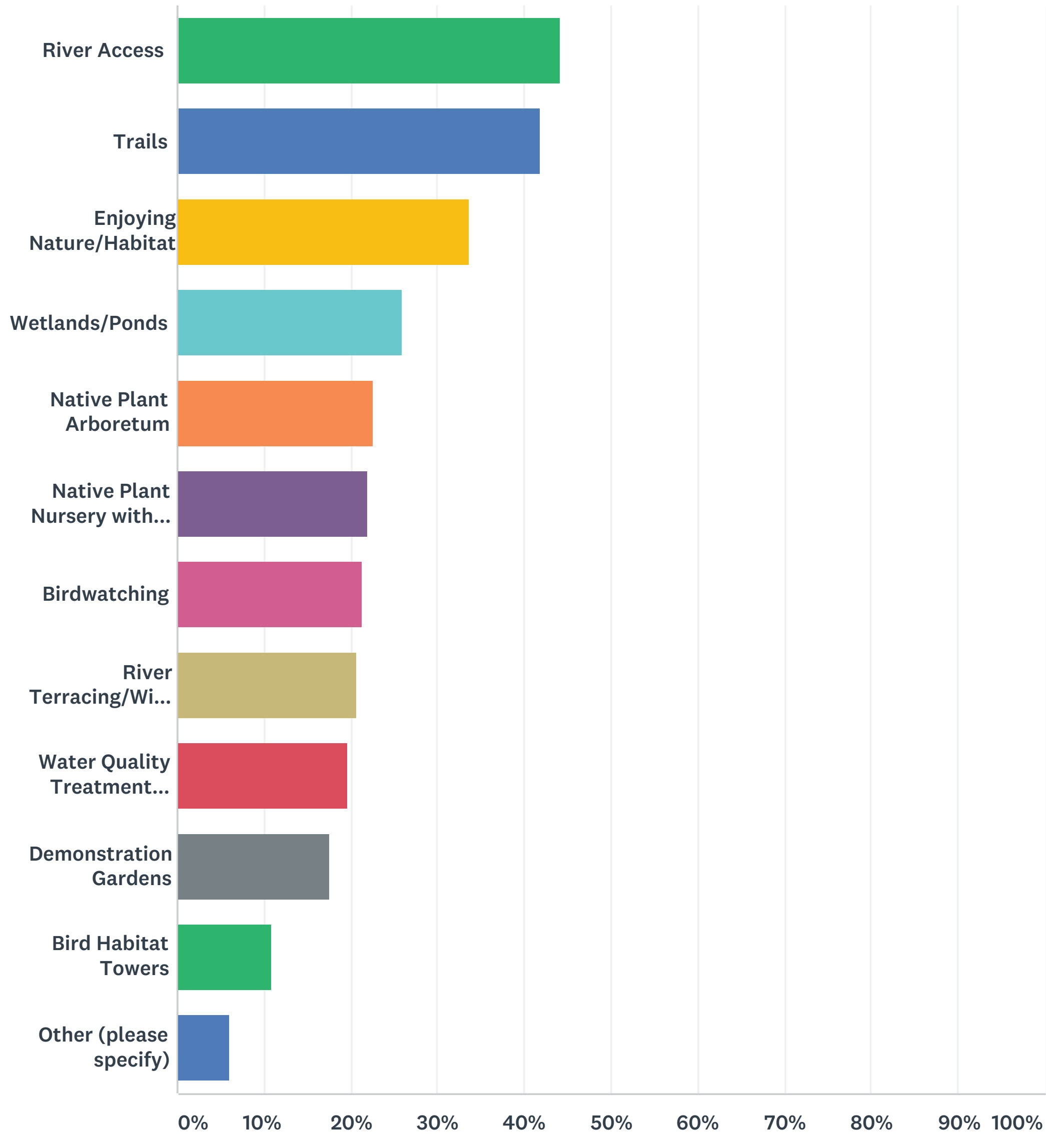


ANSWER CHOICES	RESPONSES	
R(ZdnCH(wanm	06.%58	229
R(ZdnCh I n)n, / Ck (, t c, d	24.008	%%1
y caEndCk (, t c, d	24.2 8	%%7
k (adCH(wanm	%6.278	94
k d)r-GE(: d: CPnEnw	% .948	50
Wcadnwbd: CH(wanm	% .758	52

p Ea nnmCo)cwwmni	% .%28	69
MEwdEi	1.128	0
ft admcl a(ZdC:x(b(3(aw	7.198	20
GE(: d: CPnEmw	5.1%8	%5
o E)aEmc)Ck (, t c, d	2.268	44
Wcadmk / wadi wCk (, t c, d	9.418	51
p abdmCD)dcwdCwl dl (r/ A	5.608	09
Pnac)CRdwl nt : dt awS709		C

Q 1Cy caEmc)Ck l cl dTW():)(rdCHc3(aca

s t we dmd: S709C k N(l l d: S21

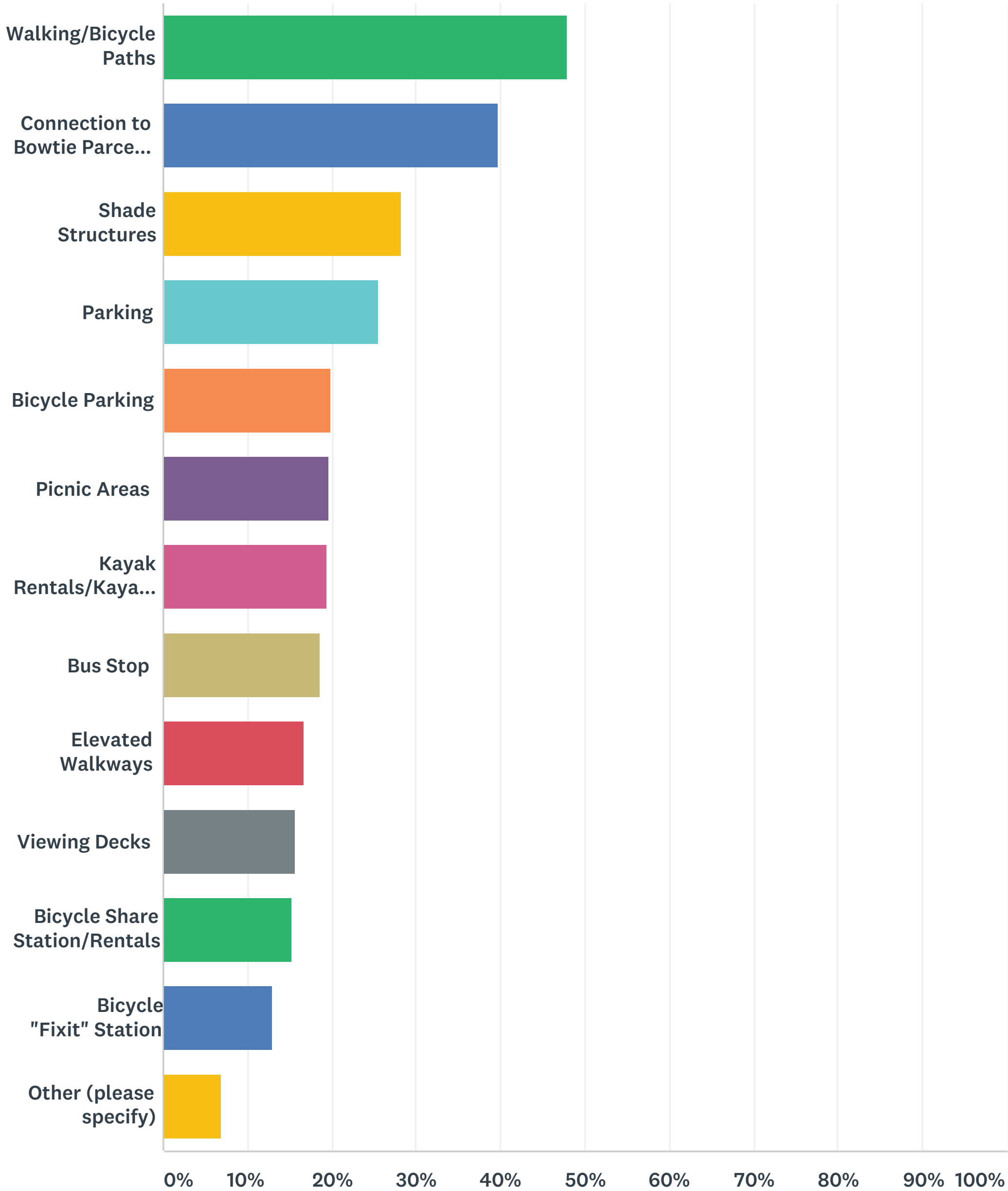


ANSWER CHOICES	RESPONSES	
R(Zdm6 l l dww	00. 98	22
Pmc()w	0 .9%8	2 0
ht jn/ (t , Cy caEmdTHc3(aca	22.718	%62
Wda)ct : wTv nt : w	%6.948	90
y ca(ZdCv)ct aG m3nmdaEi	%%658	59
y ca(ZdCv)ct aCy EmwdmGe (abCk dd: C3ct N	% .948	50
B(me ca b(t ,	% .258	54
R(ZdmPdmol (t , TW(: dt (t ,	%4.598	66

WcadmCQEc)(a/ CPmdcai dt aQ amdci wOmmCRc(t e cadm	9.758	01
Ddi nt wamca(nt CGcmdt w	7.5%8	2%
B(m CHc3(acaCPne dmw	4.1 8	1
p abdmCD)dcwdQl dl (r/ A	5.4 8	06
Pnac)CRdwl nt : dt awSZ09		C

Q 9ΩMn3()(a Ts l l dwwTo ni mma

s t we dmd: S709C k N(l l d: S21

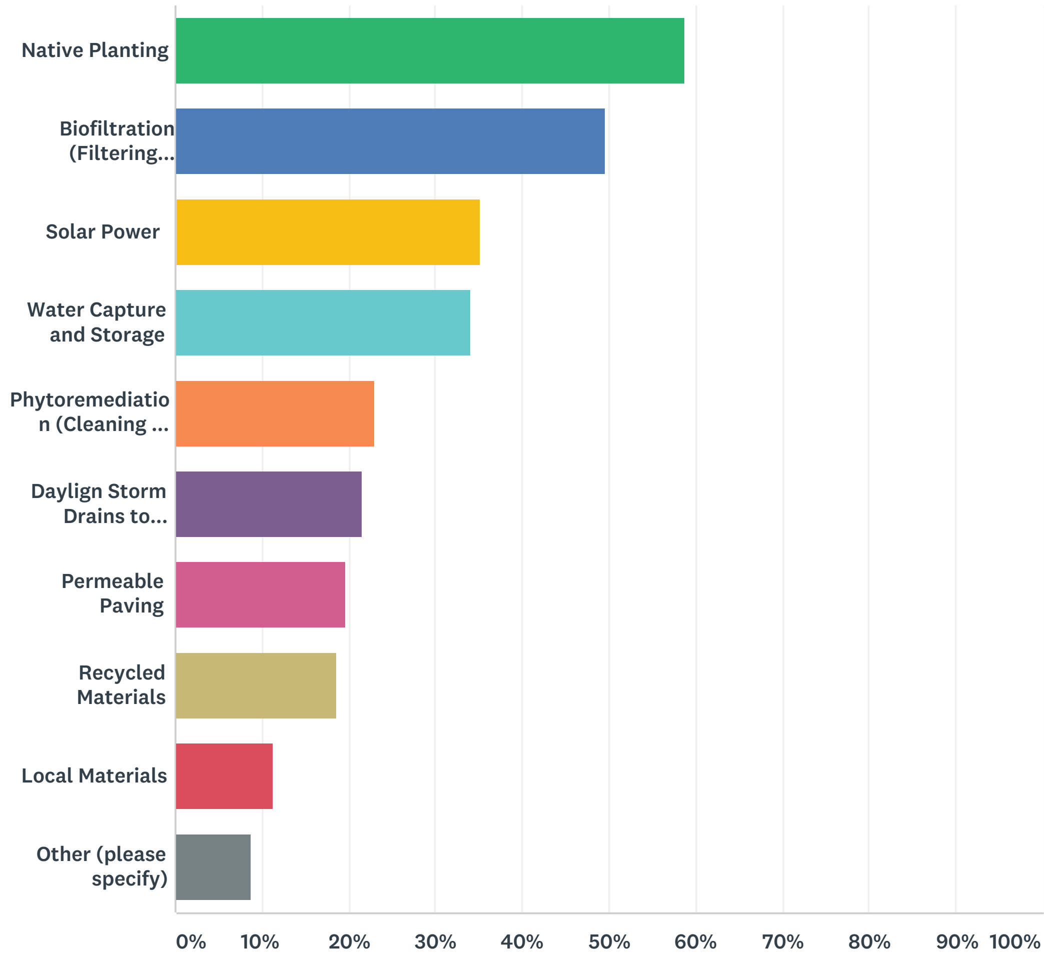


ANSWER CHOICES	RESPONSES	
Wc)N(t , B(l / l)dO cabw	07.928	269
o nt t dl a(nt GnGne a(dO cmd)GnGbdO nmbGt : CR(nC dCLnwGt , d)dwG acadO cmNGnGbdOcwa	29.798	%91
k bc: dGk anEl aEndw	%l. 78	%
v cmN(t ,	%6.648	9
B(l / l)dO cmN(t ,	9.198	09
v (l t (l G mdcw	9.528	07

Kc/ cNCRdt ac)wTKc/ cNCLcEt l b	9.098	05
BEwCk anl	1.658	29
h)dZcad: CWc)Ne c/ w	5.598	%6
V(de (t , CDdl Nw	6.768	1
B(l / l)dCk bcmdCk aca(nt TRdt ac)w	6.%%8	0
B(l / l)dCF(x(a'Ck aca(nt	%968	97
p abdmCD)dcwdCWl dl (r/ A	5.1 8	6
Pnac)CRdwl nt : dt awS709		C

Q%4 Ck Ewac(t c3()(a/ Ch)di dt aw

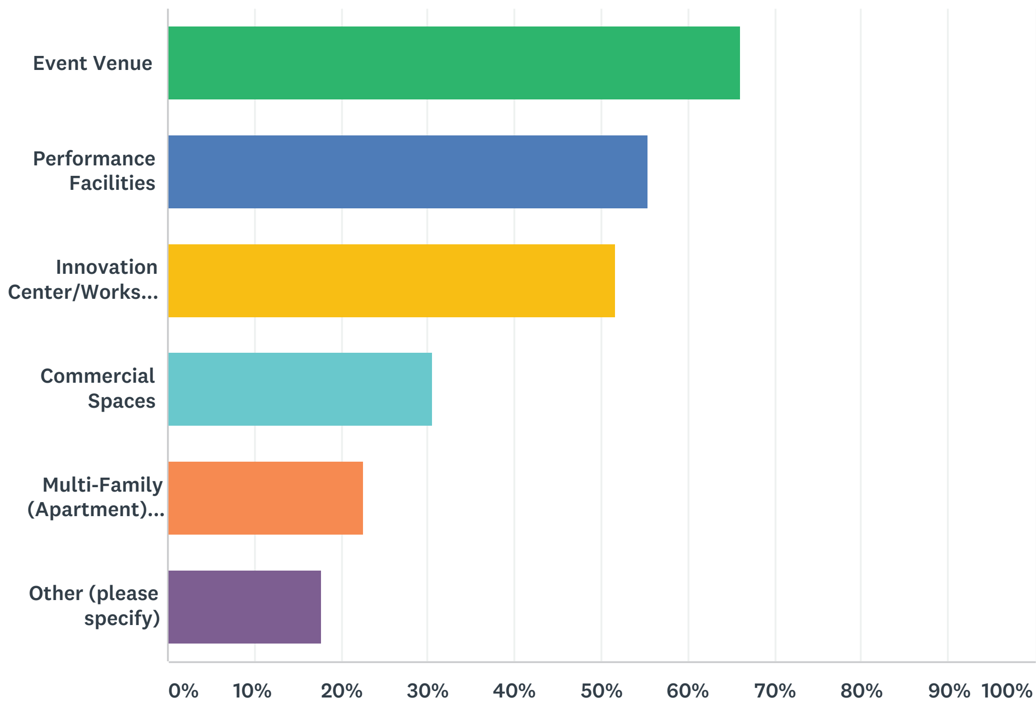
s t we dnd: S709C k N(l l d: S21



ANSWER CHOICES	RESPONSES	
y ca(Zd©)ct a(t ,	61.708	004
B(nr()aca(nt CF()adn(t , © n))Ea(nt CPbmE, b© caEmdA	09.578	27%
k n)cm© ne dm	26. 8	%52
Wcadm© cl aEmd©t : Ck anm, d	20.468	%66
v b/ anmdi d: (ca(nt Co)dct (t , ©bd©k n()©e (ab©)ct awA	%2. 48	72
Dc/)(, t Ck anm CDmc(t wCn© mdcad©s mn/ nCCWcwbACPn(3Eacn(dw	% .528	5%
v dm dc3)d© cZ(t ,	9.528	07
Rdl / l)d: CMcadm(c)w	1.658	29
Lnl c)CMcadm(c)w	.268	16
p abdmC)dcwd©l dl (r/ A	1.1 8	55
Pnac)CRdwl nt : dt awS709		C

Q% ŒFnmǽbdŒPc/)nmŸcm:ŒG%ŒR(Zdm₢ cmNgbcaŒN(t : ŒrŒdZdt EdÇ dt dmcǽ(t , w(adŒEwdwŒnE): Œ/nEŒwEl l nmǽŒnŒwEwac(t Œ)nt , -ǽdm Œl dmcǽ(nt wŒct : i c(t ǽdt ct l dŒŒ)dcwdŒwd)dl ǽŒ:))Œǽbcǽœl l)/ A?

s t we dmd: Œ7 6C k N(l l d: Œ7%



ANSWER CHOICES	RESPONSES	
h Zdt aŒVdt Ed	55. 68	072
v dmmi ct l dŒFcl ()(adw	66.6%8	297
ft t nZca(nt Œ dt admTWnmNbnl w	6 .768	274
o ni i dm(c)Œl cl dw	24.528	% 9
MEa(-Fci ()/ ŒŒl cmi dt aŒHnEw(t ,	%%6%8	5
p abdmŒŒ)dcwdŒwl dl (r/ A	7.758	%7
Pnac)ŒRdwl nt : dt awŒ7 6		C

What site use do you think MUST be included in the future park?

Answered: 592   Skipped: 195

RESPONSES (592)   TEXT ANALYSIS   TAGS (0)

Cloud View   List View

Showing top 10 words and phrases

River	12.33%	73
Nature	10.64%	63
Park	9.12%	54
Trails	8.11%	48
Space	6.93%	41
Habitat	5.57%	33
Water	4.05%	24
Restrooms	3.55%	21
Native Plants	3.38%	20
Bike Path	2.87%	17

What site use do you think MUST NOT be included in the future park?

Answered: 532 Skipped: 255

RESPONSES (532) TEXT ANALYSIS TAGS (0)

Cloud View List View

Showing top 10 words and phrases

Housing	19.17%	102
Commercial	17.11%	91
Fields	7.33%	39
Park	7.14%	38
Smoking	3.20%	17
Events	3.20%	17
Apartments	3.20%	17
Homeless	3.01%	16
Development	3.01%	16
Concerts	2.07%	11

Who do you think has great ideas about the park's future potential that has not yet been involved in the process?

Answered: 392   Skipped: 395

RESPONSES (392)   TEXT ANALYSIS   TAGS (0)

Cloud View | List View

Showing top 10 words and phrases

School	8.42%	33
Park	8.16%	32
Students	7.40%	29
Community	6.38%	25
Local	5.61%	22
River	4.85%	19
Angeles	3.57%	14
Kids	3.06%	12
Involved	2.81%	11
Neighborhood Councils	2.30%	9

Any additional comments?

Answered: 288   Skipped: 499

RESPONSES (288)   TEXT ANALYSIS   TAGS (0)

Cloud View | List View

Showing top 10 words and phrases

Park	34.03%	98
River	21.18%	61
Space	14.24%	41
Nature	11.81%	34
Community	11.81%	34
Water	6.60%	19
School	5.21%	15
Homeless	4.86%	14
Forward	3.82%	11
Native	3.13%	9

Appendix D Final Proposition O Project Concept Report

G2 TAYLOR YARD RIVER PARK PROJECT

PROPOSITION O

PROJECT CONCEPT REPORT

TAYLOR YARD G2 WATER QUALITY IMPROVEMENTS PROJECT

Prepared for:

City of Los Angeles

Department of Public Works

Bureau of Sanitation

June 2020

Prepared by:

Bureau of Engineering

and

WSP USA, Inc.

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1 EXECUTIVE SUMMARY

As a part of ongoing work with the City of Los Angeles (City) Bureau of Engineering (BOE) related to the Taylor Yard G2 Parcel (G2 parcel) on the Los Angeles River (River), this Proposition O (Prop O) Project Concept Report was prepared for submittal to the Bureau of Sanitation (LASAN) for consideration of Prop O funding. The Taylor Yard G2 Water Quality Improvements Project Concept Report describes the water quality and ecological improvement elements of the development of the G2 parcel that are crucial to meeting the long-established goals of the 2004 Prop O bond measure and of revitalizing the River. This report expands upon the draft Project Concept Report for the Taylor Yard G2 Parcel that LASAN completed on December 24, 2007.

1.1 PROJECT OBJECTIVES AND GOALS

It is a primary goal of the City to provide public access to the River by cleaning up and opening parts of the G2 parcel in a series of multiple projects. The Taylor Yard G2 Water Quality Improvements Project (Project) is proposed to be one of the projects leading to full build-out of the G2 parcel.

The design goal for the G2 parcel is to create a habitat-focused open space that is used by the local River-adjacent communities, and a regional destination for a larger array of Angelenos that improves water quality in the River, provides access to the unique urban ecology that exists there, and offers nature-based recreational and cultural opportunities. Thus, the Project is consistent with Prop O criteria to protect rivers, lakes, beaches, and the ocean; conserve and protect water sources; use parks to decrease polluted runoff; capture, cleanup, and reuse stormwater; and protect habitat.

Objectives established for the Project are listed below and discussed further in subsequent sections.

- **Quality of Life**
  - Create Great Park User Experience
  - Provide Recreational Opportunities and Safe River Access
  - Reflect History and Culture
  - Enhance Public Health and Safety
  - Encourage Active and Mass Transportation
- **Resource Allocation**
  - Conserve Water and Energy Resources
  - Use Recycled Materials
- **Natural World**
  - Remediate Contaminated Soils
  - Restore Natural Habitat
  - Support Biodiversity
  - Enhance Wildlife Connectivity
- **Climate and Risk**
  - Design for Sustainability and Net Zero
- **Leadership**
  - Engage Stakeholder Community
  - Design Consistent with Existing Plans
  - Evaluate Economic Viability

1.2 PROJECT OVERVIEW

The G2 parcel is in the Glassell Park and Cypress Park neighborhoods of Northeast Los Angeles. It has often been referred to as the crown jewel of the Los Angeles River revitalization effort and the last piece in the puzzle that will connect over 100 acres of open space along the River. The City's Los Angeles River Revitalization Master Plan (Master Plan) was adopted by City Council in 2007 and identified the G2 parcel as Taylor Yard River Park, Project No. 165. The project opportunity was also described in the Los Angeles River Ecosystem Restoration Feasibility Report (Ecosystem Plan) in 2015 by the U.S. Army Corps of Engineers (USACE), also commonly known as the ARBOR or "Area with Restoration Benefits and Opportunities for Revitalization" Study, for which the City is serving as local sponsor. The City acquired the G2 parcel in early 2017 with the intent of advancing the multiple goals of these studies, including: stormwater quality improvement, river access, recreation, and habitat restoration. The G2 parcel is critical to fulfillment of the Ecosystem Plan goals to restore ecosystem values in and along an 11-mile soft-bottomed corridor of the River from the edge of Griffith Park into Downtown Los Angeles known as the Glendale Narrows.

The City intends to remediate and activate the Project site in a series of projects over an approximately 10-year period and is currently in the planning and conceptual design phase for the multiple projects to be implemented at the Project site (site). The projects generally consist of an early activation effort, this Taylor Yard G2 Water Quality Improvements Project, and the Taylor Yard G2 River Park Project to complete full development of the site. Each project will advance revitalization of the River through implementing a site remediation strategy for this known brownfield from its former uses as a Union Pacific rail maintenance facility, and development of habitat-focused open space.

Stormwater runoff entering the site is expected to be impacted with trash, some nitrates, zinc, bacteria, and suspended solids due to the commercial, industrial, educational, transportation, and recreational uses in the area and within the site. The proposed Project primarily consists of a stormwater quality improvement feature (best management practice [BMP]) for treatment of onsite and urban runoff is a bioretention facility with an underdrain and liner (Bioretention BMP). Bioretention facilities are landscaped shallow depressions that capture and filter stormwater runoff according to the Low Impact Development (LID) Manual (City of Los Angeles 2011). These facilities have a layer of plants and soil where pollutants can be filtered, adsorbed, and biodegraded as stormwater percolates through the soil media. Once stormwater saturates the media materials and fills the Bioretention BMP, an underdrain system conveys the treated stormwater to an outlet. Because of the existing soil contamination found on-site from previous industrial uses, an impermeable liner would be used to prevent infiltration into underlying soils.

Prop O funding would allow the Project to realize immediate water quality benefits. The Bioretention BMP could be expanded by subsequent projects to provide additional water quality benefits. The alternative recommended for Prop O funding was selected to treat pollutants associated with land uses in the area and within the site in addition to the Clean Water Act (CWA) Section 303(d) impairments and current and future TMDLs associated with Los Angeles River Reach 3/ARBOR Reach 6 and the Upper Los Angeles River Enhanced Watershed Management Program. The water quality strategy summarized below incorporates a Bioretention BMP that is designed to treat onsite runoff along with varying portions of dry and wet weather flows from upstream and adjacent offsite areas. The total area tributary to the G2 parcel is 4,297 acres. Stormwater mitigation would be achieved through the proposed Bioretention BMP that is designed to manage onsite stormwater flow and urban runoff.

1.3 WATER QUALITY BENEFITS

The water quality strategy summarized in Table 1-1 will treat all the onsite flow from the 42 acres of the Project site along with a portion of urban runoff from storm drains upstream of the Project site. The overall objective for the Project is to improve the water quality of stormwater runoff entering Reach 3 of the River. This objective would be accomplished by diverting flows from offsite storm drains to the water quality improvement feature located on the site.

Table 1-1. Water Quality Benefits of Alternative 4

Alternative	Design Capture Volume (ac-ft)	Average Annual Water Capture (ac-ft)	Bioretention BMP Area (ac)	Expected Benefit
Onsite Runoff Capture and Dry Weather Flows from UPRC and Eagle Rock Drains	10.9	113.9	3.0	Reduce trash, sediment loads, absorbed pollutants and other pollutants of concern to the River; fix pollutants through root uptake; improve water quality; provide wetland and riparian habitat.

Four project alternatives are evaluated in this report. Water Quality Alternative 4, which collects on-site stormwater runoff and treats pumped dry- and wet-weather flows from the Eagle Rock and Union Pacific Railroad Company (UPRC)/City drains, was selected as the preferred alternative for Prop O funding. Alternative 4 will capture 2 cubic feet per second (cfs) from each storm drain during storm events and capture on-site local stormwater. The estimated system capture on an average annual basis from the storm drains is 104.5 acre-feet (ac-ft) of wet-weather flow. A total of 113.9 ac-ft of stormwater is expected to be captured and treated on an average annual basis with the on-site runoff included. The dry-weather flow will deliver another 218 to 283 ac-ft per year to the Bioretention BMP, which would require a dry-weather pumping flow rate of 0.30 to 0.38 cfs by the low flow pump.

1.4 ADDITIONAL BENEFITS

The Project is consistent with Prop O criteria and incorporates additional benefits. In addition to water quality improvements, the site is proposed to be developed for ecological restoration, recreational uses, educational purposes, and improved access along the River. Table 1-2 summarizes the potential amenities that are currently being evaluated with the preliminary design concepts for the series of projects at the G2 parcel.

Table 1-2. Additional Environmental and Recreational Benefits

Category	Amenity
Water	Kayak Launch
	River Deck
	Demonstration Wetlands
	River Steps
	River Overlook
	Café/Boathouse
	River Landing
Ecology	Native Nursery
	Container Woodland
	Habitat Tower
	Boxed Forest
	Raised Pollinator Garden
	Timber Trees
Experience	Picnic Areas
	Outdoor Classrooms
	River Loop
	Open Event Space
	Bridge to Rio
	Nature Center
	Info Box Kiosk
Remediation	Phytoremediation Test Plots
	Phytoremediation Observation Deck

1.5 COST ESTIMATE

Table 1-4 provides the cost estimate for the recommended Bioretention BMP. The cost is based on the amount of grading, piping, and pumping facilities needed to achieve the system requirements. A large portion of the cost is due to the larger treatment BMP footprint and a more extensive pumping system than the other water quality alternatives that were evaluated for Prop O funding.

Table 1-3. Bioretention BMP Alternative 4 Cost Estimate

Alternative	Total Cost ($)
Onsite Runoff Capture and Dry Weather Flows from UPRC and Eagle Rock Drains	16,332,086

1.6 SCHEDULE

The design and construction of the Project will be completed November 2023. Figure 1-1 depicts a preliminary schedule.

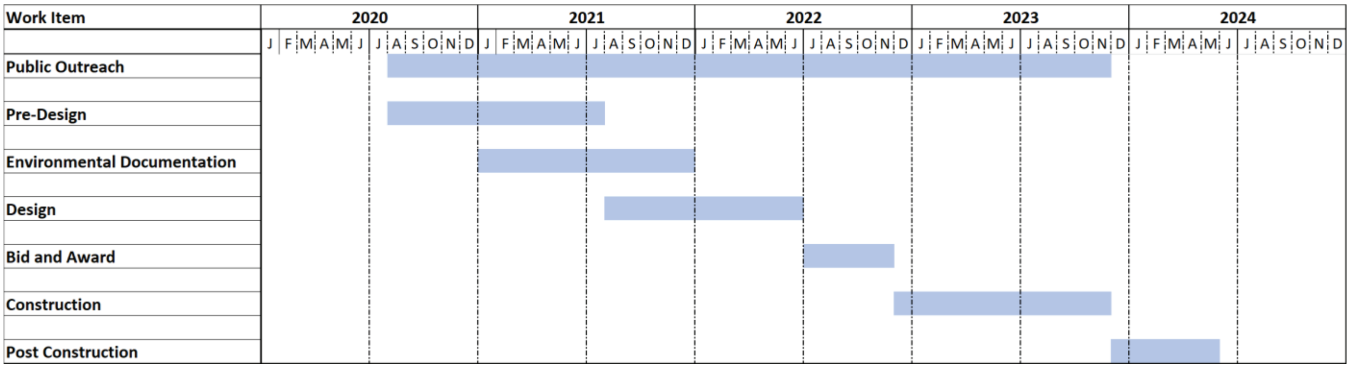


Figure 1-1. Preliminary Schedule

2 PROJECT SCOPE

2.1 BACKGROUND

This Project Concept Report was developed for submittal to the Bureau of Sanitation (LASAN) for consideration of Prop O funding. The Taylor Yard G2 Water Quality Improvements Project Concept Report describes the water quality and ecological improvement elements of the development of the G2 parcel that are crucial to meeting the long-established goals of revitalizing the Los Angeles River (River). This report builds upon the draft Project Concept Report for the Taylor Yard G2 parcel that was completed by LASAN on December 24, 2007.

The G2 parcel has often been referred to as "The Crown Jewel" of the River revitalization effort and the last piece in the puzzle that will connect over 100 acres of open space along the River. The Los Angeles River Revitalization Master Plan (Master Plan) was adopted by City Council in 2007 and identified the G2 Parcel as Taylor Yard River Park, Project No. 165. The project opportunity was also described in the Los Angeles River Ecosystem Restoration Feasibility Report (Ecosystem Plan) in 2015 by the USACE, also commonly known as the ARBOR or "Area with Restoration Benefits and Opportunities for Revitalization" Study, for which the City is serving as local sponsor.

Several other significant historical planning studies have identified the site as an important opportunity for the local and regional communities. The study entitled: "Taylor Yard, A Catalyst for Community Change," prepared by the American Institute of Architects, which is one of the oldest studies dating back 25 years, was followed by other studies:

- The River Through Downtown, Friends of the Los Angeles River, The Sierra Club, The Urban Resources Partnership (1998)
- Taylor Yard and Los Angeles River Preliminary Groundwater and Surface Water Study, The River Project (2002)
- Taylor Yard Feasibility Study, California State Coastal Conservancy (2002)

As described below, implementation of the Prop O project would achieve the goals and objectives of the Master Plan and the Upper Los Angeles River Draft Enhanced Watershed Management Program (Black & Veatch 2015).

2.1.1 LOS ANGELES RIVER REVITALIZATION MASTER PLAN

The Master Plan was adopted by the Los Angeles City Council in May 2007. The Master Plan defined goals to help guide the identification of potential Opportunity Areas. The goals included:

- Revitalize the River
- Green the Neighborhoods
- Capture Community Opportunities
- Create Value

Based on these goals, Taylor Yard was identified as one of 20 Opportunity Areas because it demonstrated a significant opportunity for ecosystem restoration on a large scale. As indicated below, the recommended alternative for Prop O funding responds to the Master Plan goal for river revitalization.

- The Bioretention BMP enhances water quality by treating all the on-site flows for the G2 parcel and runoff from both the Union Pacific Railroad Company (UPRC)/City and Eagle Rock storm drains upstream of the site. The surface flows will deliver the design capture volume to the Bioretention BMP that will treat the water prior to release to the River.

2.1.2 UPPER LOS ANGELES RIVER DRAFT ENHANCED WATERSHED MANAGEMENT PROGRAM

The Enhanced Watershed Management Program (EWMP) for the Upper Los Angeles River (ULAR) was developed by the ULAR EWMP Group (Black & Veatch 2015). The objective of the EWMP is to identify watershed control strategies and structural BMPs that will be implemented through the EWMP to achieve pollutant reductions while also providing multiple community benefits and promoting green infrastructure practices. According to the ULAR Draft EWMP, regional projects are identified as one of the subcategories of structural BMPs. Regional projects are centralized facilities located near the downstream ends of large drainage areas (treating areas ranging from 10 to 100 acres). Regional projects are further defined as projects that receive large volumes of runoff from extensive upstream areas and provide a cost-effective mechanism for infiltration and pollutant reductions. For these projects, runoff is diverted after it has entered storm drains. Structural BMPs associated with these reginal projects are designed to retain the storm water volume from the 85th percentile, 24-hour storm.

Implementation of the recommended alternative for Prop O funding is consistent with the ULAR Draft EWMP because this alternative is downstream from a large drainage area and would receive large volumes of runoff from extensive upstream areas along with on-site runoff from the 42-acre parcel. Specifically, approximately 4 ac-ft of wet weather runoff from the UPRC/City and the Eagle Rock storm drains would be conveyed to the Bioretention BMP. Based on the estimated storm water capture of 4 ac-ft per event, it is expected that 26.8 ac-ft of wet-weather flow will be captured on an average annual basis from the storm drains. Furthermore, with on-site runoff, a total of 37.5 ac-ft of stormwater is expected to be captured and treated on an average annual basis. Regarding dry weather flow, approximately 256 to 321 ac-ft per year will be conveyed to the Bioretention BMP.

2.1.3 STAKEHOLDERS AND COMMUNITY MEMBERS

In recognition of the historic nature of the Project, and the multiple goals and objectives of interest, BOE has been employing a collaborative planning approach since Project inception in October 2017. The process includes a robust community and stakeholder engagement process both within and among City departments, as well as outside agency partners including the Mountains Recreation and Conservation Authority (MRCA), the California State Coastal Conservancy, and the California Department of Toxic Substances Control (DTSC).

MOUNTAINS RECREATION AND CONSERVATION AUTHORITY

The State of California has been involved in environmental enhancement and revitalization activities on the River since the 1990s through the Santa Monica Mountains Conservancy (SMMC) and its affiliate agency, MRCA. SMMC's mission is to implement strategic actions that "preserve, protect, restore, and enhance treasured pieces of Southern California to form an interlinking system of urban, rural and river parks, open space, trails, and wildlife habitats." SMMC and MRCA have reclaimed or protected valuable open space along the banks of the River by replacing derelict industrial or housing sites with a string of passive parks filled with native riparian plants and floodable permeable walkways. These efforts by SMMC and MRCA to increase public ownership along the River have increased the restoration opportunities that were not available even 15 years ago (USACE 2015).

The City has granted the MRCA a 12.5-acre multi-purpose easement on the G2 parcel. The activities and history associated with the MRCA easement are summarized below as referenced in the Taylor Yard G2 River Park Project Status Report (BOE 2019):

— On August 24, 2017, the State Wildlife Conservation Board approved the $20 million State Proposition 84 Grant and the Draft Easement Agreement for MRCA. The easement agreement and the Memorandum of Understanding (MOU) will require City Council approval.

- On February 22, 2018, the State Wildlife Conservation Board allocated $5.015 million to assist in the cooperative project with the SMMC/MRCA to expend by up to 3.225 acres, for a total of 12.5 acres, a multipurpose easement for habitat restoration, open space preservation and to provide future wildlife-oriented public use opportunities.
- On August 31, 2018, the City Council (Council File [C.F.] 13-1641-S3) approved a report from the Office of the Chief Legislative Analyst (CLA) to grant a 12.5-acre easement to MRCA on the Taylor Yard G2 parcel. An MOU outlining the duties of MRCA and the City in the remediation and development of the easement area is included in the report. This report was approved by the Arts, Entertainment, Parks and River Committee on August 22, 2018.
- On December 5, 2018, the City Council (C.F. 13-1641-S3) adopted an ordinance, subject to approval of the Mayor, authorizing and providing for City's grant of a perpetual, exclusive multipurpose 12.5-acre easement to MRCA over the Taylor Yard G2 parcel. The multipurpose easement is sold to MRCA without calling for bids because public interest and necessity is served by the grant of such easement to the MRCA. The sale of the easement will result in sales proceeds of $26,952,770. $20 million will be used to pay down the MRCA purchase, and $6,952,770 will finance ongoing site assessment, initial remediation, development, and closing costs. Escrow closed on the easement in April 2019.

CALIFORNIA STATE COASTAL CONSERVANCY

Development of the water quality feature for the site is a stakeholder driven effort with involvement form multiple agencies. As a stakeholder, the California State Coastal Conservancy participated in the early planning effort for the G2 parcel. Later, in June 2017, the California State Coastal Conservancy granted an agreement for $2 million in Proposition 1 funds to perform environmental site assessments and develop an Implementation Plan with preliminary design concepts for development of the site that are consistent with the Ecosystem Plan (BOE 2019). This funding allowed the City to embark on implementation planning and conceptual design.

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Development of the entire 42-acre site is subject to DTSC approval. BOE is working in close collaboration with DTSC as part of the site assessment and remediation/cleanup process. A site assessment provides basic information for determining if there has been a release of hazardous material at a site, or if a naturally occurring hazardous material that presents a risk to human health or the environment may be present. A Report of Findings (WSP 2019) for the G2 parcel was conducted under the oversight of DTSC to evaluate the type, amount and extent of contamination. To properly remediate the site, BOE is working with DTSC to achieve a level of site remediation that is safe for public access.

TECHNICAL ADVISORY STAKEHOLDER AND COMMUNITY LEADERSHIP COMMITTEES

Additionally, technical and community advisory committees were created to advise and inform the process. Each of these committees has over 50 members, and several meetings of these committees have been held between 2017 and 2019 on specific design topics including water quality, site assessments, and habitat restoration as detailed in the following discussion.

The meeting held on September 6, 2018, was dedicated to the topic of water quality and presented concepts for stormwater quality improvement described in this report. Public meetings were held in 2018 and 2019 to share project goals and obtain input from the public, in which 200-300 people were typically in attendance. These meetings are ongoing.

A comprehensive community survey was also developed and publicized in early 2018 at these public meetings and online. Over 1,300 respondents provided their input. Survey results gathered revealed that the community has high interest in natural components, open space, trails, and habitat. The survey found that users of existing parks often went to those facilities for the same natural elements. Survey results also showed high response rates for outdoor recreation including walking, jogging, and cycling both as activities respondents currently undertake in parks, as well as activities that they would like to be included in G2 parcel planning. Finally, respondents overwhelmingly reported familiarity with the River with 84% of total respondents reporting having visited the River. For questions focused on river interaction and education, results showed a strong interest in these features being included as part of park planning. The design team has used this input to guide the development of multiple alternative preliminary design concepts (WSP 2019).

Multiple feedback cycles were incorporated into the preliminary concept design development process to integrate all opportunities and constraints. The design team tested ideas and concepts using this approach and hosted several team pre-design workshops. The goal was always to foster discussion, organize goals and objectives, test the approach, define and evaluate opportunities and constraints, test ideas and strategies, build preliminary tools, and develop preliminary design concepts. The entire multi-disciplinary team attended these workshops, including stakeholder outreach representatives, and benefited from the full range of knowledge and experience represented.

A public meeting/community workshop was conducted on October 4, 2018, to present the community survey results and to provide an update on the site assessment, preliminary design concepts and the water quality improvement strategies. Another community workshop was held on December 5, 2018. At this workshop, attendees were provided a project summary and overview as well as details regarding site remediation; sampling and analysis; and health and safety procedures. Revised design concepts based on input from stakeholders and public were presented at a community workshop on May 18, 2019.

2.2 EXISTING CONDITIONS

The site is a former rail yard located adjacent to the River approximately 2.5 miles northeast of downtown Los Angeles. This approximately 42-acre parcel of land is located at 2850 Kerr Street in the communities of Glassell Park and Cypress Park of the City. Accessed via a private road extending westerly from San Fernando Road marked Metrolink Central Maintenance Facility (CMF), the site is bordered by the River on the west and active railroad tracks on the east. The railroad tracks generally have a north-south orientation adjacent to the site. In addition, the railroad tracks are situated on an elevated grade-separated structure above the CMF access road, which runs perpendicular to the tracks. The Site is surrounded by other parcels of the former Taylor Yard rail complex that have been previously sold for non-railroad uses, including two California State Parks-owned parcels: the Taylor Yard G1 Parcel (G1 parcel) and Rio de Los Angeles State Park, schools, and a multi-unit housing development (City of Los Angeles 2014). Figure 2-1 shows the regional location of the site.

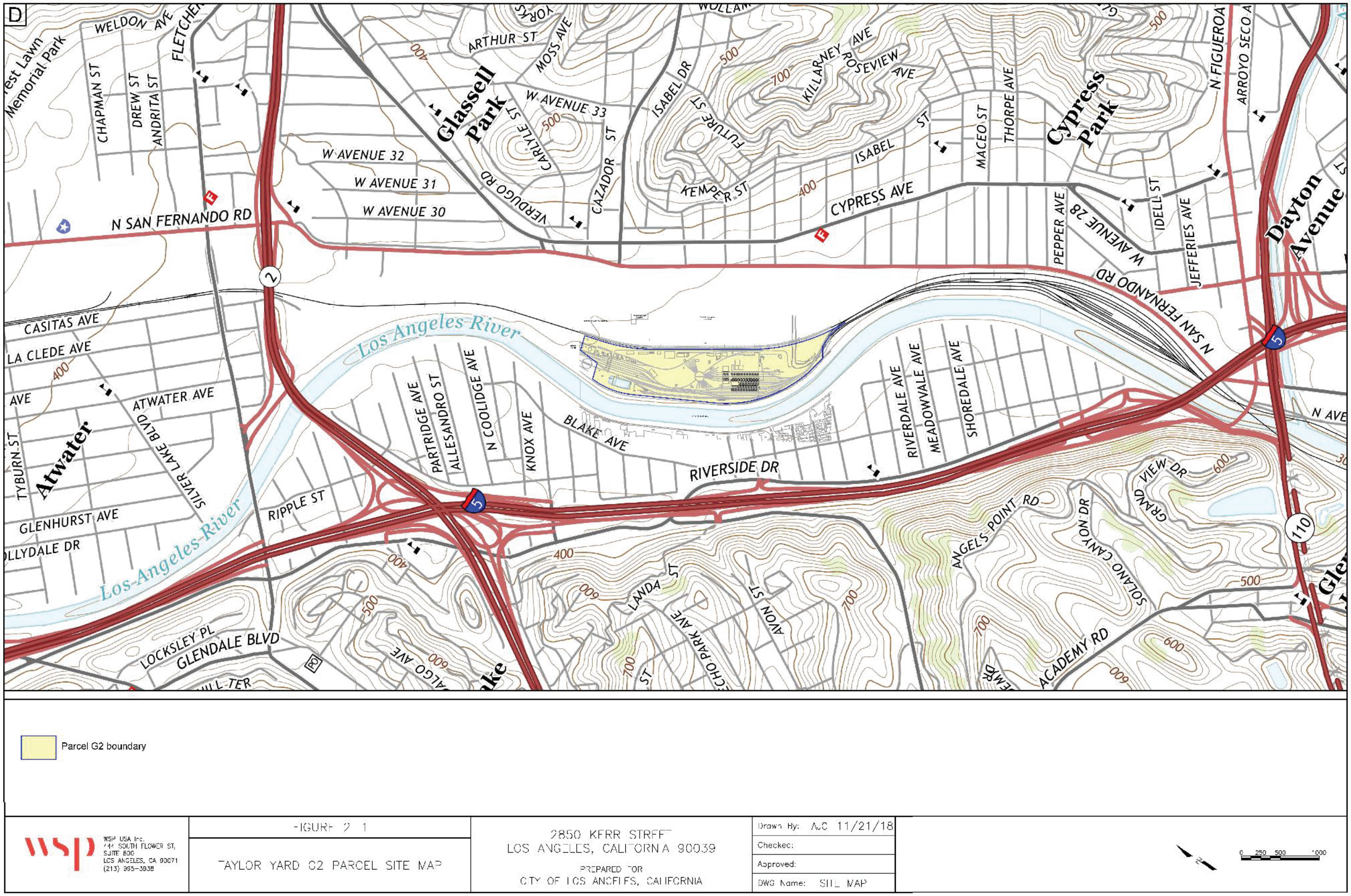


Figure 2-1. Taylor Yard G2 Parcel Site Map

2.2.1 SITE HISTORY

UPRC and its predecessors were the property owners of the site from the early 1900s. Railyard operations, including maintenance and fueling, began in the 1930s and continued through 2006, when the yard was permanently closed. Former facilities at the site included a diesel shop, a machine shop, a roundhouse, a turntable, underground and aboveground storage tanks (USTs and ASTs), a service track area, and miscellaneous buildings. A storm water collection system and associated industrial wastewater treatment plant were in operation at the site until decommissioning in 2011.

Materials previously used or stored at the site included diesel fuel, Bunker C fuel oil, journal box lubrication oil, gasoline, other types of oils, greases, acids, alkaline cleaning soaps, water treatment chemicals, paints and thinners, pesticides and herbicides, compressed gases, lead, cleaning solvents, and chlorinated solvents. Since 1985, a multitude of soil, soil gas, and groundwater investigations have been conducted at the site. Results of the several progressive phases of remedial investigation have identified constituents of potential concern (COPCs) in the site soil to be lead, arsenic, total petroleum hydrocarbons, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). VOCs are also present in groundwater beneath the site; however, groundwater impacts are generally attributed to the regional VOC groundwater plume and VOC sources upgradient of the site (WSP 2018a).

The site is zoned for industrial use. It has undergone previous site remediation evaluations to industrial standards under the guidance of DTSC. On January 8, 2014, DTSC adopted a negative declaration and on March 14, 2014, approved the Remedial Action Plan, Taylor Yard Parcel G-2, Los Angeles, California, prepared by UPRC (City of Los Angeles 2014). More recently, BOE completed a comprehensive site assessment in 2018 to further characterize the site and submitted the Final Report of Findings to DTSC in June 2019. BOE intends to develop a revised Response Plan to replace the 2014 UPRC Remedial Action Plan and begin remediation activities in 2020.

In 2013, the City was presented with the opportunity to purchase the G2 parcel from UPRC. Land purchase negotiations between the City and UPRC were finalized in March 2017. In June 2017, BOE initiated Task Order Solicitation No. 13 for development of an implementation plan/pre-design report that includes a site remediation strategy and three preliminary design concepts for development at the G2 parcel.

The City intends to remediate and activate the Project site in a series of projects over an approximately 10-year period. It is currently in the planning and conceptual design phase for the multiple projects to be implemented at the site. The projects generally consist of an early activation effort, this Taylor Yard G2 Water Quality Improvements Project, and the Taylor Yard G2 River Park Project to complete full site development. Each project will advance revitalization of the River through implementing a site remediation strategy for this known brownfield from its former uses as a UPRC rail maintenance facility, and development of habitat-focused open space.

The BMP evaluated and recommended for the site, as discussed in subsequent sections, is a Bioretention BMP. Bioretention facilities are landscaped shallow depressions that capture and filter stormwater runoff according to the LID Manual (City of Los Angeles 2011). The Bioretention BMP would be developed by excavating portions of the G2 parcel area to be shaped to form a natural channel system that is protected from river flows, but allows on-site dry weather flow and on-site 85th percentile wet-weather flow to be conveyed into the wetlands and riparian habitat area for treatment, habitat restoration, and National Pollutant Discharge Elimination System (NPDES) permit compliance.

The site is immediately adjacent to the Glendale Narrows portion of the River flood control channel. It is situated in Reach 6 of the Ecosystem Plan and is adjacent to a soft-bottomed portion of the River. The Project is critical to fulfillment of the Ecosystem Plan goals to restore ecosystem values in and along an 11-mile corridor of the River from the edge of Griffith Park into Downtown Los Angeles. The Glendale Narrows is fed by stormwater runoff, water reclamation plant effluent and natural springs, and supports native stands of willows, sycamores, and cottonwoods, box elders, Arizona ash, cattails, bulrush, and aquatic plants, as well as exotic and invasive species (LASAN 2007). Current land use in the area is dominated by residential housing, light and heavy industrial use, manufacturing, and public lands. Approximately 730 acres of parklands and open spaces exist within a two-mile radius of the site, including the Río de Los Angeles State Park, which is adjacent and east of the site. The approximately 600-acre Elysian Park is located across the River and across the Interstate 5 Golden State Freeway southwest of the site. Also, the Sonia Sotomayor Center for Arts and Sciences is located east of the Site across the existing railroad tracks (City of Los Angeles 2014).

2.2.2 SOCIOECONOMIC PROFILE

A community profile was prepared for the area surrounding the G2 parcel (WSP 2019). The profile supports the park design process by describing the environmental justice implications for potential park users from surrounding neighborhoods.

The profile analyzed the census tracts and census block groups within 1 mile of the site. The analysis was based on demographic and socioeconomic data from the 2017 American Community Survey 5-Year Estimate, using geographic information systems (GIS). The profile provides an overview of Disadvantaged Communities (DAC) within the study area, in addition to Low Income Households (LIHH), Low Income Communities (LIC), and the racial and economic composition of the community.

Overall, within the study area, 78 percent are DACs and 72 percent are LICs. The entire study area has a higher pollution burden than more than 50 percent of Los Angeles County, and 48 percent of households are below poverty, compared to 40 percent in Los Angeles County. The entire community profile is provided as Appendix A.

2.2.3 BIOLOGICAL RESOURCES

The following is based on excerpts from the biological and jurisdictional supplementary analysis technical memorandum prepared for the Taylor Yard G2 River Park Project by ECORP Consulting Inc. (2018). The entire technical memorandum including references cited herein is provided as Appendix B.

TAYLOR YARD RAILROAD MAINTENANCE AREA

The decommissioned railroad maintenance yard is currently in a very disturbed state. The site is mostly flat, and, although all structures have been removed, the concrete foundations remain and cover approximately 35 to 40 percent of the site. There is a high-voltage power line that traverses along the western edge of the site, and at the top of the bank of the River. The vegetation that exists comprises a mixture of ruderal species (non-native weeds typical of disturbed areas) as well as what appear to be remnant ornamental trees. Culverts flow under the site and daylight on the west-facing bank of the River. It appears that the culverts drain the site itself and most likely the adjacent streets to the east, north, and south. An active double rail line exists along the eastern side of the site and is situated approximately 50 feet away.

LOS ANGELES RIVER CHANNEL

Adjacent to the site, the River currently comprises concrete banks and a natural bottom. Within the riverbed portion of the channel, there is a mixture of open water and disturbed riparian and wetland vegetation that is dominated by non-native plant, tree, and vine species. The most prominent non-native plant species is a rhizomatous monocot known as giant reed (*Arundo donax*). The riverbed is braided in some areas; however, in most locations there are primary and secondary terraces that have various types of riparian and wetland vegetation communities.

SPECIAL-STATUS SPECIES AND HABITAT

For this section, special-status refers to species that are listed under the state and/or federal Endangered Species Acts, species of special concern, species or habitat that are afforded special protection due to their rarity or limited distribution, or species that are being tracked or monitored by conservation groups (e.g., California Native Plant Society, Western Bat Working Group).

SPECIAL-STATUS HABITATS

Special-status habitat is not likely to be present within the site; however, it is likely that within the River channel special-status vegetation communities are present. For example, there is likely southern willow scrub which is categorized as a S2.1 vegetation community in the Manual of California Vegetation (Very threatened; 6 – 20 viable occurrences worldwide/statewide, and/or more than 518 -2,590 hectares) (Sawyer et al. 2012).

SPECIAL-STATUS PLANTS AND WILDLIFE

Historically, there have been numerous special-status plants and wildlife observed in the vicinity of the Project, including the federally and state-listed as endangered least Bell's vireo (*Vireo bellii pusillus*; LBVI). Protocol-level surveys for the federally and state-listed as endangered southwestern willow flycatcher (*Empidonax trailii extimus*; SWFL), LBVI, and the federally listed as threatened and California species of special concern coastal California gnatcatcher (*Polioptila californica*; CAGN) were conducted in 2005 and 2007 in USACE-managed areas (USACE 2015a). The survey area included the Project area. Surveys for SWFL and CAGN were negative. LBVI were detected in 2007, in 2009 during another survey, and again in 2013, but breeding or nesting behavior has not been observed (USACE 2015a).

There do not appear to be records of special-status species within the site based on results of a California Natural Diversity Database (CNDDB) records search using the 2017 dataset. Only records from 1980 to the present are shown. The reason for using these parameters is because most records prior to 1980 are from the early 1900s, and, with the heavy development in the vicinity since that time, the possibility of those species persisting is low. The Ecosystem Plan states that the study area is not likely to have federal or state-listed species, or species of special concern (special-status species) because the site has been developed for many decades (USACE 2015a).

The CNDDB data have been provided under a license agreement with the California Department of Fish and Wildlife (CDFW). Imagery depicting locations of these species cannot be shared with the public, however, summarized data such as a list of species known to occur are acceptable.

JURISDICTIONAL WETLANDS AND WATERS

The presence of jurisdictional features was assessed using desktop analysis for the Project and adjacent River channel. The site does not appear to have any jurisdictional features present based on review of aerial imagery. There does appear to be two substantial culvert outlets that release surface flows from urban areas adjacent to the site. The flows are released directly to the River channel. These culverts likely run underneath the site and are not expected to be considered jurisdictional by the USACE, Regional Water Quality Control Board (RWQCB), or CDFW.

The River channel is assumed to have jurisdictional features and is currently designated as a Traditional Navigable Water (USACE 2015a). Using ordinary high-water mark (OHWM) as a basis for USACE jurisdiction, it is assumed that most of the riverbed will be considered Waters of the U.S. When the Ecosystem Plan is referred to, the OHWM for the River was conservatively estimated to be halfway up the embankment (USACE 2015b) based on examination of debris lines. Attachment B in Appendix B depicts the anticipated USACE jurisdictional waters within the River channel. In addition, RWQCB jurisdictional waters (Waters of the State) will likely cover the same areas as Waters of the U.S. (see Attachment Bin Appendix B) and could also include the entire channel to the top of bank. CDFW jurisdictional waters will likely cover the same areas as Waters of the U.S., and would include the entire channel, top of bank to top of bank, including any area of riparian canopy cover. Attachment B in Appendix B depicts only the CDFW jurisdictional habitat, even though its jurisdiction is likely to extend farther up the banks.

2.2.4 GEOLOGY

As described by CDM Smith (2014), the site is located at the northern edge of the Los Angeles coastal plain and is underlain by up to 160 feet of unconsolidated alluvial sediments (California Department of Water Resources [DWR] 1961). These sediments include fluvial deposits associated with the River and stream terrace and alluvial fan deposits associated with smaller tributary drainages originating in the hills bordering the Glendale Narrows, as well as colluvium (United States Geological Survey [USGS] 2004). The alluvium associated with the River generally comprises sand- and gravel- dominated deposits, while the alluvium and colluvium derived from the surrounding hills often comprises silt- and clay-dominated deposits (USGS 2004). Older (Pleistocene) poorly consolidated alluvium dominated by silt and clay are present in nearby outcrops northeast of the site. The Miocene Puente Formation is the bedrock unit that underlies the alluvial sediments in the area. This formation consists predominantly of sandstones and mudstones (Lamar 1970).

The Elysian Park Anticline is the major structural feature near the site. This anticline trends northwest-southeast, and the anticlinal axis is located south of the site. Folding and uplift associated with the Elysian Park Anticline occurred contemporaneously with deposition of sediments in the Glendale Narrows, and the structure is currently considered active (Oskin et al. 2000).

According to CDM Smith (2014), most of the site surface is covered by asphalt, concrete, and railroad ballast, beneath which the site is underlain by three soil types:

- Silty sand (fill) – 5 to 15 feet thick
- Coarse-grained alluvium – 25 to100+ feet thick
- Fine-grained alluvium – 5 to 10 feet thick

The fill is primarily composed of silty sand with some gravel and structural debris. The fill layer extends from ground surface to as much as 15 feet below ground surface (bgs).

The coarse-grained alluvial unit consists of poorly graded sand with little to no silt or clay. This soil unit begins as shallow as 5 feet depth and extends to depths greater than 100 feet (maximum depth explored at the site). Discontinuous silt layers, assigned to the fine-grained alluvium unit, are interbedded with the coarse-grained unit between depths of 15 and 30 feet. The coarse-grained unit is interpreted as channel or point bar deposits associated with the River.

The fine-grained alluvial unit consists of silt and silty sand between depths of 15 and 30 feet and occurs in discontinuous layers within the coarse-grained alluvium. The occurrence of this soil unit is limited to the northern area of the site and is believed to be associated with stream terrace deposits originating from drainages in the hills northeast of the site and overbank deposits associated with the River (WSP 2018a).

2.2.5 HYDROGEOLOGY

As described by CDM Smith (2014), the site lies within the Glendale Narrows portion of the Los Angeles Forebay Sub-Basin of the Central Groundwater Water Basin (Forebay) (DWR 1961). The Glendale Narrows is a region where the River dissects the surrounding low-lying hills. Fluvial deposits, stream terraces, alluvial fan deposits, and colluvium are present within the Glendale Narrows from the ground surface to depths of up to 160 feet. These soils comprise the aquifer beneath the Glendale Narrows.

Groundwater occurs under unconfined conditions within the Glendale Narrows. The water table occurs at an approximate depth of 30 to 40 feet (CDM Smith 2014), and the aquifer reaches a maximum depth of approximately 160 feet at the bedrock contact (Puente Formation). Bedrock also bounds the aquifer laterally at the steep valley walls of the Glendale Narrows. Groundwater flows unobstructed through the aquifer in the Glendale Narrows, linking the aquifers in the higher elevation San Fernando Basin with the aquifer in the lower Forebay. The unlined stretches of the River, such as the section of the River adjacent to the site, have historically been groundwater discharge areas (USGS 2004). Preliminary groundwater/surface water studies concluded that near the River, groundwater in the uppermost part of the aquifer discharges to the River, while deeper groundwater flows through the aquifer independent of the River, following topography (MBE 2002, Laton 2002).

Based on groundwater monitoring conducted at the site from 1994 to 2012, groundwater beneath the site flows south to southeast, parallel to the trend of the Glendale Narrows, with a horizontal hydraulic gradient across the G2 parcel of approximately 0.003 foot per foot (CDM Smith 2012, WSP 2018a).

2.2.6 TOPOGRAPHY

The site elevation is approximately 353 feet above mean sea level, and the ground slopes toward the southwest (USGS 2012). The site is located within the Los Angeles River Watershed (Hydrologic Unit Code 18070105). The River is located along the west side of the site. Locally, the sides of the River are concrete-lined, and the bottom is unlined (WSP 2018a).

2.2.7 HYDROLOGY

The following discussion is based on a Water Quality Supplementary Analysis Technical Memorandum prepared for the Taylor Yard G2 River Park Project by CWE (2019).

Taylor Yard historically consisted of one large 244-acre parcel that was subsequently divided into 10 parcels. The Project occupies the G2 parcel that is shown in Figure 2-2, which also displays the major storm drains for areas outside the G2 parcel. The land to the east of the railroad slopes east, while the land west of the railroad slopes towards the River. There are several small parcel outlets along the top of the eastern riverbank that appear to drain the G2 parcel. Two locations that may indicate pipes embedded or connected to the eastern bank lining are shown as red lines in Figure 2-2. These locations should be further investigated in future phases of the Project (CWE 2019).

Figure 2-2. Major Storm Drains in the Vicinity of the G2 Parcel

The hydrologic regime of the site and surrounding area consists of direct precipitation, River flows, local runoff, and groundwater flowing under the site. The watersheds for the drains that could be used for delivery of stormwater and urban runoff are shown in Figure 2-3. The watersheds have a total combined watershed area of 4,297 acres.

As Figure 2-2 shows, there are several storm drains that cross the site at various depths bgs. Three major storm drains were identified in the Taylor Yard Multiple Objective Feasibility Study (SCC 2002) and summarized by CWE (2018). These major storm drains are as follows:

— Project 480, Unit 3, Portion of Line B: This drainage facility consists of a 10-foot by 12-foot reinforced concrete box (RCB) (Project 479, Unit 1, Line F) that runs along Eagle Rock Boulevard then transitions to an 11.5-foot horseshoe arch tunnel. The arch tunnel begins as the box culvert curves away from Eagle Rock Boulevard, continuing under San Fernando Road and the railroad tracks to the River. The capital discharge for this storm drain is 2,550 cubic feet per second (cfs).

— Eagle Rock Drain: This drainage facility consists of a 14-foot by 8-foot RCB that runs along Eagle Rock Boulevard. As it curves towards the River, the culvert transitions to an 8.5-foot by 10.5-foot arch section. It transitions to a 10-foot by 10-foot RCB for approximately 1,000 feet under the UPRC Taylor Yard right-of-way. The capital discharge for this storm drain is 4,550 cfs.

— City-UPRC Drain 29901: This drainage facility consists of a 48-inch reinforced concrete pipe (RCP) that transitions to a 42-inch RCP as it nears San Fernando Road transitioning again to a 30-inch RCP as it crosses San Fernando Road. The pipe splits into two 48-inch RCPs for the next 1,250 feet and then transitions to a 72-inch by 67-inch RCB before transitioning into a 78-inch corrugated metal pipe for the last 100 feet before emptying into the River. The capital discharge for this drainage facility is 130 cfs.

— City Drain 1805 – This drainage facility runs along San Fernando Road near the Rio de Los Angeles State Park and captures flows that are carried through a 48-inch RCP and into an open channel that discharges into the River just downstream of the site.
— Local surface runoff drains to outlets along the top of the River levee.

The storm drain systems listed above convey flows from primarily developed land. Figure 2-3 displays this area and identifies the storm drain systems through which different subarea flows are conveyed.

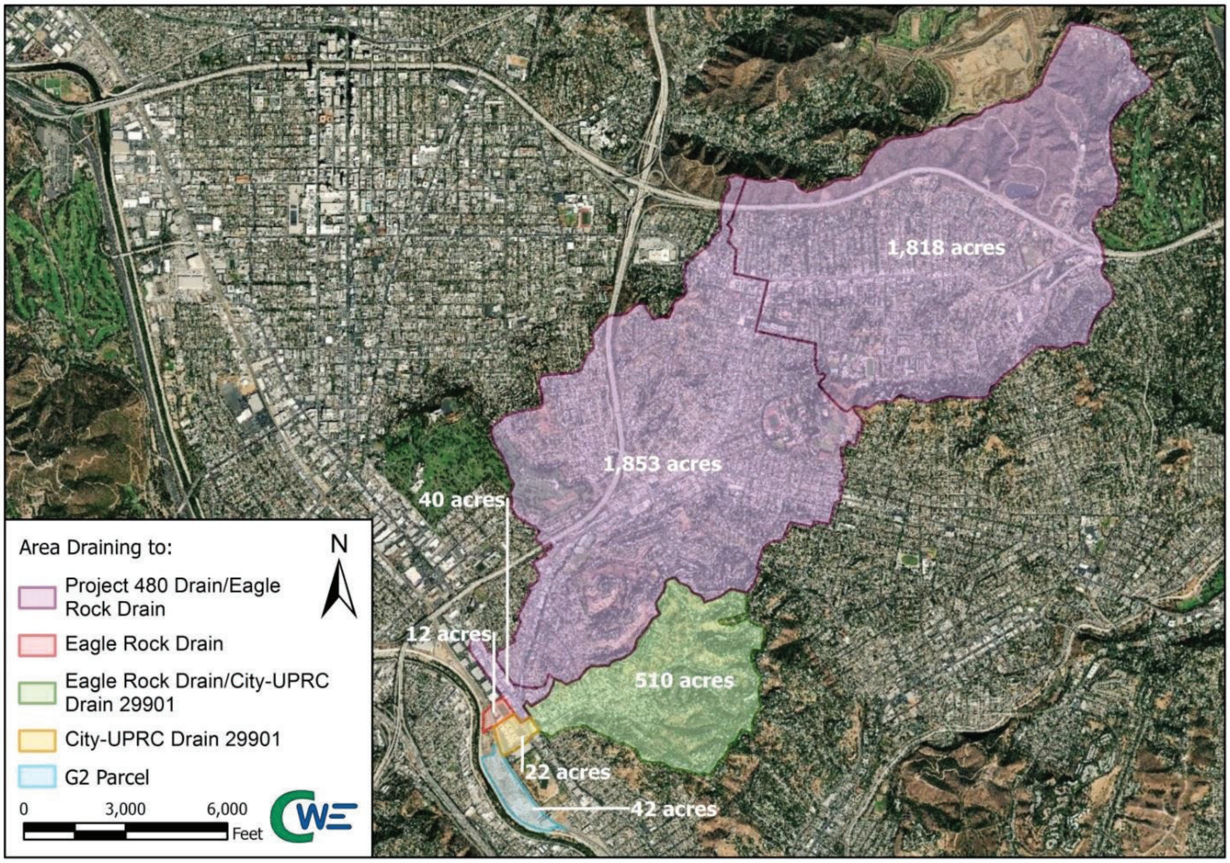


Figure 2-3. Watersheds Draining Near the G2 Parcel

2.2.8 WATER QUALITY

According to the Basin Plan prepared by the Los Angeles RWQCB (LARWQCB 1994) the River is composed of six reaches with water quality objectives and beneficial uses designated for each reach. Ecosystem Plan Reach 6 falls within Los Angeles River Reach 3, per the LARWQCB Basin Plan. The existing water quality described for Ecosystem Plan Reach 6 is based on the water quality objectives and beneficial uses for Los Angeles River Reach 3.

SURFACE WATER QUALITY

The CWA requires states to identify water bodies that are considered impaired, which means the water body does not meet water quality standards. States must then place these water bodies onto a list. This list, referred to as the California 2014/2016 Integrated Report includes a combined list of CWA Section 303(d) water bodies that are listed as not meeting water quality standards and Section 305(b) water bodies that identifies water bodies still requiring the development of a total maximum daily load (TMDL), those that have a completed TMDL approved by the U.S. Environmental Protection Agency (USEPA), and those that are being addressed by actions other than a TMDL (State Water Resources Control Board [SWRCB], 2018). Table 2-1 summarizes water quality information from the Final 2014/2016 Integrated Report.

Table 2-1. 2014/2016 Integrated Report Summary

Water Body	Pollutant	TMDL Status
Los Angeles River Reach 3	Trash	EPA Approved TMDL
	Ammonia	EPA Approved TMDL
	Copper	EPA Approved TMDL
	Nutrients (Algae)	EPA Approved TMDL
	Toxicity	TMDL Required
	Indicator Bacteria	EPA Approved TMDL

Source: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml

BENEFICIAL USES

The document for each region of SWRCB's jurisdiction is the Water Quality Control Plan, commonly referred to as the Basin Plan. The Basin Plan designates beneficial uses for surface and ground waters, and it sets qualitative and quantitative objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy. The Basin Plan also describes implementation programs to protect the beneficial uses of all waters in the region and surveillance and monitoring activities to evaluate its effectiveness (LARWQCB 1994). Designated potential and existing beneficial uses for Los Angeles River Reach 3 are displayed in Table 2-2.

Table 2-2. Beneficial Uses

Water Body	Beneficial Use	Description	Notes
Los Angeles River Reach 3	MUN	Municipal and Domestic Supply	Potential; Designated under SB 88-63 and RB 89-03. May be considered for an exemption later.
	IND	Industrial Service Supply	Potential
	GWR	Groundwater Recharge	Existing
	REC-1	Water Contract Recreation	Existing
	REC-2	Non-contact Water Recreation	Existing
	WARM	Warm Freshwater Habitat	Existing
	WILD	Wildlife Habitat	Existing
	WET	Wetland Habitat	Existing; Waterbodies designated as WET may have wetlands habitat associated with only a portion of the waterbody. Any regulatory section would require a detailed analysis of the area.

GROUNDWATER QUALITY

The general flow of groundwater, as determined by groundwater monitoring wells in the vicinity, is south-southeast (Geosyntec 2017). The depth to groundwater fluctuates with the wet and dry season but generally ranges between 20 and 35 feet bgs. However, "perched" groundwater has been encountered at depths of less than 5 feet bgs. Monitoring activities at the site have shown groundwater contamination with VOCs at levels exceeding state drinking water standards or maximum contamination levels (MCLs) (CWE 2019).

During the 2017 groundwater monitoring period, the horizontal hydraulic gradient across the G2 parcel was approximately 0.003 foot per foot (Geosyntec 2017). Shallow, impermeable geologic strata forces groundwater to the surface. As a result, the River through the Glendale Narrows has an unlined bottom due to upward pressure from shallow groundwater (CDM 2014).

The nearest drinking water well is Well 3949A, located approximately 1-mile northwest of the site (Geosyntec 2017). Groundwater monitoring at Taylor Yard was initiated in 1994 as part of DTSC's Enforceable Agreement (Docket #HSA89-90-006) (Geosyntec, 2017). The objective of the Enforceable Agreement is to ensure that the nature and extent of any releases or threatened releases of a hazardous substance to the air, soil, surface water, or groundwater, at or from the site, are investigated and that appropriate remedial actions are taken.

The G2 parcel is within the San Fernando Valley Groundwater Basin, an area designated by USEPA as a State Superfund site for groundwater contamination (CDM 2014). Groundwater contamination in the San Fernando Valley Groundwater Basin is linked to historic and current industrialization of the San Fernando Valley. In 1980, concentrations of VOCs, including trichloroethylene (TCE) and perchloroethylene (PCE), were found to be above federal MCLs and State Action Levels in a number of City production wells.

Four National Priority List (NPL) sites have been identified as part of the groundwater contamination in the San Fernando Valley. The site is located within the southern portion of Area 4 Pollock, an NPL site with contaminated groundwater covering approximately 5,860 acres near the Pollock Well Field in the City. COPCs in groundwater at the site are TCE, PCE, 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-DCE, and vinyl chloride (CDM 2014).

Local groundwater periodically interfaces with surface water along the portion of the River adjacent to the G2 parcel due to a shallow impermeable geologic stratum forcing groundwater to the surface. DTSC recommended additional assessments to be conducted to determine the contribution of contaminated groundwater from the rail yard to the River (CDM 2014).

UPPER LOS ANGELES RIVER ENHANCED WATERSHED MANAGEMENT PROGRAM

A ULAR EWMP was developed to address water quality in this section of the River (Black & Veatch 2015). The EWMP describes a customized compliance pathway that participating agencies will follow to address the pollutant reduction requirements of the 2012 Municipal Separate Storm Sewer System (MS4) Permit Order No. R4-2012-0175; NPDES Permit No. CAS004001. By electing the optional compliance pathway in the MS4 Permit, the ULAR Watershed Management Program Group has leveraged the EWMP to facilitate a robust, comprehensive approach to stormwater planning for the ULAR watershed. This EWMP builds upon multiple previously developed planning efforts and identifies a detailed implementation strategy that provides not only water quality improvement but also environmental, aesthetic, recreational, water supply and/or other community enhancements. The strategy was developed through an extensive stakeholder coordination process including three public workshops and numerous one-on-one meetings. The vision for development of the EWMP was to use a multi-pollutant approach that maximizes the retention and use of urban runoff as a resource for groundwater recharge and irrigation, while also creating additional benefits for the communities in the ULAR watershed (CWE 2019).

WASTE DISCHARGE REQUIREMENTS FOR MS4 DISCHARGES WITHIN THE COASTAL WATERSHEDS OF LOS ANGELES COUNTY

The MS4 Permit contains effluent limitations, receiving water limitations (RWLs), minimum control measures (MCMs), and TMDL provisions, and outlines the process for developing watershed management programs, including the EWMP. The MS4 Permit incorporates the TMDL Waste Load Allocations (WLAs) applicable to dry- and wet-weather as water quality-based effluent limits (WQBELs) and/or RWLs. Section V.A of the MS4 Permit requires compliance with the WQBELs as outlined by the respective TMDLs. The EWMP provides a compliance pathway for attaining these limitations.

The MS4 Permit also requires permittees to implement MCMs to protect water quality in receiving waters (Part VI.D). Unlike previous permits, the MS4 Permit allows for the modification of MCMs to more effectively address the highest priority water quality conditions. Permittees can evaluate current MCMs, identify potential modifications that will address water quality priorities, and provide justification for modification and/or elimination of any MCM that is determined to not be applicable to the permittee (with the exception of MCMs in the Planning and Land Development Program, which may not be eliminated). Customization may include replacement of an MCM for a more effective measure, reduced implementation of an MCM, augmented implementation of the MCM, focusing the MCM on the water quality priority (WQP), or elimination of an MCM.

A primary driver of the extent and scheduling of control measures that make up the EWMP Implementation Strategies are the applicable TMDLs in the Los Angeles River watershed. Section 303(d) of the CWA requires states to prepare a list of water bodies that do not meet water quality standards and establish for each of these water bodies load and waste load allocations (load refers to pollutants), that is, a TMDL that will ensure attainment of water quality standards. A TMDL represents an amount of pollution that can be released by anthropogenic and natural sources of a watershed into a specific water body without causing a decline in water quality and beneficial uses. Unlike federal law, State law requires Regional Boards to include an implementation plan for TMDLs, and these plans generally include compliance schedules.

— A summary of the existing TMDLs for the ULAR is presented in Table 2-3, which presents TMDLs developed for water bodies within the ULAR EWMP area and TMDLs for downstream waterbodies.
— Table 2-4 (mainstem and tributaries) show where the permit assigns WQBELs, RWLs, or WLAs to permittees within the ULAR EWMP area. The numeric WQBELs and RWLs as well as the WLAs for the USEPA TMDLs listed in Table 2-3 and Table 2-4 can be found in Attachments N and O of the MS4 Permit.

Table 2-3. TMDLs Applicable to the ULAR

TMDL	LARWQCB Resolution Number	Effective Date and/or EPA Approval Date
LA River Nitrogen Compounds and Related Effects	2003-009	03/23/2004
	2012-010 (amended)	08/07/2014
Legg Lake Trash TMDL	2007-010	03/06/2008
LA River Trash TMDL	2007-012	09/23/2008
LA River Metals TMDL	2007-014	10/29/2008
	2010-003 (amended)	11/03/2011
LA River Bacteria TMDL	2010-007	03/23/2012
Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL	2011-008	03/23/2012
Los Angeles Area Lakes TMDLs for Lake Calabasas, Echo Park Lake, and Legg Lake	NA (USEPA TMDL)	03/26/2012

Source: CWE 2019

Based on available information and data analysis, Water Body-Pollutant Combinations (WBPCs) were classified in one of the three MS4 Permit categories, as described in the EWMP. The MS4 Permit outlines a prioritization process that defines how pollutants in the various categories will be considered in scheduling. The factors to consider in the scheduling include the following based on the compliance approaches outlined in the MS4 Permit:

— Regional Board-adopted TMDLs with past due interim and/or limits and those with interim and/or limits within the MS4 Permit term (schedule according to TMDL schedule)
— Regional Board-adopted TMDLs with interim and/or limits outside the MS4 Permit term (schedule according to TMDL schedule)
— Other receiving water exceedances

USEPA TMDLs, 303(d) listings without a TMDL adopted, and other exceedances of RWLs do not contain milestones or an implementation schedule. As such, these Water Quality Priorities do not have a defined schedule for attainment/implementation. To address this issue for USEPA TMDLs, Part VI.E.3.c of the MS4 Permit allows MS4 Permittees to propose a schedule in the EWMP. To address this issue for exceedances of RWLs associated with WBPCs not addressed through a TMDL (i.e., 303(d) listings and other exceedances of RWLs), Part VI.C.2.a of the Permit (page 49) specifies how interim numeric milestones and compliance schedules must be set for each WBPC based on its placement in one of the following groups that were developed as part of the EWMP:

- Group 1: Pollutants that are in the same class as those addressed in a TMDL in the watershed and for which the water body is identified as impaired on the 303(d) List as of December 28, 2012;
- Group 2: Pollutants that are not in the same class as those addressed in a TMDL for the watershed, but for which the water body is identified as impaired on the 303(d) List as of December 28, 2012;
- Group 3: Pollutants for which there are exceedances of RWLs, but for which the water body is not identified as impaired on the 303(d) List as of December 28, 2012; or
- USEPA TMDL: Pollutants addressed by USEPA TMDL without an implementation plan/schedule.

Table 2-4 contains the classified pollutants for the reaches of the River; the information for Reach 3 is the reach of interest for the Project. Both wet- and dry-weather requirements for the pollutant are classified.

The schedule for compliance with the classified pollutants was provided in the EWMP. Trash TMDL requirements are already expected to be met, while other pollutant load compliance dates range between 2024 and 2037 based on TMDL requirements.

Table 2-4. Summary of ULAR WMA Water Body-Pollutant Categories for Mainstem Reaches (ULAR EWMP, 2015)

Constituent	Water Body	Category	Relevant TMDL	TMDL in Watershed with Same BMP Class	TMDL in Watershed with Same Scheduling Class	Classification
2,3,7,8-TCDD (Dioxin)	LAR Reach 3	3A (Wet) 3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			
Bis(2-ethylhexyl) Phthalate	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Mercury Total	LAR	2C (Dry) 3C (Wet)	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Thallium Total	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Dibenzo(a,h) Anthracene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Indeno(1,2,3-cd) Pyrene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Nickel Total	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Zinc[2]	LAR Reach 3	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Cyanide	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Benzo(a)Anthracene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Chrysene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Chlorine (Total)	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Dichlorobromomethane	LAR Reach 3	3C	MS4 determined to not be a source that may be causing or contributing to observed exceedances (water reclamation plant effluent is identified source)			
Chlorodibromomethane	Burbank Western Channel	2A	MS4 determined to not be a source that may be causing or contributing to observed exceedances (water reclamation plant effluent is identified source)			

Constituent	Water Body	Category	Relevant TMDL	TMDL in Watershed with Same BMP Class	TMDL in Watershed with Same Scheduling Class	Classification
Selenium	LAR Reach 3	3C	MS4 determined to not be a source that may be causing or contributing to observed exceedances. As noted in the LAR Metals TMDL, originates from natural sources			
pH	LAR Reach 3	3B	Reflective of a condition of pollution, not necessarily a result of MS4 discharge			
Dissolved Oxygen	LAR Reach 3	3B	Reflective of a condition of pollution, not necessarily a result of MS4 discharge			

Source: CWE, 2019

1 – Based on fate and transport mechanisms during wet weather.

2 – The LAR Metals TMDL states that "Dry-weather impairments related to zinc only occur in Rio Hondo Reach 1". As a result, dry weather impairments related to zinc in other water bodies are not addressed by the Regional Board adopted TMDL.

3 – The LAR Metals TMDL does not address dry weather impairments related to copper or lead in Rio Hondo Reach 2, Rio Hondo Reach 3, or Caballero Creek.

2.3 DESCRIPTION OF PROPOSED BEST MANAGEMENT PRACTICES

2.3.1 POLLUTANTS OF CONCERN

The site consists of rail yard surface and subsurface debris and is in a mixed industrial, residential, and open space area surrounded by busy streets. The total area tributary to the G2 parcel is 4,297 acres (see Figure 2-3). Urban runoff draining from the tributary area contains numerous pollutants with potential to degrade water quality and contribute to frequent exceedances of water quality standards. Typical pollutant sources in urban runoff include oil, grease, and gasoline from vehicles leaking onto roadways and parking areas; pesticides, herbicides, and fertilizers from urban areas; sediment from construction operations; and metals from vehicle exhaust, rust, paint, tires, and engine parts. Bacteria and other potentially pathogenic microorganisms from food waste, pet and wildlife waste, human waste including leaking sanitary sewers or overflows, and other sources are also considered as pollutants associated with urban runoff. Given the high level of development, including industrial and commercial areas, pollutant loadings in runoff from the tributary drainage area are assumed to degrade water quality in the River (BOE 2014).

Since 1985, several soil and groundwater investigations have been conducted and have identified chemicals in the soil, including total petroleum hydrocarbons; metals; VOCs and SVOCs; pesticides/herbicides; and polychlorinated biphenyls.

The Bioretention BMP proposed for Prop O funding has been designed to treat pollutants of concern from both offsite urban runoff and onsite flows. By intercepting on- and off-site runoff prior to its release into Los Angeles River Reach 3, it is expected that the recommended water quality strategy would reduce pollutant loads and improve water quality. The four water quality alternatives evaluated for Prop O funding have been designed to specifically target on-site and off-site pollutants of concern and provide dry weather and wet weather runoff management. These benefits will assist in complying with current and future TMDL regulations, increasing beneficial and recreational uses of receiving water bodies, reducing potential risks to human health and safety, reducing beach closures, and preserving aquatic habitat. Thus, the Project will support the City's efforts to comply with current and future stormwater regulations to improve water quality while also benefitting the local community.

2.3.2 BIORETENTION

The Taylor Yard G2 Water Quality Improvements Project proposes to improve water quality, create habitat, and enhance recreational and educational opportunities in this underserved community. The Project includes design and engineering of a Bioretention BMP that would treat all the on-site flow at the G2 parcel. The system can also capture and treat dry- and wet-weather flow from nearby storm drains. Treatment of flows from storm drains will require low-flow diversions, pre-treatment, and pumping.

BIORETENTION BMP

The proposed water quality feature for treatment of on-site and urban runoff is a bioretention facility with an underdrain and impermeable liner as depicted in Figure 2-4 and described below. Bioretention BMPs can remove total suspended solids, nutrients, particulate metals, pathogens, and trash. Bioretention removes stormwater pollutants through physical and biological processes, including adsorption, filtration, plant uptake, microbial activity, decomposition, sedimentation, and volatilization (USEPA 1999). A tabular summary and a further description of water quality improvements and benefits provided by the Bioretention BMP are provided in Section 2.6. An exhibit describing Bioretention BMPs is provided in the Development Best Management Practices Handbook, Part B Planning Activities, 4th edition, which was adopted by the City of Los Angeles, Board of Public Works on July 1, 2011, and is available online.[1]

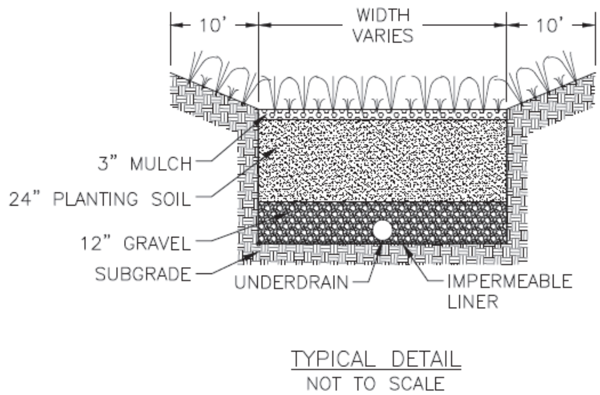


Figure 2-4. Detailed Section of a Bioretention BMP with an Underdrain and Liner

The Bioretention BMP to be funded by Prop O would create habitat and improve water quality and includes the following features:

— Planting layer: Facilitates pollutant filtration, adsorption, and biodegradation
— Mulch: Facilitates pollutant filtration, adsorption, and biodegradation
— Planting soil: Facilitates pollutant filtration, adsorption and biodegradation
— Gravel: Acts as a high porosity reservoir for treated stormwater
— Underdrain: Conveys treated stormwater to an outlet
— Impermeable liner: Composed of a synthetic polymer. Required to prevent incidental infiltration into underlying soils due to the existing soil contamination found on-site from the previous industrial uses.

2.4 ALTERNATIVES

Prop O funding would allow the Project to proceed such that immediate water quality benefits are realized. Each of the alternatives described below includes a description of the BMP strategy selected to treat 303(d) impairments and current and future TMDLs associated with Los Angeles River Reach 3/ARBOR Reach 6. The alternative strategies presented below include a Bioretention BMP designed to treat portions of the design capture volume associated with the site. The total area tributary to the G2 parcel is 4,297 acres (see Figure 2-3). Stormwater mitigation would be achieved through the proposed Bioretention BMP that is designed to manage on-site stormwater flow and urban runoff.

[1] http://www.lastormwater.org/wp-content/files_mf/lidhandbookfinal62212.pdf

2.4.1 TAYLOR YARD G2 WATER QUALITY IMPROVEMENTS PROJECT OBJECTIVES AND GOALS

It is a primary goal of the City to provide public access to the River by cleaning up and opening parts of the G2 parcel in a series of multiple projects. The Project is proposed to be one of the projects leading to full build-out of the G2 parcel.

The design goal for the G2 parcel is to create a habitat-focused open space that can not only be used by the local River-adjacent communities, but also offers a landscape that can serve as a regional destination for a larger array of Angelenos that improves water quality in the River and provides access to the unique urban ecology that exists there and nature-based recreational and cultural opportunities. Thus, the Project is consistent with Prop O criteria and incorporates multiple objectives. Project objectives are listed below and discussed further in subsequent sections.

Project objectives include:

- **Quality of Life**
  - Create Great Park User Experience
  - Provide Recreational Opportunities and Safe River Access
  - Reflect History and Culture
  - Enhance Public Health and Safety
  - Encourage Active and Mass Transportation
- **Resource Allocation**
  - Conserve Water and Energy Resources
  - Use Recycled Materials
- **Natural World**
  - Remediate Contaminated Soils
  - Restore Natural Habitat
  - Support Biodiversity
  - Enhance Wildlife Connectivity
- **Climate and Risk**
  - Design for Sustainability and Net Zero
- **Leadership**
  - Engage Stakeholder Community
  - Design Consistent with Existing Plans
  - Evaluate Economic Viability

SITE DEVELOPMENT

The City's objective for the G2 parcel is to revitalize the River by restoring the ecosystem in and along the 11-mile corridor known as the Glendale Narrows. BOE is in early planning and conceptual design for a series of projects to activate the site and open it to the public (BOE 2018).

One of those projects is the Taylor Yard G2 Water Quality Improvement Project which would feature a Bioretention BMP with an underdrain and liner for on-site treatment of urban runoff while providing a natural hydrologic feature. The proposed location of the BMP is optimal for collecting all site runoff with gravity flow and consistent with the conceptual layout suggested by the landscape architect and depicted in Figure 2-5.

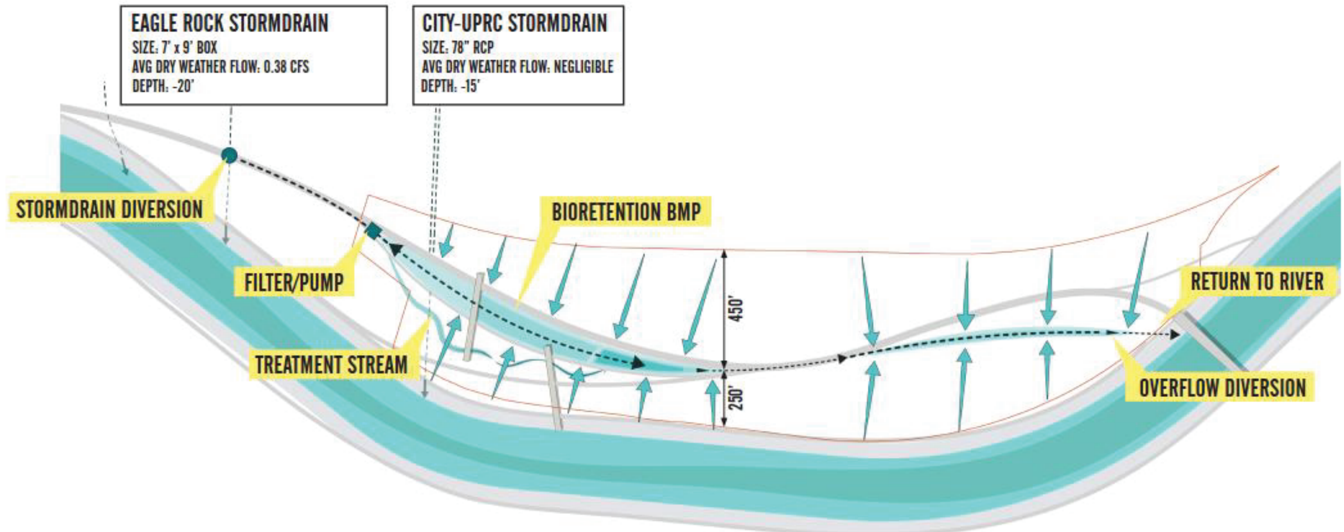


Figure 2-5. Preliminary Design Concept of Bioretention BMP

Future projects may include recreational, aesthetic, and educational elements; re-vegetation with native plant species; and re-establishment of riparian corridors. The project design concepts would be incorporated such that restoration of more natural hydrologic processes can occur and would provide benefits to water quality and habitat.

The proposed Bioretention BMP would improve water quality in the River, which would in turn support beneficial uses of receiving water bodies, reduce potential risks to human health and safety, reduce beach closures, and preserve aquatic habitat. The proposed BMP would also support the City's efforts to comply with current and future stormwater regulations related to the existing water quality conditions and beneficial uses designated for Los Angeles River Reach 3/ARBOR Reach 6.

This project shall not increase flood risk at the project site. Global flood risk for the Taylor Yard G2 site will be studied during development of the larger Taylor Yard River Park project.

PROJECT SEQUENCING

BOE has developed a plan for a series of projects to accomplish remediation and development of the site. The Site is known to be contaminated; therefore, all uses of the Site are contingent on DTSC approval. It is anticipated that each project will involve recreational, educational, and nature programming events. The site development strategy will involve taking advantage of the cleaner areas and existing site features first. Remediation and site development would then continue in strategic projects, all with the River revitalization goals in mind. BOE's project sequencing approach is summarized in Table 2-5.

Table 2-5. Sequencing of Projects at the G2 Parcel

Taylor Yard G2 Parcel Projects	Scope & Major Elements
Early activation project(s)	• 2-3 year timeline • Targeted remediation, River's edge activation, public event/gathering spaces • Coordinated project with adjacent State-owned Taylor Yard G1 (Bowtie) Parcel.
Water Quality Improvements Project	• 5 year timeline • Additional remediation, stormwater quality improvement feature, youth activities and training opportunities
Taylor Yard G2 River Park Project	• 10 year timeline • Full remediation, habitat, recreation

2.4.2 PRELIMINARY ALTERNATIVES DEVELOPMENT

The priority, according to the City's LID Manual (City of Los Angeles 2011) are BMPs that can infiltrate stormwater completely, which reduces the volume of water entering the MS4 and therefore reduces the pollutants that enter the MS4. Infiltration BMPs also provide the benefit of recharging groundwater. Infiltration BMPs, however, are not feasible in all locations. Infiltration BMPs require clean soils with high permeability. They cannot be placed in sites with contaminated soils nor can they be placed adjacent to building foundations, walls, or other locations where additional groundwater could present adverse structural impacts. A pure infiltration BMP is not feasible because of contaminated soil and groundwater at the site as well as the site's proximity to river channel walls on the Los Angeles River.

Capture and use of BMPs like cisterns have second priority according to the LID Manual, but these are most commonly designed for concepts involving buildings and habitation, where captured stormwater could offset some potable water use. These types of BMPs are less desirable for the G2 parcel but could have some use for planned facilities.

The third priority for structural BMPs according to the LID Manual is high efficiency biofiltration BMPs. These are landscaped features that collect stormwater and treat it through biological or physical processes before discharging the stormwater.

Biofiltration BMPs, such as bioretention BMPs, are designed for partial infiltration of runoff and partial biotreatment, according to the LID Manual. The Bioretention BMP was sized according to the methodology used in the City's LID Manual. The 85th percentile rain depth is the amount of rainfall that would be exceeded in only 15% of storm events and was acquired from the Los Angeles County Hydrology Map. The impervious area information was gathered from typical values for land use types as listed in a dataset from the Southern California Association of Governments for data from 2005 and modified based on aerial photography of the G2 parcel to match existing conditions.

The design capture volume (DCV) is the volume of water that would be expected to be produced in an 85th-percentile rainfall event that should be captured by the Bioretention BMP. The DCV is calculated by multiplying the 85th-percentile rain depth by 1.5 and by the catchment area, which is defined by the following formula from the LID Manual:

Catchment area = (impervious area x 0.9) + [(pervious and undeveloped area) x 0.1]

The design infiltrating surface area dictates how much area the Bioretention BMP must cover to capture the entire DCV in a three-hour time period. It is calculated by dividing the DCV by the depth of water that can pass through it in three hours, which is a function of ponding depth and permeability of the soil filter medium.

The estimated runoff coefficient for the tributary drainage areas is 0.45, and the 85th percentile 24-hour rainfall depth is 0.95 inch. The total runoff in acre-feet tributary to the site based on the calculation for the DCV is 229 ac-ft. This would require storing 5.5 feet of water over the entire G2 parcel.

The Reasonable Assurance Analysis from the EWMP has found that capturing 65 percent of the 85th percentile 24-hour storm provides enough reduction of pollutant loads to meet the TMDLs in the River. This would reduce the required DCV to approximately 150 ac-ft and would require storing water to a depth of 3.5 feet over the entire G2 parcel, or 7 feet deep over half of the area.

Due to the site constraints associated with areas of known contamination that were identified during the Phase II Site Assessment (WSP 2018) and existing easements (see Appendix C), it is not feasible to construct a Bioretention BMP system large enough to capture the entire DCV of the watershed upstream from the G2 parcel, or even the EWMP required volume. Several Bioretention BMP alternatives that will capture a portion of the DCV, however, still provide valuable pollutant filtration benefits. These alternatives are described in detail in the following sections.

Dry-weather flows in the drains near the site vary in each drain. The Draft Concept Report (LASAN 2007), indicated that the Eagle Rock drain carries 0.38 cfs and Project 480 carries 0.81 cfs for a total flow of 1.19 cfs, or 534 gallons per minute (gpm). This equates to approximately 0.13 gpm/acre. Recent studies and projects within the City have shown approximately 0.1 gpm/acre, according to LASAN. These numbers provide a range of potential water conservation and pollutant load reduction opportunities for projects on the G2 parcel.

Dry weather water quality and flow monitoring was performed by LASAN from November 14 to December 17, 2019 (see Appendix J). It must be noted that the mentioned dry weather water quality and flow monitoring data, provided in Appendix J, is not incorporated in the proposed report calculations as all quantities were calculated during the concept phase based on EMC in this report. The data from Appendix J -Dry Weather Water Quality and Flow Monitoring Report must be used for the design of this project.

2.4.3 ALTERNATIVE COMPARISON

WATER QUALITY ALTERNATIVE 1 – ONSITE RUNOFF CAPTURE

The first water quality alternative will capture all the on-site flows for the G2 parcel and collect the DCV to the Bioretention BMP and a water quality feature that will treat the water prior to release to the River. The site will be graded so that the local runoff from 42 acres is collected in the Bioretention BMP features and treated. The estimated DCV is 0.9 ac-ft for the site, with an estimated 9.4 ac-ft of average annual water capture. This amount of capture will account for stormwater only and no dry-weather flows from off-site areas. The treatment system for this work requires a footprint of 0.42 acre to handle these flow rates. Monitoring of wet weather flows is recommended on-site prior to design finalization. Figure 2-6 shows the Bioretention BMP location for capturing flows from the site. The overall site configuration for Alternative 1 has the Bioretention BMP near the northeast corner of the MRCA Easement Area. It is expected that the grading will be sloped towards the Bioretention BMP. Treated flows will discharge from the Bioretention BMP into the River via a reinforced concrete pipe in a lined trench.

Figure 2-7 shows the details of the Bioretention BMP for Water Quality Alternative 1. The system includes rip-rap for concentrated on-site flows to enter the upstream end of the facility and a small sedimentation basin to allow any heavier sediments to settle out. Flows will be treated as they seep through biofiltration media and into a perforated 15-inch high density polyethylene (HPDE) pipe. Flows will then discharge into an 18-inch RCP and outlet into the River. Both the Bioretention BMP and the discharge pipe trench will be lined with an impermeable liner to prevent water interacting with contamination in the existing soil profile. The calculations for the design volumes are provided in the Water Quality Supplemental Analysis in Appendix D. Alternative 1 provides only the water quality benefits necessary to meet LID requirements. As such, it will not be eligible for Proposition O funding.

Figure 2-6. Water Quality Alternative 1 Overall Site Layout with On-Site Water Quality Treatment

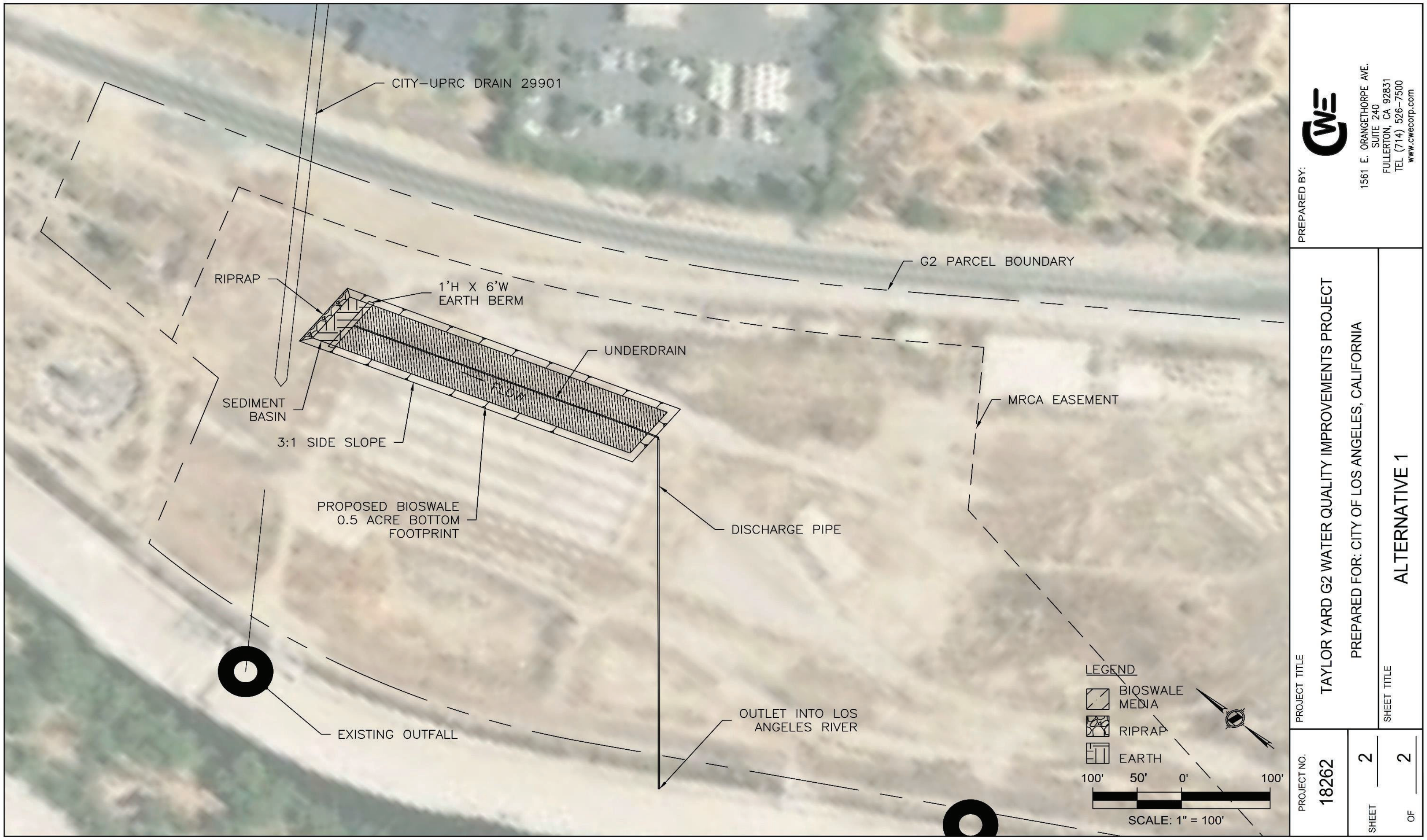


Figure 2-7. Water Quality Alternative 1 Bioretention BMP Concept for On-Site Water Quality Treatment

ESTIMATED POLLUTANT QUANTITIES TREATED

The water quality of the stormwater entering the site is expected to be impacted with trash, some nitrates, zinc, bacteria, and suspended solids due to the commercial, industrial, educational, transportation, and recreational uses in the area and within the parcel. Table 2-6 shows the estimated quantities of influent constituents in an average annual year resulting from on-site wet-weather flows. Quantities were estimated using event mean concentrations (EMCs), obtained from the User's Guide for the Structural BMP Prioritization and Analysis Tool (SBPAT) which correlate pollutants to land use and are based on the most recent data available in Los Angeles County. Quantiles demonstrate the loading associated with 9.4 ac-ft of capture – the total average annual influent stormwater volume for Alternative 1.

Table 2-6. Alternative 1 Influent Water Quality

Constituent	Unit	Quantity
Total Trash	ft^3	42
Nitrate	kg	8.05
Total Copper	kg	0.26
Total Lead	kg	0.05
Total Zinc	kg	1.55
Fecal Coliform	MPN	1.05E+13
TSS	kg	1,315

POLLUTANT LOAD REDUCTION

Bioretention BMPs vary in efficiency for reducing different pollutant loads. Table 2-7 shows the expected efficiency of the proposed BMP. Trash is expected to be removed by both the pre-treatment system and the bioretention basin, allowing for an efficiency of 100%. Remaining efficiencies were based on values provided by the National Pollutant Removal Performance Database for Stormwater Treatment Practices (Winer 2000) and a paper entitled, "Hydrologic and pollutant removal performance of stormwater biofiltration systems at the field scale" (Hatt et al. 2009).

Table 2-7. Alternative 1 Load Reductions

Constituent	Unit	Efficiency	Reduction
Total Trash	ft^3	100%	42
Nitrate	kg	50%	3.55
Total Copper	kg	90%	0.21
Total Lead	kg	90%	0.04
Total Zinc	kg	90%	1.23
Fecal Coliform	MPN	35%	3.25E+12
TSS	kg	90%	1,042

PERCENT DCV TREATED

The treatment system will treat all the flows from the 42 acres of the G2 parcel which equates to 9.4 ac-ft annually. The water will be routed through the Bioretention BMP and discharged to the River. Proposed wet weather influent load and expected load reductions are summarized in Table 2-8.

Table 2-8. Alternative 1 Proposed Load Reductions

Constituent	Unit	Wet-Weather	
		Expected Influent Load	Expected Load Reduction
Total Trash	ft^3	42	42
Nitrate	kg	7.09	3.55
Total Copper	kg	0.23	0.21
Total Lead	kg	0.04	0.04
Total Zinc	kg	1.37	1.23
Fecal Coliform	MPN	9.29E+12	3.25E+12
TSS	kg	1,158	1,042

WATER QUALITY ALTERNATIVE 2 – ON-SITE RUNOFF CAPTURE AND WET WEATHER FLOW FROM UPRC DRAIN

The second water quality alternative will capture all the on-site flows for the G2 parcel and wet weather runoff from the UPRC/City drain upstream. The surface flows will deliver the DCV to the Bioretention BMP and a water quality feature that will treat the water prior to release to the River. The Site will be graded so that the local runoff from 42 acres is collected in the water quality BMP features and treated. The BOE report on the G2 parcel indicated that there is negligible dry-weather flow from the UPRC/City drain. However, the system will use pumps to deliver wet-weather flows from the UPRC/City drain to the Bioretention BMP.

The estimated design capture volume is 0.90 ac-ft for the G2 parcel, with an estimated 9.4 ac-ft of average annual water capture. The drainage system upstream of the G2 parcel is complicated, with interconnecting City and County relief drains that move flows from one drain to another. The UPRC/City drain is connected to the Eagle Rock drain. The amounts of flow in each for various design events are not known at this time. However, it is expected that more water is available than can be treated on-site. This alternative assumes that another 2.7 ac-ft of water will be pumped from the drain and into the Bioretention BMP. This amount of capture will account for stormwater only and no dry-weather flows from offsite areas since no dry-weather flows have been observed in the drain. Based on the estimated storm water capture of 2.7 ac-ft per event, it is expected that 28.6 ac-ft of wet-weather flow will be captured on an average annual basis from the storm drain. A total of 38 ac-ft of stormwater is expected to be captured and treated on an average annual basis using this design concept.

The treatment system for the total 3.6 ac-ft of water to be delivered during storm events requires a footprint of approximately 1 acre to handle these flow rates. Monitoring of wet weather and dry weather flows is recommended prior to design finalization. Figure 2-8 shows the overall site layout for the Bioretention BMP and the location for the stormwater diversion for capturing flows for Alternative 2. It is expected that the surface grading will be sloped towards the Bioretention BMP. Treated flows will discharge from the Bioretention BMP into the River via an RCP within a lined trench.

Figure 2-9 shows the layout for the Bioretention BMP required to treat the on-site runoff and the water diverted from the UPRC/City drain. There is a pre-treatment system prior to pumping the flows to the lined Bioretention BMP and a sedimentation basin to allow further settling of heavier entrained sediments. Like Alternative 1, flows will be treated by biofiltration media and drain into a perforated 15-inch HPDE pipe. Flows will then discharge into an 18-inch RCP in a lined trench and outlet into the River. The calculations for design volumes are provided in the Water Quality Supplemental Analysis in Appendix D.

Figure 2-8. Alternative 2 Site Plan with Flow Diversion and the Bioretention BMP

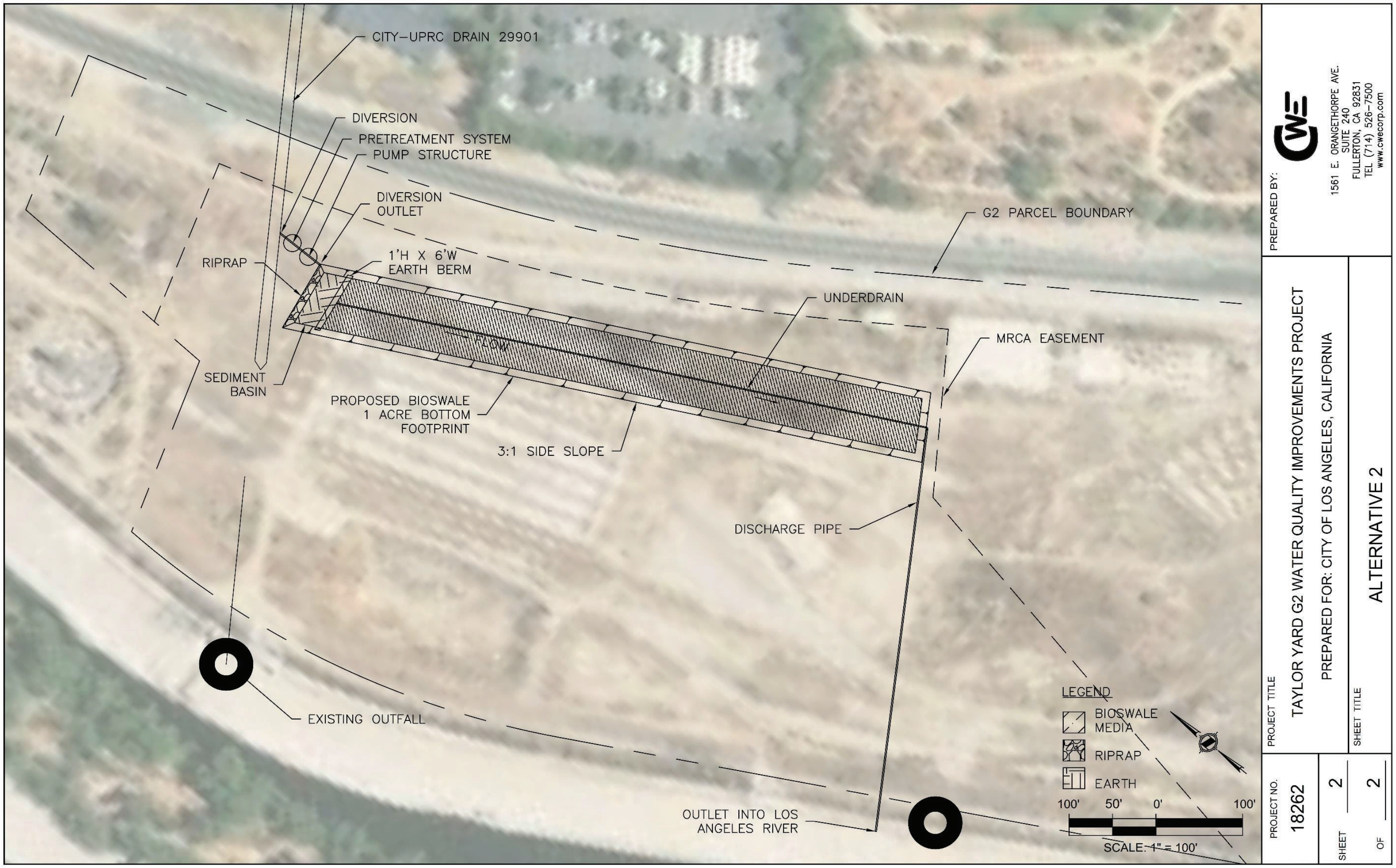


Figure 2-9. Concept Layout for Water Quality Alternative 2 with the Flow Diversion from the UPRC/City Drain

ESTIMATED POLLUTANT QUANTITIES TREATED

Table 2-9 shows the estimated quantities of treated influent constituents in an average annual year for the system based on land use resulting from wet-weather flows. Quantities were estimated using EMCs, obtained from the User's Guide for the SBPAT, which correlate pollutants to land use and are based on the most recent data available in Los Angeles County. The analysis included surface runoff from the G2 parcel as well as a pro-rated capture of water from the UPRC/City drain. Total average annual influent diverted stormwater volume is expected to be 28.6 ac-ft for Alternative 2. The basin will also treat the 9.4 ac-ft of on-site runoff on an average annual basis, for a total of 38 ac-ft of stormwater treated annually.

Table 2-9. Alternative 2 Influent Water Quality

Constituent	Unit	Influent Load
Total Trash	ft^3	113
Nitrate	kg	40.42
Total Copper	kg	0.86
Total Lead	kg	0.37
Total Zinc	kg	4.89
Fecal Coliform	MPN	1.98E+13
TSS	kg	4,830

POLLUTANT LOAD REDUCTION

Bioretention BMPs vary in efficiency for reducing different pollutant loads. Table 2-10 shows the expected efficiency of the proposed BMP for the average annual capture of 38 ac-ft for Alternative 2. Trash is expected to be removed by both the pre-treatment system and the bioretention basin, allowing for an efficiency of 100%. Remaining efficiencies were based on values provided by the National Pollutant Removal Performance Database for Stormwater Treatment Practices (Winer 2000) and a Hatt et al. (2009).

Table 2-10. Alternative 2 Load Reductions

Constituent	Unit	Efficiency	Reduction
Total Trash	ft^3	100%	113
Nitrate	kg	50%	20.21
Total Copper	kg	90%	0.77
Total Lead	kg	90%	0.34
Total Zinc	kg	90%	4.40
Fecal Coliform	MPN	35%	6.92E+12
TSS	kg	90%	4,347

PERCENT DCV TREATED

The treatment system will treat all the flows from the 42 acres of the G2 parcel which equates to 9.4 ac-ft annually. The water will be routed through the Bioretention BMP and discharged to the Los Angeles River. The system also treats 28.6 ac-ft of the estimated 153 ac-ft of average annual runoff that could be captured from the UPRC/City drain. In total, Alternative 2 will treat 38 ac-ft of flows annually. Table 2-11 summarizes wet weather load reductions for Alternative 2.

Table 2-11. Alternative 2 Proposed Load Reductions

Constituent	Unit	Wet-Weather	
		Expected Influent Load	Expected Load Reduction
Total Trash	ft3	113	113
Nitrate	kg	40.42	20.21
Total Copper	kg	0.86	0.77
Total Lead	kg	0.37	0.34
Total Zinc	kg	4.89	4.40
Fecal Coliform	MPN	1.98E+13	6.92E+12
TSS	kg	4,830	4,347

WATER QUALITY ALTERNATIVE 3 - ON-SITE RUNOFF CAPTURE AND DRY-WEATHER FLOWS FROM UPRC AND EAGLE ROCK DRAINS

Water Quality Alternative 3 will capture all the on-site flows for the G2 parcel and runoff from both the UPRC/City and Eagle Rock drains upstream of the parcel. The surface flows will deliver the DCV to the Bioretention BMP and a water quality feature that will treat the water prior to release to Los Angeles River Reach 3. The site will be graded so that the on-site runoff from 42 acres is collected in the water quality BMP feature and treated. The BOE report on the G2 parcel indicated that there is negligible dry-weather flow from the UPRC/City drain. However, there is approximately 0.38 cfs of dry-weather flow in the Eagle Rock drain that will be collected and pumped to the Bioretention BMP. The system will also use pumps to deliver wet-weather flows from the UPRC/City and Eagle Rock drains to the Bioretention BMP.

This system will need to have separate galleries to allow a wetting and drying cycle for maintenance during operation of dry-weather flow treatment. The treatment system for dry-weather and stormwater requires a Bioretention BMP footprint of approximately 1.5 acres to handle these flow rates. Monitoring of wet weather and dry weather flows is recommended prior to design finalization. Figure 2-10 shows the overall concept for Alternative 3 with the Bioretention BMP location for capturing flows and diversions from the UPRC/City and Eagle Rock drains. It is expected that the surface grading on-site will be sloped towards the Bioretention BMP. Treated flows will discharge from the Bioretention BMP into the River via an RCP in a lined trench.

Figure 2-11 shows the conceptual details of the Bioretention BMP that will treat water from the UPRC/City and Eagle Rock drains. The system is sized to treat on-site flows and 2 cfs from the storm drains. The system will also treat low flows diverted from the Eagle Rock drain. The Bioretention BMP will discharge into River Reach 3 via a system like Water Quality Alternatives 1 and 2. The calculations for design volumes are provided in the Water Quality Supplemental Analysis in Appendix D.

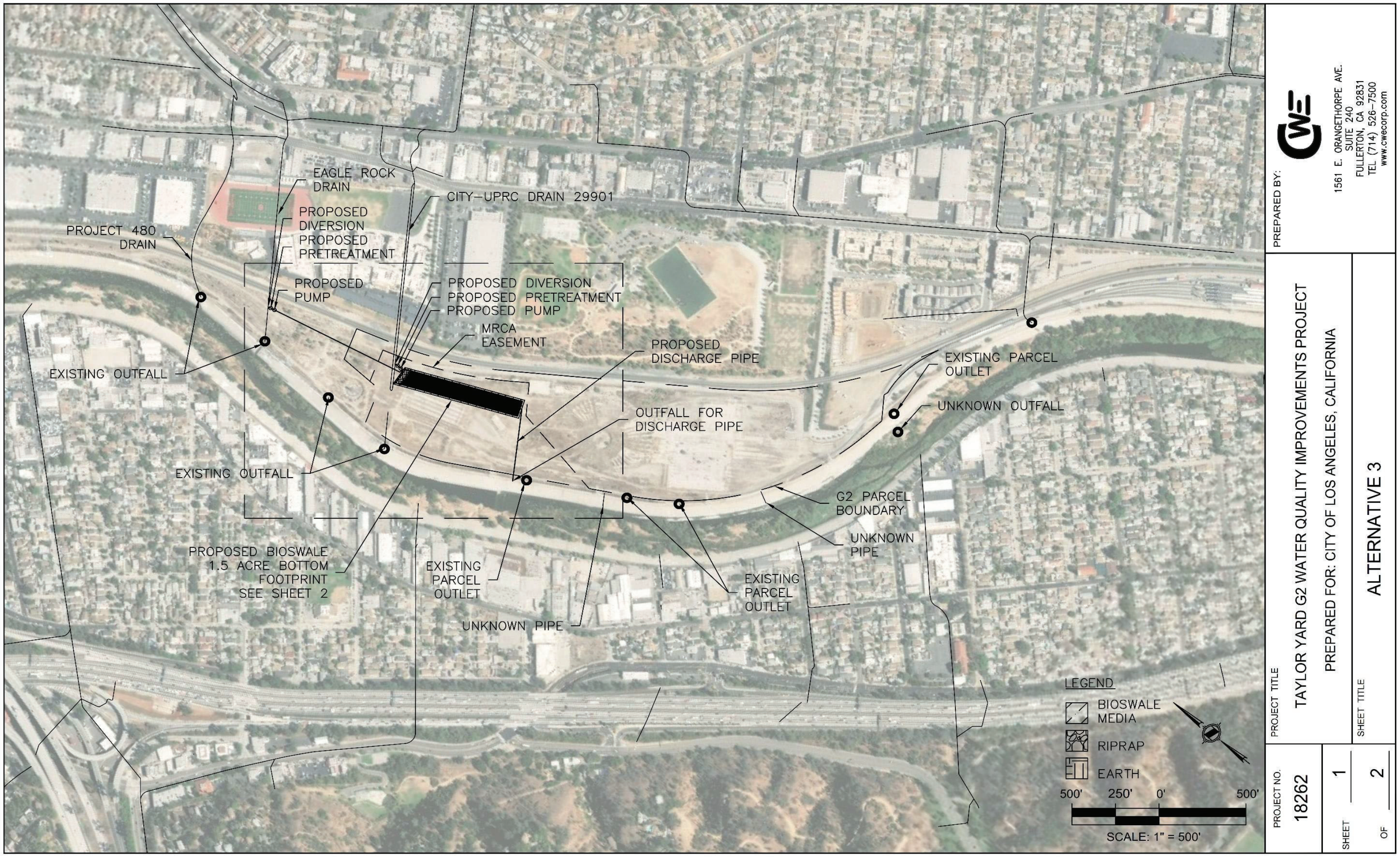


Figure 2-10. Conceptual Layout of Water Quality Alternative 3 with Diversions from UPRC/City and Eagle Rock Drains

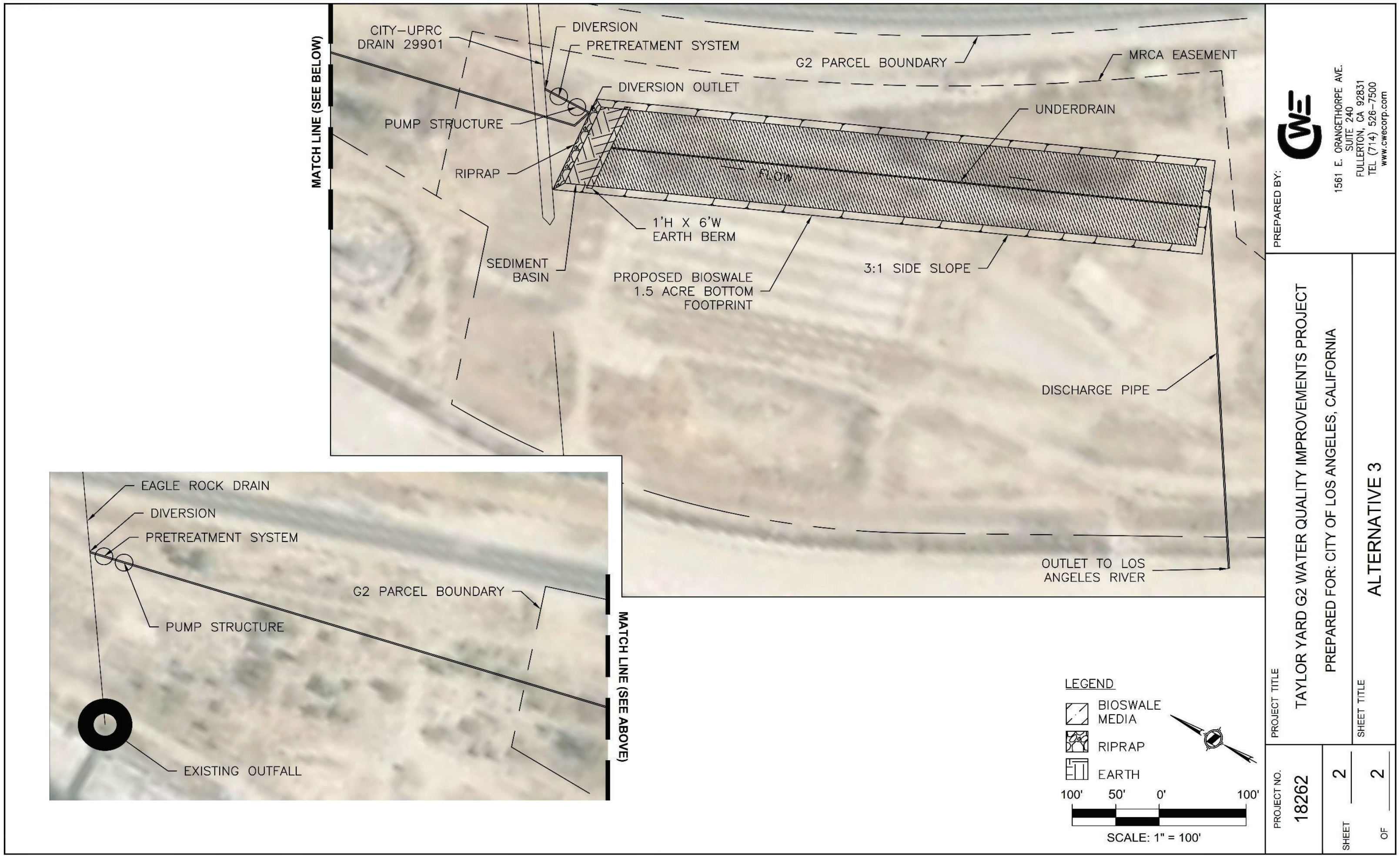


Figure 2-11. Water Quality Alternative 3 Bioretention BMP System for Treating Onsite and Storm Drain Runoff

ESTIMATED POLLUTANT QUANTITIES TREATED

Table 2-12 shows the estimated quantities of influent constituents in an average annual year resulting from wet and dry weather flows. Quantities were estimated using EMCs, obtained from the User's Guide for the SBPAT, which correlate pollutants to land use and are based on the most recent data available in Los Angeles County. The analysis included surface runoff from the G2 parcel, wet weather flows from the UPRC/City drain and wet and dry weather flows from the Eagle Rock drain. Total average annual influent diverted stormwater volume is expected to be 24.2 ac-ft for Alternative 3. The basin will also treat the 9.4 ac-ft of on-site runoff on an average annual basis, for a total of 33.6 ac-ft of stormwater treated annually.

Table 2-12. Alternative 3 Influent Water Quality

Constituent	Unit	Influent Load	
		Wet Weather	Dry Weather
Total Trash	ft^3	158	0
Nitrate	kg	61.07	252 – 328
Total Copper	kg	1.34	5 – 6
Total Lead	kg	0.61	4 – 5
Total Zinc	kg	7.82	23 – 31
Fecal Coliform	MPN	2.72E+13	6.75E+13 – 8.77E+13
TSS	kg	7,287	37,051 – 48,166

POLLUTANT LOAD REDUCTION

Bioretention BMPs vary in efficiency for reducing different pollutant loads. Table 2-13 shows the expected efficiency of the proposed BMP for the average annual capture of 33.6 ac-ft for Alternative 3. Trash is expected to be removed by both the pre-treatment system and the bioretention basin, allowing for an efficiency of 100 percent. Remaining efficiencies were based on values provided by the National Pollutant Removal Performance Database for Stormwater Treatment Practices (Winer 2000) and Hatt et al. (2009).

Table 2-13. Alternative 3 Load Reduction

Constituent	Unit	Efficiency	Reduction	
			Wet Weather	Dry Weather
Total Trash	ft^3	100%	158	0
Nitrate	kg	50%	30.54	126 – 164
Total Copper	kg	90%	1.21	4 – 6
Total Lead	kg	90%	0.55	3 – 5
Total Zinc	kg	90%	7.04	21 – 27
Fecal Coliform	MPN	35%	9.53E+12	2.36E+13 – 3.07E+13
TSS	kg	90%	6,559	33,346 – 43,349

PERCENT DCV TREATED

The treatment system will treat all the flows from the 42 acres of the G2 parcel which equates to 9.4 ac-ft annually. The water will be routed through the Bioretention BMP and discharged to the River. The system also treats 47.4 ac-ft of the annual stormwater runoff that could be captured from the UPRC/City and Eagle Rock drains. Capture of an additional 218 to 283 ac-ft of water from dry-weather flows is also expected. In total, Alternative 3 will treat between 275 and 340 ac-ft of flows annually. Table 2-14 summarizes wet and dry weather pollutant load reductions for Alternative 3.

Table 2-14. Alternative 3 Wet and Dry Weather Pollutant Load and Reduction

Constituent	Unit	Wet Weather		Dry Weather	
		Expected Influent Load	Expected Load Reduction	Expected Influent Load	Expected Load Reduction
Total Trash	ft3	158	158	0	0
Nitrate	kg	61.07	30.54	252 - 328	126 - 164
Total Copper	kg	1.34	1.21	5 - 6	4 - 6
Total Lead	kg	0.61	0.55	4 - 5	3 - 5
Total Zinc	kg	7.82	7.04	23 - 31	21 - 27
Fecal Coliform	MPN	2.72E+13	9.53E+12	6.75E+13 - 8.77+E13	2.36E+13 - 3.07E+13
TSS	kg	7,287	6,559	37,051 - 48,166	33,346 - 43,349

WATER QUALITY ALTERNATIVE 4 – ON-SITE RUNOFF CAPTURE AND WET-WEATHER FLOWS FROM THE UPRC AND EAGLE ROCK DRAINS

The fourth water quality alternative will capture all the on-site flows for the G2 parcel and wet weather runoff from the UPRC/City drain and Eagle Rock drains upstream of the parcel upstream. The surface flows will deliver the DCV to the Bioretention BMP and a water quality feature that will treat the water prior to release to Los Angeles River Reach 3. The site will be graded so that the on-site runoff from 42 acres is collected in the water quality BMP feature and treated. The BOE report on the G2 parcel indicated that there is negligible dry-weather flow from the UPRC/City drain. However, there is approximately 0.38 cfs of dry-weather flow in the Eagle Rock drain that will be collected and pumped to the Bioretention BMP. The system will also use pumps to deliver wet-weather flows from the UPRC/City and Eagle Rock drains to the Bioretention BMP.

This system will need to have separate galleries to allow a wetting and drying cycle for maintenance during operation of dry-weather flow treatment. The treatment system for dry-weather and stormwater requires a Bioretention BMP footprint of approximately 3.5 acres to handle these flow rates. Monitoring of wet weather and dry weather flows is recommended prior to design finalization. Figure 2-12 shows the overall concept for Alternative 4 with the Bioretention BMP location for capturing flows and diversions from the UPRC/City and Eagle Rock drains. It is expected that the surface grading on-site will be sloped towards the Bioretention BMP. Treated flows will discharge from the Bioretention BMP into the River via an RCP in a lined trench.

Figure 2-13 shows the conceptual details of the Bioretention BMP that will treat water from the UPRC/City and Eagle Rock drains. The system is sized to treat on-site flows and 6 cfs from the storm drains. The system will also treat low flows diverted from the Eagle Rock drain. The Bioretention BMP will discharge into River Reach 3 via a system like Water Quality Alternatives 1, 2, and 3. The calculations for design volumes are provided in the Water Quality Supplemental Analysis in Appendix D.

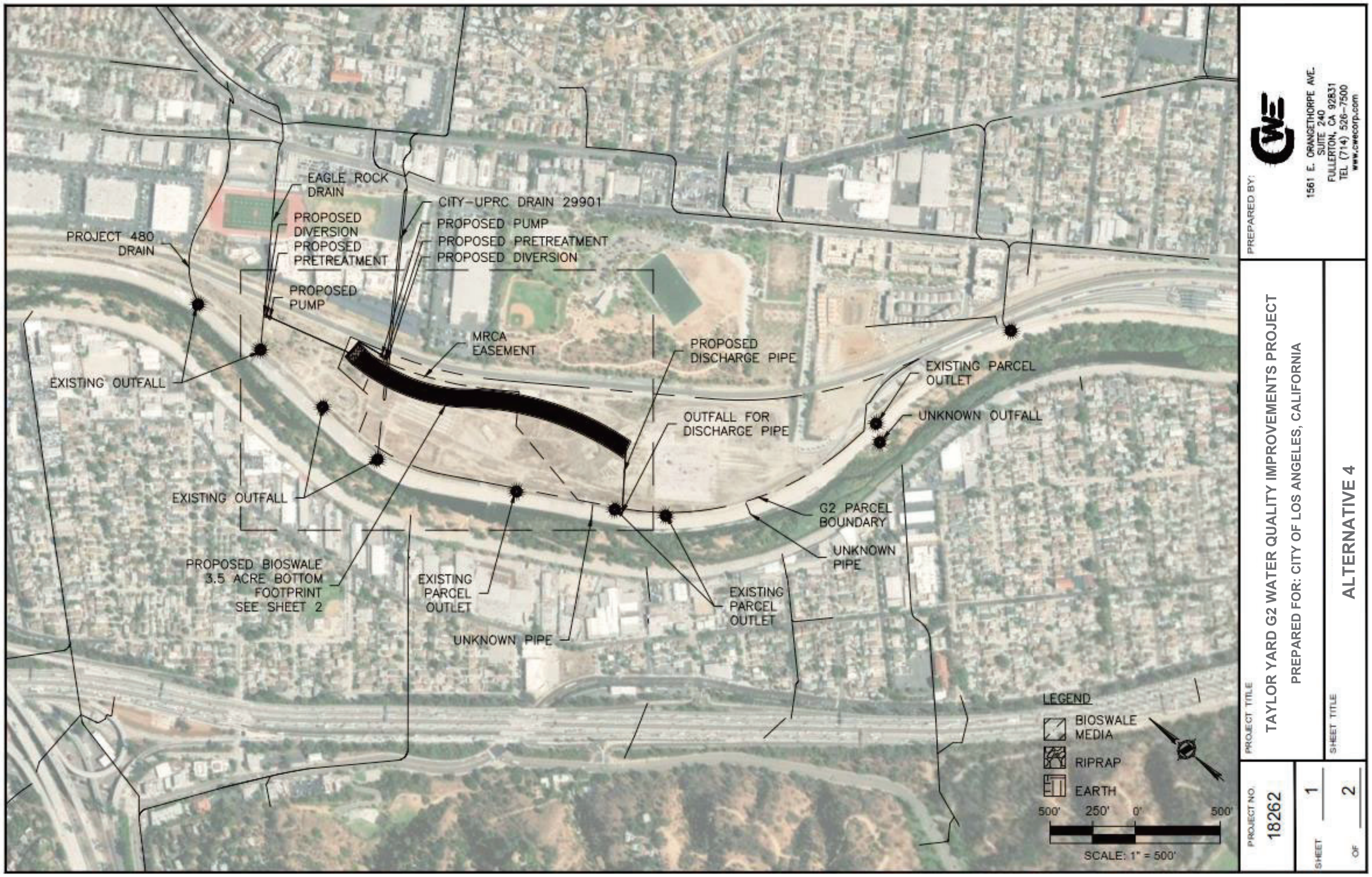


Figure 2-12. Conceptual Layout of Water Quality Alternative 4 with Diversions from UPRC/City and Eagle Rock Drains

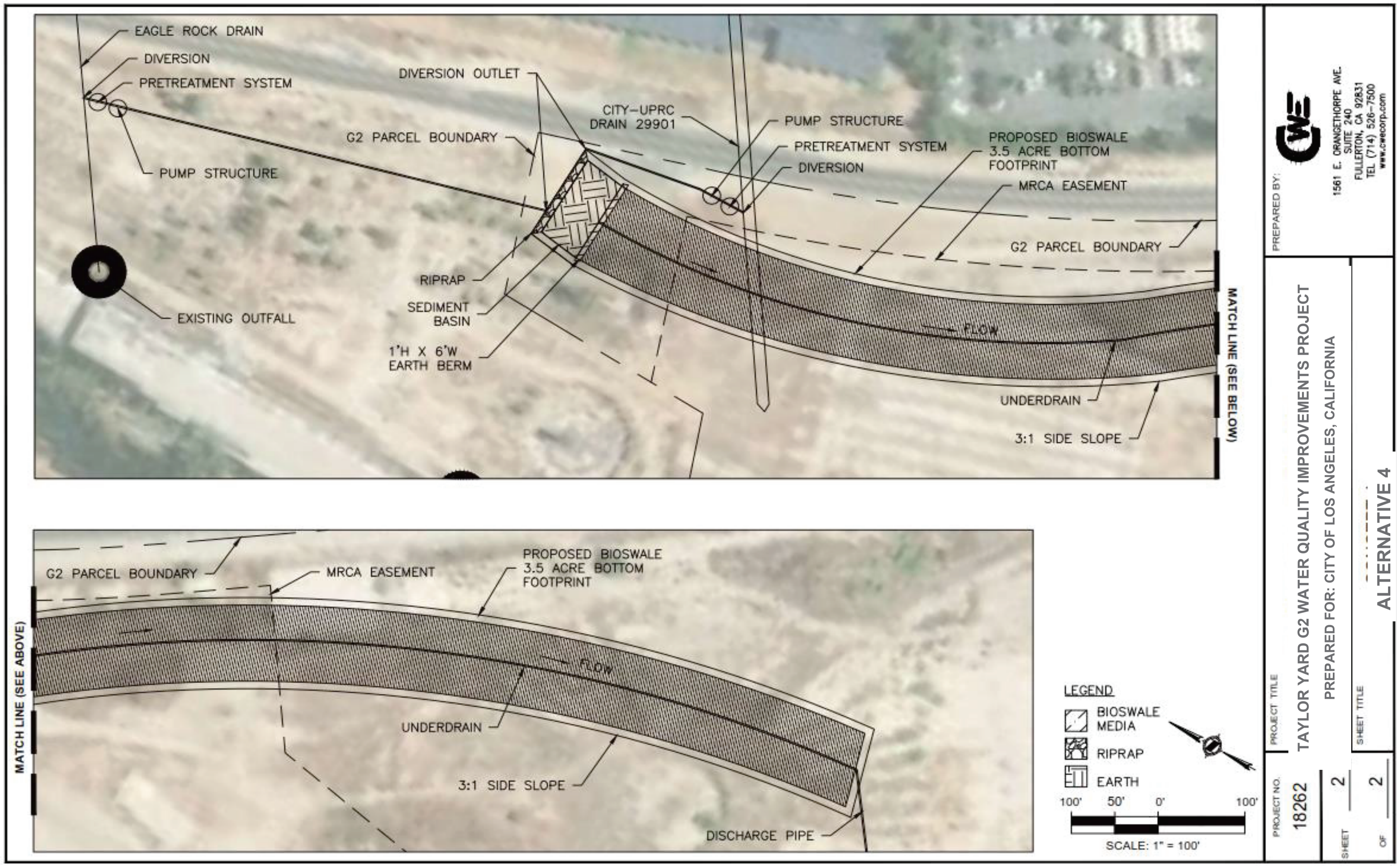


Figure 2-13. Water Quality Alternative 4 Bioretention BMP System for Treating Onsite and Storm Drain Runoff

2.4.4 RECOMMENDED PROP O PROJECT

Water Quality Alternative 4, which collects on-site stormwater runoff and treats pumped dry and wet weather flows from the Eagle Rock and UPRC/City drains, has been selected as the recommended water quality alternative for Prop O funding. This alternative will capture 3 cfs from each storm drain during wet weather events and capture on-site local stormwater. The estimated system capture on an average annual basis from the storm drains is 124.0 ac-ft of wet-weather flow. A total of 133.4 ac-ft of stormwater is expected to be captured and treated on an average annual basis with the on-site runoff included. The dry-weather flow will deliver another 218 to 283 ac-ft per year to the Bioretention BMP. This would require a dry-weather pumping flow rate of 0.30 to 0.38 cfs by the low flow pump.

2.5 PRELIMINARY DESIGN CRITERIA AND INITIAL CALCULATIONS

2.5.1 ESTIMATED WET WEATHER RUNOFF

The estimated DCV is 0.9 ac-ft for the G2 parcel, with an estimated 9.4 ac-ft of average annual water capture. The drainage system upstream of the G2 parcel is complicated, with interconnecting City and County relief drains that move flows from one drain system to another. The UPRC/City drain is connected to the Eagle Rock drain. The amounts of flow in each for various design events are not known now. However, there is more stormwater available than can be treated on-site. This alternative assumes that 7.1 ac-ft of water from the UPRC/City drain and 4.7 ac-ft from the Eagle Rock drain will be pumped into the Bioretention BMP during wet-weather events. Based on the estimated storm water capture of 11.8 ac-ft per event, it is expected that 124.0 ac-ft of wet-weather flow will be captured on an average annual basis from the storm drains. A total of 113.4 ac-ft of stormwater is expected to be captured and treated on an average annual basis using this design concept.

2.5.2 ESTIMATED DRY WEATHER RUNOFF

Dry-weather flows in the drains near the site vary in each drain. The Draft Concept Report (LASAN 2007) indicated that the Eagle Rock drain conveys 0.38 cfs and Project 480 carries 0.81 cfs for a total flow of 1.19 cfs, or 534 gpm. This is equal to approximately 0.13 gpm/ac. Recent studies and projects within the City have shown approximately 0.1 gpm/ac according to the LASAN report. These numbers provide a range of potential water conservation and pollutant load reduction opportunities for the G2 parcel. Based on the dry-weather flow of 0.38 cfs noted in the 2007 LASAN report (2007) for just the Eagle Rock drain, 283 ac-ft per year will be conveyed to the Bioretention BMP.

The Eagle Rock drain represents approximately 1,352 acres of the total 4,233-acre watershed based on dry-weather contributions. The expected range of annual dry-weather capture will range from 218 to 283 ac-ft for the proposed Bioretention BMP based on the range of potential flows from 0.1 to 0.13 gpm/ac. Placement of the diversion system may also influence the amount of water collected. The ratio of pumping from each system will depend on average flows in each drain. This range of flows will need to be evaluated in the design phase. The range of average annual capture for dry- and wet-weather flow would be 351 to 473 ac-ft per year for treatment in the system.

2.6 PROJECT BENEFITS

2.6.1 WATER QUALITY BENEFITS

ESTIMATED POLLUTANT QUANTITIES TREATED

Table 2-15 shows the estimated quantities of influent constituents in an average annual year resulting from wet and dry weather flows. Quantities were estimated using EMCs, obtained from the User's Guide for the SBPAT, which correlate pollutants to land use and are based on the most recent data available in Los Angeles County. The analysis included surface runoff from the G2 parcel, wet weather flows from the UPRC/City drain and wet and dry weather flows from the Eagle Rock drain. Total average annual influent diverted stormwater volume is expected to be 124.0 ac-ft for Alternative 4. The basin will also treat the 9.4 ac-ft of on-site runoff on an average annual basis, for a total of 133.4 ac-ft of stormwater treated annually.

Table 2-15. Alternative 4 Influent Water Quality

Constituent	Unit	Influent Load	
		Wet Weather	Dry Weather
Total Trash	ft^3	346	0
Nitrate	kg	149.14	252 – 328
Total Copper	kg	3.15	5 – 6
Total Lead	kg	1.54	4 – 5
Total Zinc	kg	18.35	23 – 31
Fecal Coliform	MPN	5.65E+13	6.75E+13 – 8.77E+13
TSS	kg	17,291	37,051 – 48,166

POLLUTANT LOAD REDUCTION

Bioretention BMPs vary in efficiency for reducing different pollutant loads. Table 2-16 shows the expected efficiency of the proposed BMP for the average annual capture of 133.4 ac-ft for Alternative 4. Trash is expected to be removed by both the pre-treatment system and the bioretention basin, allowing for an efficiency of 100%. Remaining efficiencies were based on values provided by the National Pollutant Removal Performance Database for Stormwater Treatment Practices (Winer 2000) and Hatt et al. (2009).

Table 2-16. Alternative 4 Load Reduction

Constituent	Unit	Efficiency	Reduction	
			Wet Weather	Dry Weather
Total Trash	ft^3	100%	346	0
Nitrate	kg	50%	74.57	126 – 164
Total Copper	kg	90%	2.83	4 – 6
Total Lead	kg	90%	1.39	3 – 5
Total Zinc	kg	90%	16.52	21 – 27
Fecal Coliform	MPN	35%	1.98E+13	2.36E+13 – 3.07E+13
TSS	kg	90%	15,562	33,346 – 43,349

PERCENT DCV TREATED

The treatment system will treat all the flows from the 42 acres of the G2 parcel which equates to 9.4 ac-ft annually. The water will be routed through the Bioretention BMP and discharged to the River. The system also treats 124.0 ac-ft of the annual stormwater runoff that could be captured from the UPRC/City and Eagle Rock drains. Capture of an additional 218 to 283 ac-ft of water from dry-weather flows is also expected. In total, Alternative 4 will treat between 351 and 473 ac-ft of flows annually. Table 2-17 summarizes wet and dry weather pollutant load reductions for Alternative 4.

Table 2-17. Alternative 4 Wet and Dry Weather Pollutant Load and Reduction

Constituent	Unit	Wet Weather		Dry Weather	
		Expected Influent Load	Expected Load Reduction	Expected Influent Load	Expected Load Reduction
Total Trash	ft^3	346	346	0	0
Nitrate	kg	149.14	74.57	252 - 328	126 - 164
Total Copper	kg	3.15	2.83	5 - 6	4 - 6
Total Lead	kg	1.54	1.39	4 - 5	3 - 5
Total Zinc	kg	18.35	16.52	23 - 31	21 - 27
Fecal Coliform	MPN	5.65E+13	1.98E+13	6.75E+13 - 8.77+E13	2.36E+13 - 3.07E+13
TSS	kg	17,291	15,562	37,051 - 48,166	33,346 - 43,349

2.6.2 ADDITIONAL BENEFITS

The Project is consistent with Prop O criteria and incorporate additional benefits. In addition to water quality improvements, the site is proposed to be developed for ecological restoration, recreational uses, educational purposes, and improved access along the River. Table 2-18 summarizes the potential amenities that are currently being evaluated with the Preliminary Design Concepts (WSP 2019) for the series of projects at the G2 parcel.

Table 2-18. Additional Environmental and Recreational Benefits

Category	Amenity
Water	Kayak Launch
	River Deck
	Demonstration Wetlands
	River Steps
	River Overlook
	Café/Boathouse
	River Landing
Ecology	Native Nursery
	Container Woodland
	Habitat Tower
	Boxed Forest
	Raised Pollinator Garden
	Timber Trees
Experience	Picnic Areas
	Outdoor Classrooms
	River Loop
	Open Event Space
	Bridge to Rio
	Nature Center
	Info Box Kiosk
Remediation	Phytoremediation Test Plots
	Phytoremediation Observation Deck

3 PRELIMINARY COST ESTIMATE

3.1 CAPITAL COSTS

Table 3-1 summarizes the costs for Water Quality Alternative 4, the recommended alternative for Prop O funding. Preliminary costs estimate also were prepared for Water Quality Alternatives 1, 2, and 3 and are included in Appendix E.

The cost analysis for Alternative 4 includes the grading and excavation related only to the Bioretention BMP, and not the overall site grading. Cost of excavation assumes a basin bottom footprint of approximately 3.5 acres. Depth to the top of the Bioretention BMP media is 3 feet and has a 3:1 side slope. Depth to the Bioretention BMP invert is an additional 3 feet at no slope. Cost of excavation also includes the excavation necessary for the 18-inch RCP which assumes a 3.5-foot width and 6-foot depth for the length of the pipe for cost estimating purposes. Possible remediation approaches is pending discussion for approval from DTSC to achieve appropriate remediation targets suitable for future site uses. It is assumed that contaminated soils will be placed and capped on-site for remediation of exterior areas of project. For interior spaces, soil gas mitigation systems underlying building slabs may be used to prevent indoor air intrusion. These mitigation systems could include vapor barriers (membranes to block migration of vapors upward into the building) or venting (active or passive extraction of vapors, directing them away from the building and breathing zone of occupants). Soil gas extraction systems could also be installed in those areas of the Project site where soil gas concentrations are highest. This will result in a potential additional cost which can be defined during the design phase.

Cost of capping assumes a depth of 2-feet to determine the area of fill to be covered. The costs also include the diversion structures at the UPRC/City and Eagle Rock drains, the pre-treatment systems, and the pump sumps. The pumps and pipe systems to capture the 3 cfs from each drain and a low-flow pump to capture dry-weather flow are also included in the costs.

An impermeable liner (Line Item No. 13), composed of a synthetic polymer, is proposed at this site to prevent infiltration into underlying soils due to the existing soil contamination found on-site from the previous industrial uses.

Table 3-1. Water Quality Alternative 4 Quantities and Cost Estimate

Item #	Description	Unit	Quantity	Unit Price ($)	Extended Amount ($)
1	Pre-Design	LS	1	247,500	247,500
2	Design & Permitting	LS	1	1,278,000	1,278,000
3	Bid and Award	LS	1	180,000	180,000
4	Construction Soft Costs	LS	1	1,057,500	1,057,500
5	Excavation	CY	38,070	35	1,332,450
6	Fill	CY	38,070	25	951,750
7	Capping	AC	10.0	250,000	2,500,000
8	Rip Rap	CY	60	150	9,000
9	Vegetation	SF	152,300	10	1,523,000
10	3" Mulch	CY	1,410	90	126,900
11	2' Soil Media	CY	11,281	15	169,215
12	1' Gravel	CY	5,641	162	913,842
13	HDPE Liner	SY	8,459	15	126,885
14	15" HDPE Underdrain	LF	1,690	10	16,900
15	18" RCP Outlet Pipe	LF	375	300	112,500
16	Diversion Structure	LF	760	150	114,000
17	Pretreatment System	EA	2	500,000	1,000,000
18	Pump System	EA	2	500,000	1,000,000
19	Low Flow Pump	EA	1	100,000	100,000
				Total	12,759,442
				28% Contingency	3,572,644
				GRAND TOTAL	**16,332,086**

3.1.1 COST PER POUND OF POLLUTANT REMOVED

Table 3-2 provides the cost per load of pollutants removed under implementation of Alternative 4. The estimates include only constituents measured in units of weight – metals, nitrate, and TSS.

Table 3-2. Unit Cost of Pollutants Removed for Alternative 4

Constituent	Wet Weather			Dry-Weather		
	Load	Unit	Unit Cost ($)	Load[1]	Unit	Unit Cost ($)
Total Trash	12.83	cy	971,110	0	cy	-
Nitrate	164.05	lb	75,961	319.33	lb	39,025
Total Copper	6.23	lb	1,999,219	10.71	lb	1,163,793
Total Lead	3.05	lb	4,079,952	8.82	lb	1,412,946
Total Zinc	36.34	lb	342,933	53.47	lb	233,043
Fecal Coliform	-	MPN	-	2.72E+13	MPN	-
TSS	34,236	lb	364	84,365	lb	148

[1] Average expected reduction

3.2 FUNDING OPTIONS

Potential funding options for the Taylor Yard G2 Water Quality Improvements Project are discussed in the following sections.

3.2.1 POTENTIAL FUNDING SOURCES AND AWARDED GRANTS

BOE is developing a budget strategy that considers both capital funding needs, as well as the need for sustainable sources of income as required. Sustainable sources of income are needed to fund operations and maintenance for all projects at the G2 parcel. The partnership between the City and MRCA on this Project creates a strong coalition of experience in the delivery of nature-based and sustainable water quality projects and opens opportunities to apply for further potential funding streams. Potential sources of funds and awarded grants for this Project, and the other projects at the G2 parcel, are summarized in Table 3-3 and 3-4.

Table 3-3. Potential Funding Sources for Projects at the G2 Parcel

Approximate Potential Funding Sources	Comments/Status	Amount
1. LA County Measure A	To be awarded through grant program, pending guidelines. Annual allocation application requires processing	**$12,000,000**
2. State Cap & Trade Proceeds	Grant application processes through multiple State programs	**$10,000,000**
3. Private Sponsorship & Philanthropy	Grant application processes to seek funding from multiple organizations	**$5,000,000**
4. Proposition O	On 4/10/2018 City Council (CF 13-1526) allocated a $12.4 million set-aside from Prop O Contingency for a Taylor Yard Water Quality project pending development and approval of a concept report for a water quality project. Scope & budget is pending future development.	**$12,400,000**
5. Other Federal Sources	Potential grants or partnerships with: US Bureau of Reclamation, National Park Service, Environmental Protection Agency, etc.	**$5,000,000**

Table 3-4 Awarded Grants for Projects at the G2 Parcel

Awarded Grants	Comments/Status	Amount
1. **Mountain Recreation Conservation Authority (MRCA): Prop 84**	Grant & Draft Easement Agreement approved by Wildlife Conservation Board on 8/24/2017. Escrow has closed.	**$20,000,000**
2. **State Prop 84- Easement Acquisition**	On 4/22/2018, the State Wildlife Conservation Board allocated $5.015M to assist the MRCA to expand the easement by up to 3.25 acres for a total of 12.5 acres.	**$5,000,000**
3. **MRCA: State Prop 1 through SMMC- Easement Acquisition and Development**	SMMC allocated $10M to assist MRCA in purchasing the easement at G2 and development of a water quality and open space project. $4M of the allocated grant will be dedicated to the Prop O project.	**$10,000,000**

3.2.2 GRANT OPPORTUNITIES

Since project inception, grant opportunity updates have been submitted periodically for BOE's consideration. The updates identified programs that may fund activities related to design and development of the G2 parcel. The updates cover federal and state transportation, community development and sustainability programs with application deadlines, anticipated notice of funding availability or calls for projects. These updates served as the basis for funding opportunities that BOE could pursue through development and submission of grant applications. The grant opportunity update for the last quarter of 2020 is provided as Appendix F.

3.2.3 PROP O PROJECT FUNDING ALLOCATION

Funding for Alternative 4 is expected to come from various sources. The amount requested from Prop O is $12,400,000. Prop O funds would cover most project costs. Remaining project costs would be provided by MRCA or other future sources. The remainder of the funds provided by MRCA could cover landscaping, walkways, access roads and other features associated with the Project. The breakdown of this funding is presented in Table 3-5.

Table 3-5 Funding Allocation

Funding Source	Amount ($)
Proposition O	12,400,000
MRCA – SMMC Prop 1	Up to 4,000,000
Other (Prop 1, Prop 68, Measure W, City)	To be determined

3.3 OPERATIONS AND MAINTENANCE

Table 3-6 summarizes the anticipated inspection and maintenance that will be required for the Project. The Operation and Maintenance cost (O&M) to be determined during the design of this project based on selective water quality alternative.

Table 3-6 Summary of Anticipated O&M by Project Component

Component	Operation/Maintenance	Inspection Frequency
Diversion System (inlet and pipe)	— Inspect for accumulated sediment and debris over grate and within manhole — Remove accumulated sediment and debris (litter and leaves) from the grate and inside structure — Inspect conveyance pipe for clogging — Remove accumulated materials from the pipe system	Before and after the storm season
Pretreatment System	— Inspect for blockages or obstructions in the inlet and separation screen — Clear blockages or obstructions if observed — Inspect sump to assess volume of sediment accumulated — Use vacuum truck to remove accumulated sediment and debris once the sump is 75% full	Before and after the storm season
Pump System	— Inspect pump well for sediment and debris and remove as necessary — Check valves for operation and clogging — Clear material and replace valves as necessary — Inspect bearings and impeller for wear — Lubricate bearings as needed — Check pump for operation — Verify pump levels have been maintained — Consult manufacturer if pump has not been operated in more than 12 months or if more extensive maintenance is required — During operation, check pump for excessive noise, vibration, or other abnormal conditions	Twice a year (at a minimum)
Bioretention BMP	— Inspect for clogging at inlet pipes — Clear debris and material at inlet if clogged — Inspect for sediment accumulation in sediment basin — Use a vacuum truck to remove accumulated sediment and debris as appropriate — Observe discharge flow rates over time to confirm biomedia is not clogged — Restore biomedia if rates impacted significantly (maintenance requirements may vary based on issue)	Before and after the storm season

4 ANTICIPATED PERMITS AND AGREEMENTS

Because the Project will connect to USACE-owned facility, coordination with USACE will be required throughout the Project's design phase to discuss specific requirements associated with obtaining connection permits. Applications should be submitted with the 50% design plans to expedite the permit process and finalize the Project components. Coordination will also be required with RWQCB and CDFW. Additionally, the contractor will need to obtain connection and construction permits from the City. Per Bureau of Engineering's Environmental Management Group (EMG) recommendation, a supplemental focused Environmental Impact Report (EIR) will be prepared that tiers off the Ecosystem Restoration EIR. The information available from the site will be used for the environmental documentation schedule. Further consultation will be done with the City Attorney's Office during further discussion as needed. The following sections detail requirements associated with applicable permits/approvals. The following sections detail requirements associated with applicable permits/approvals.

4.1 UNITED STATES ARMY CORPS OF ENGINEERS

4.1.1 CLEAN WATER ACT SECTION 404

Section 404 of the CWA establishes a program that requires a permit to be obtained prior to construction to regulate the discharge of dredged or fill material into the Waters of the U.S. The basic premise of the program is that no discharge of dredged or fill material may be permitted if a practicable alternative exists that is less damaging to the aquatic environment or the nation's waters would be significantly degraded. When applying for a permit, it must be clear that steps have been taken that will minimize potential impacts and that compensation will be provided for all remaining unavoidable impacts (USEPA 2013).

USACE reviews individual permits and evaluates applications under public interest review as well as Section 404 guidelines. For most discharges that will have only minimal adverse effects, a general permit may be suitable. General permits are issued on a nationwide, regional, or state basis for categories of activities (USEPA 2013). LARWQCB regulates discharges for municipal separate storm sewer systems (MS4s) in Los Angeles County. A permit from LARWQCB issued under the NPDES Program will need to be obtained prior to any connection to the Los Angeles River waterway.

Appendix G includes documents relevant to the USACE CWA Section 404 permitting process. To obtain a permit, a complete application must be submitted and include a detailed description of the project activities and the purpose of the project. The volume of discharged material must be included in the application. Design plans must also be submitted with the application. A "pre-application consultation" or informal meeting with USACE is recommended early in the design phase and may prevent future delays. Typically, three to four months are required to process a routine application involving public notice and applications for large or complex activities may take longer. It is best to submit the permit application as early as possible so that all permits are obtained prior to the anticipated construction date (USACE 2014).

4.1.2 CLEAN WATER ACT SECTION 401

Section 401 of the CWA requires that any person applying for a federal permit or license, which may result in discharge of pollutants into Waters of the U.S., must obtain a state water quality certification that the activity complies with all water quality standards, limitations, and restrictions. Certification under Section 401 is required prior to other federal agency certifications or licenses. This certification is required prior to construction and is only applicable during construction activities. The authority to certify projects has been delegated to local RWQCB, which in this case is LARWQCB. The project must be designed in such a way that will preserve beneficial uses, satisfy water quality objectives, and be consistent with the Antidegradation Policy according to CWA 40 Code of Federal Regulation (CFR) 131 SWRCB 2014).

Appendix H includes documents related to the CWA 401 approval process. To receive certification under CWA Section 401, an application will need to be completed and submitted to LARWQCB. An accurate description of the project, including the purpose and final goal of the project must be included along with completed design plans. Additionally, a detailed description of all measures to be taken to prevent the project from adversely affecting the water quality and beneficial uses of the River must be included (SWRCB 2014).

Once the application is submitted, the Regional Board has 30 days to notify the applicant regarding the completeness of the application. If the application is incomplete, the material must be resubmitted and another 30 days are used to review the revised application. If the applicant does not hear back within 30 days then the application is assumed to be complete. Once the application is complete, RWQCB can request additional information as they see necessary. RWQCB has between 60 days and one year to decide and a minimum 21 days must be provided for public comment prior to approval (SWRCB 2014).

4.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

4.2.1 FISH AND WILDLIFE CODE 1600

Fish and Wildlife Code 1602 requires any entity to notify CDFW before beginning any activity that will do one or more of the following:

1. Substantially obstruct or divert the natural flow of any river, stream, or lake.
2. Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake.
3. Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Appendix I includes documents relevant to the Department Code 1600 approval process. To notify CDFW regarding the Project, the Notification of Lake or Streambed Alteration form must be completed and submitted along with the applicable fee to the South Coast Region (Region 5). Appendix I includes documents relevant to the Department Code 1600 approval process. CDFW will review the application to determine if it is complete. Ample detail must be provided in the application to ensure it is deemed complete.

Once the notification package is submitted, CDFW has 30 days to determine completeness. If the package is incomplete it will need to be revised and resubmitted. If the package is complete, it will be determined whether a Lake or Streambed Alteration Agreement is required for the proposed activity. If an agreement is required, CDFW will conduct an on-site inspection if necessary and submit a draft agreement to the applicant that includes measures to protect fish and wildlife resources while conducting the project. If a regular agreement is sought, CDFW will submit the draft agreement within 60 days. After the draft agreement is received, the applicant has 30 days to notify CDFW whether the measures in the draft agreement are acceptable and a signed agreement must be resubmitted. If parts of the agreement are not acceptable to the applicant, they must meet with CDFW within 14 calendar days to resolve the disagreement. If the applicant does not respond within 90 days, CDFW will withdraw the agreement. Lastly, CDFW will sign the final agreement once the appropriate fee is submitted with the signed draft agreement (CDFW 2008).

4.3 CITY PERMITS

A storm drain "S" Permit is required because this Project will connect to two City-owned storm drains. The type of connection must be determined and approved by BOE, who may determine that a junction structure is required. The permit application further requires the distance from the property line to the point of connection to be determined. It is expected that this permitting process will be conducted internally with BOE.

In addition to the permits discussed above, the Project must be covered under applicable City permits. Electrical, encroachment, excavation, mechanical, and/or right-of-way construction permits may be required prior to constructing the Project.

5 PROJECT IMPLEMENTATION SCHEDULE

The design and construction of the Bioretention BMP would be completed by November 2023. Figure 5-1 depicts a preliminary schedule.

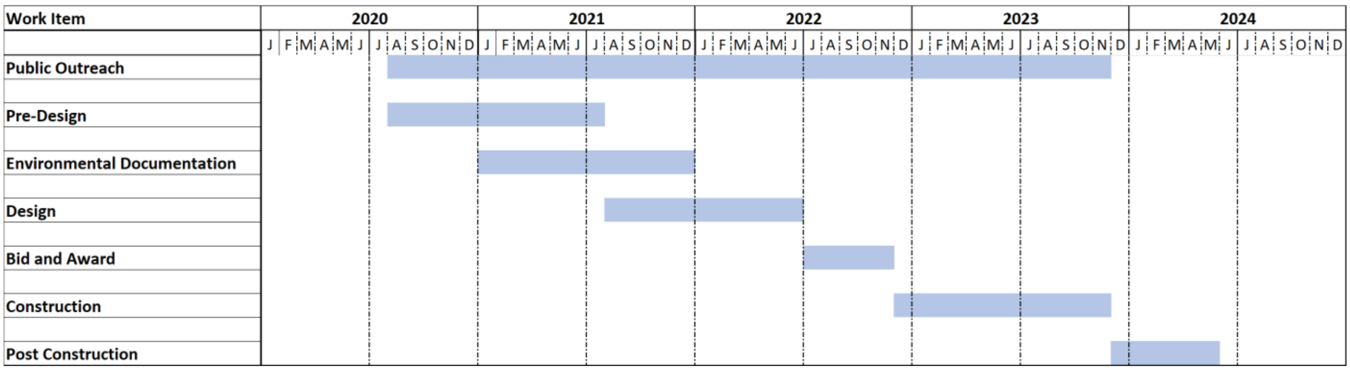


Figure 5-1. Preliminary Schedule

BIBLIOGRAPHY

- Black & Veatch. 2015. Upper Los Angeles River Draft Enhanced Watershed Management Program. May 2015.
- CDFW (California Department of Fish and Wildlife. 2008. LSA Notification Forms, Instructions, and Fees. Printable version of Questions and Answers. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=3771&inline. Accessed December 26, 2014.
- California State Coastal Conservancy. 2002. Taylor Yard Multiple Objective Feasibility Study Final Report. Prepared by Everest International Consultants Inc, June 2002.
- CDM (Camp, Dresser, and McKee, Inc. (CDM). 2014. Final Remedial Action Plan. February 2014
- CDM Smith, 2012. 2010 Groundwater Monitoring Report, Taylor Yard Parcel G-2, Los Angeles, California. August.
- City of Los Angeles. 2007. Los Angeles River Revitalization Master Plan. http://boe.lacity.org/lariverrmp/.
- City of Los Angeles. 2011. Development Best Management Practices Handbook Low Impact Development Manual, 4th Edition. June 2011.
- City of Los Angeles. 2016. Reader's Guide for the LA River Ecosystem Restoration Project. A document by the local sponsor, the City of Los Angeles, California. April 2016.
- City of Los Angeles, Bureau of Engineering. 2014. Initial Study/Mitigated Negative Declaration for Taylor Yard River Parcel G2 Project. August 2014.
- City of Los Angeles, Bureau of Engineering, Project Management Team. 2018. Taylor Yard G2 River Park Project Status Report – 2nd Qtr 2018/19 – Oct thru Dec.
- CWE (California Watershed Engineering). 2019. Taylor Yard G2 River Park Project Water Quality Supplemental Analysis. Memorandum. January 18, 2019.
- DWR (California Department of Water Resources), 1961, Planned Utilization of the Groundwater Basins of the Coastal Plain of the Los Angeles County, Bulletin No. 104, Appendix A, Groundwater Geology.
- ECORP Consulting, Inc. 2018. Biological and Jurisdictional Supplementary Analysis Technical Memorandum for the Taylor Yard River Park Project – Project No. 165 of the Los Angeles River Revitalization Master Plan. March 2018.
- Friends of the Los Angeles River, The Sierra Club and The Urban Resources Partnership. 1998. The River Through Downtown.
- Geosyntec. 2017. Groundwater Monitoring Report. July 2017.
- Hatt, Belinda, Tim Fletcher, and Ana Deletic. "Hydrologic and pollutant removal performance of stormwater biofiltration systems at the field scale." Journal of Hydrology 365.3-4 (2009): 310-321. *ScienceDirect*. Web. January 2019.
- Lamar, D.L., 1970. Geology of Elysian Park, Repetto Hills Area, Los Angeles County, California, California Division of Mines and Geology, Special Report 101, San Francisco, California.
- LARWQCB (Los Angeles Regional Water Quality Control Board). 1994. Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. Beneficial Uses, dated November 10, 2011.
- LASAN (City of Los Angeles, Bureau of Sanitation). 2007. Draft Concept Report Taylor Yard G-2 Parcel. December 24, 2007.
- Laton, W.R., 2002. Taylor Yard and Los Angeles River, Preliminary Groundwater and Surface Water Study, Groundwater Model, Taylor Yard and Vicinity Los Angeles, California. NGWA National Meeting (abstract/poster).

- MBE (Miller Brooks Environmental Inc.), 2002. Taylor Yard and the Los Angeles River Preliminary Groundwater and Surface Water Study. A report to the California Coastal Conservancy and the Los Angeles and San Gabriel Rivers Watershed Council, March.
- Oskin, M., Sieh, K., Rockwell, T., Miller, G., Guptill, P., Curit, M., McArdle, S., and Elliot, P. 2000. Active Parasitic Folds on the Elysian Park Anticline: Implications for Seismic Hazard in Central Los Angeles, California. GSA Bulletin, v. 112. May.
- SWRCB (State Water Resources Control Board). 2014. 401 Water Quality Certification Frequently Asked Questions. http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/401_certification/docs/401_FAQ_FINAL.pdf. Accessed December 26, 2014.
- SWRCB. 2018. Final 2014/2016 California Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report. April 6, 2018. Accessed via Web site at: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml. April 2018.
- The River Project. 2002. Taylor Yard and Los Angeles River Preliminary Groundwater and Surface Water Study.
- USACE (United States Army Corps of Engineers). 2014. Regulatory Program Frequently Asked Questions. http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/FrequentlyAskedQuestions.aspx. Accessed December 26, 2014.
- USACE, 2015. Los Angeles River Ecosystem Restoration Project Final Integrated Feasibility Report, which includes the Final Environmental Impact Report/ Environmental Impact Study. Volume I of 4: Integrated Feasibility Report. September 2015. http://lariver.org/blog/lariver ecosystem restoration.
- USEPA (United States Environmental Protection Agency). 1999. Stormwater Technology Fact Sheet: Bioretention. EPA-832-F-99-012.
- USEPA. 2013. Water: Discharge of Dredged Fill Materials (404). Section 404 Permitting. http://water.epa.gov/lawsregs/guidance/cwa/dredgdis/. Accessed December 26, 2014.
- USGS (United States Geological Survey), 2004. Geological, Hydrological, and Biological Issues Related to the Proposed Development of a Park at the Confluence of the Los Angeles River and the Arroyo Seco, Los Angeles County, California, Scientific Investigations Report 2004-5296.
- USGS, 2012. Hollywood Quadrangle, California, 7.5-Minute Series (Topographic), 1:24,000.
- Winer, Rebecca. 2000. National Pollutant Removal Performance Database for Stormwater Treatment Practices, 2nd Edition. March 2000.
- WSP, 2018. Taylor Yard G2 River Park Project Community Survey Report. May 2018.
- WSP, 2018a. Taylor Yard G2 River Park Project, Area A2 Site-Specific Sampling and Analysis Plan. January 2018.
- WSP, 2018b. Draft – Taylor Yard Parcel G-2 Phase II Remedial Investigation Report, City of Los Angeles. November 2018.
- WSP, 2019. Taylor Yard River Park – Preliminary Design Concepts; Technical Memorandum. January 2019.
- WSP, 2019a. Taylor Yard River Park Project – Environmental Justice Profile. January 2019.

APPENDIX

A ENVIRONMENTAL JUSTICE PROFILE

Taylor Yard G2 River Park Project – Environmental Justice Profile

Background and Summary

The Los Angeles Bureau of Engineering (BOE) has requested that WSP prepare a community profile for the area surrounding the Taylor Yard G2 River Park Project. This profile supports the park design process by describing the environmental justice implications for potential park users from surrounding neighborhoods.

This profile analyzes the census tracts and census block groups within 1 mile of the project site. The analysis is based on demographic and socioeconomic data from the 2017 ACS 5-Year Estimate, using Geographic Information Systems (GIS). This profile will provide an overview of Disadvantaged Communities (DAC) within the study area, in addition to Low Income Households (LIHH), Low Income Communities (LIC), and the racial and economic composition of the community.

Of the Project area's 18 census tracts, CalEnviroScreen 3.0 designates

***72%** as **Low-Income** Communities &*

***78%** as **Disadvantaged** Communities.*

Within the study area, 78 percent are DACs and 72 percent are LICs. The entire study area has a higher pollution burden than more than 50 percent of Los Angeles (LA) County, and 48 percent of households are below poverty, compared to 40 percent in LA County. The median age in the study area is 35.9 years, in line with LA County's median age of 36.0.

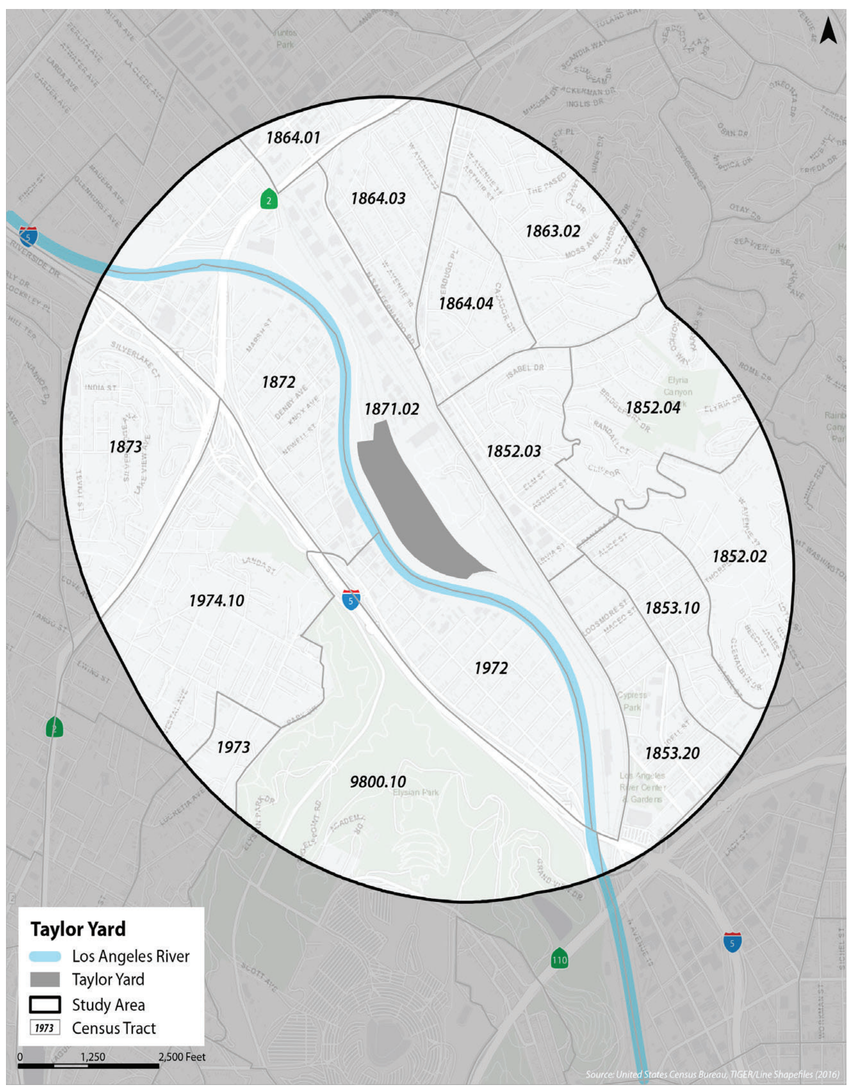
STUDY AREA

Eighteen census tracts and 38 block groups are within one mile of the Taylor Yard G2 River Park Project (Figure 1). This area spans approximately 5 square miles, and includes a total of 20,225 households (Table 1).

Table 1. Total Households within Study Area

Census Tracts	Total Households
1852.02	1,417
1852.03	933
1852.04	695
1853.10	847
1853.20	848
1863.02	1,778
1864.01	971
1864.03	847
1864.04	790
1871.02	1,168
1872.00	865
1873.00	1,455
1972.00	1,175
1973.00	1,753
1974.10	1,653
1974.20	1,350
1990.00	1,625
9800.10	55
TOTAL	20,225

Figure 1 : Study Area Census Tracts



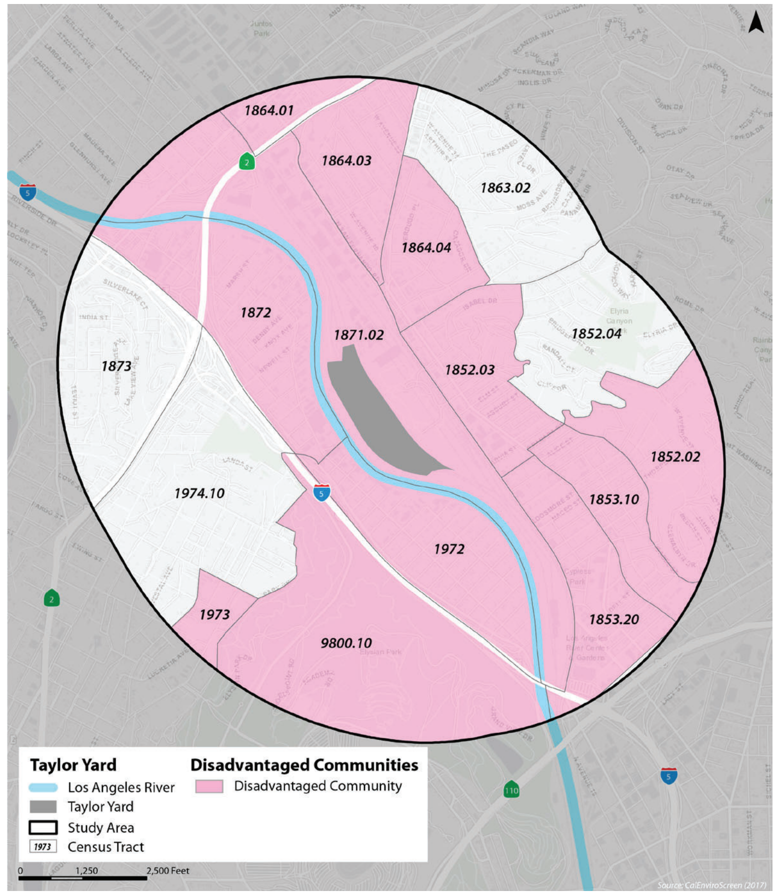
DISADVANTAGED COMMUNITIES

DACs in California are identified using an Office of Environmental Health Hazard Assessment (OEHHA) tool. Under CalEnviroScreen 3.0, communities are categorized as disadvantaged if they are disproportionately burdened by air pollution and are most vulnerable to its effects.

This tool accounts for the socioeconomic characteristics and the underlying health status of communities. Census tracts are DACs if they are in the top 25 percent of CalEnviroScreen 3.0 scores.

Figure 2 shows the location of the identified DACs within one mile of the Taylor Yard G2 River Park Project site. Of the eighteen census tracts within the study area, fourteen are considered to be DACs. As such, 78 percent of the study area are DACs.

Figure 2: Disadvantaged Communities

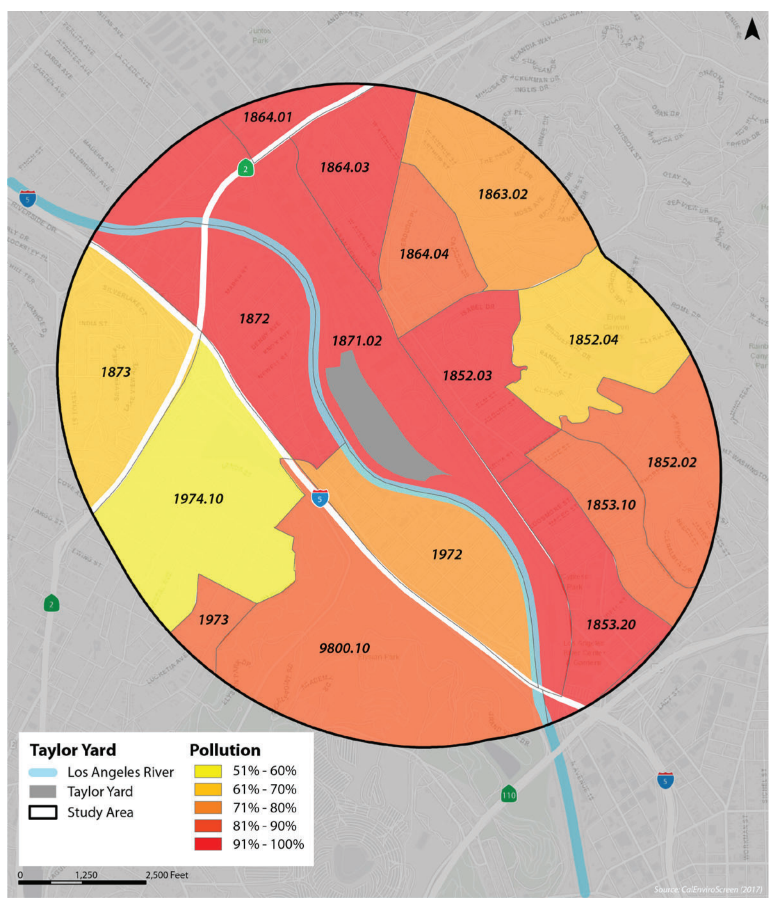


AIR QUALITY

The CalEnviroScreen 3.0 map in Figure 3 shows the extent to which each census tract within the study area also suffers a higher air pollution burden.

The entire study area has an air pollution burden of greater than 50 percent compared to LA County as a whole. A significant portion of the neighborhoods directly adjacent to the Taylor Yard G2 River Park Project site are in the 90th percentile for air pollution burden.

Figure 3: Air Quality



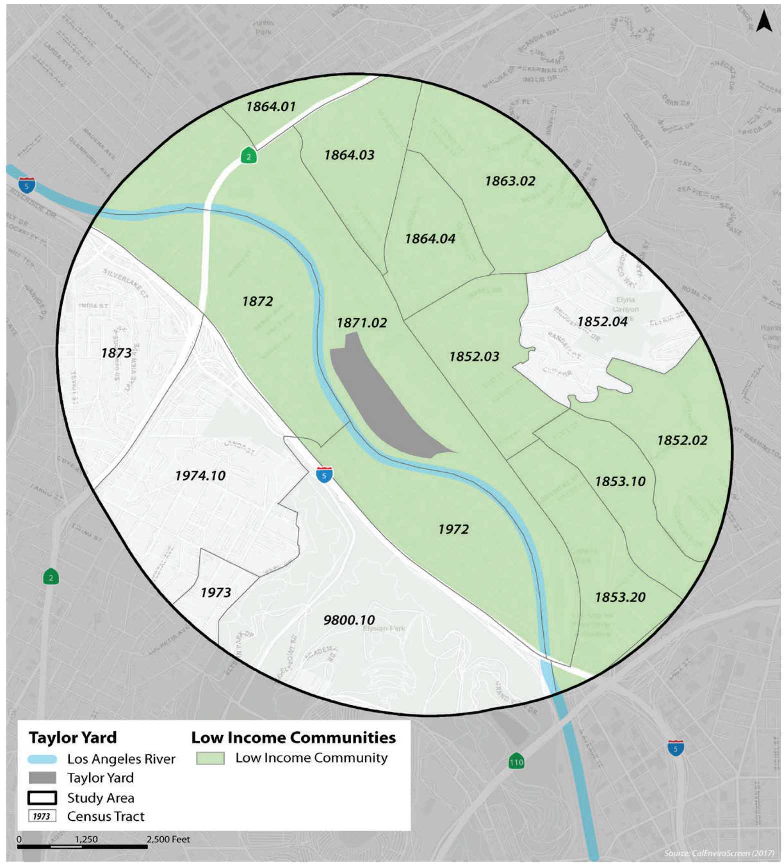
ECONOMIC AND SOCIAL COMPOSITION

LOW INCOME COMMUNITIES

Low Income Communities (LICs) are defined as census tracts that are either at or below 80 percent of the state-wide median income or at or below the threshold designated as low income by the California Department of Housing and Community Development's 2018 State Income Limits.

Figure 4 shows the LICs within one mile of the Taylor Yard G2 River Park Project site. Of the eighteen census tracts within the study area, thirteen are considered to be LICs. As such, 72 percent of the study area are LICs.

Figure 4: Low Income Communities



LOW INCOME HOUSEHOLDS

Low Income Households (LIHHs) are shown in Figure 5. The concentration of LIHHs range from 24 percent at the lowest to 87 percent. Of the eighteen census tracts, twelve have a higher concentration of LIHHs than LA County as a whole.

In the study area, 8,708 households are designated LIHHs. They comprise 43 poercent of total households in the study area.

Table 2 shows that median household income in the study area is $54,594, which is approximately $6,421 lower than LA County's median household income.

Figure 5: Low Income Households

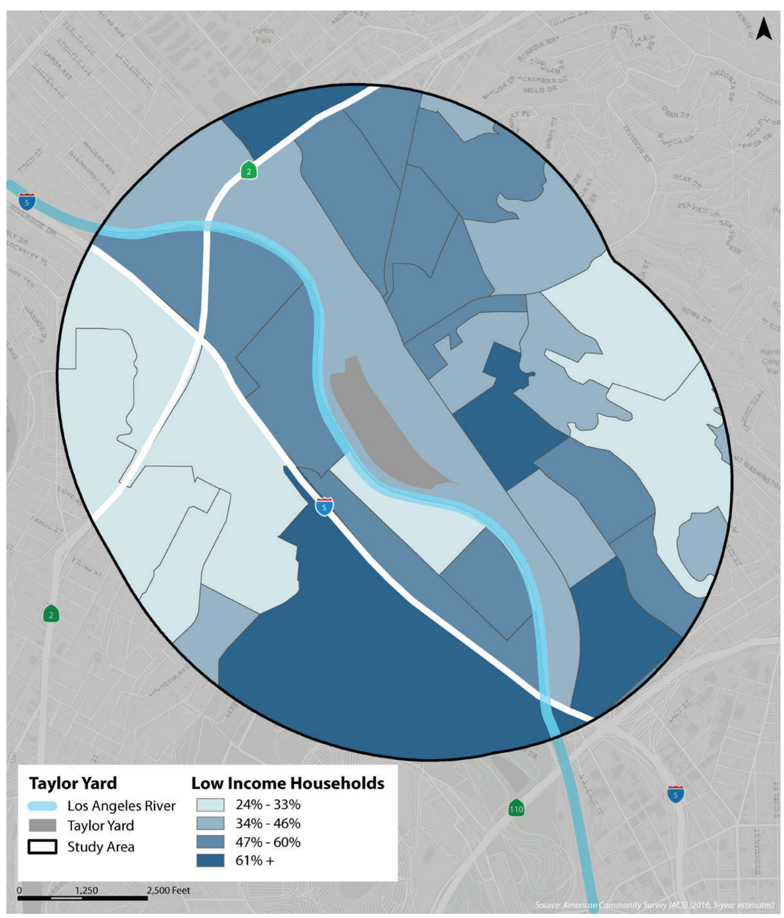


Table 2. Demographic Data

Census Tract	Non-White (non-Hispanic)	Hispanic	Percent Below Poverty	Median House-hold Income	Total Households
1852.02	13%	61%	44%	$62,044	1,417
1852.03	10%	82%	59%	$40,208	933
1852.04	28%	39%	20%	$77,120	695
1853.10	9%	82%	65%	$50,724	847
1853.20	7%	89%	66%	$39,868	848
1863.02	17%	54%	34%	$63,158	1,778
1864.01	13%	83%	58%	$38,375	971
1864.03	21%	64%	45%	$53,958	847
1864.04	14%	78%	56%	$56,094	790
1871.02	21%	59%	40%	$54,167	1,168
1872.00	11%	76%	57%	$58,705	865
1873.00	17%	20%	18%	$99,911	1,455
1972.00	34%	55%	36%	$55,021	1,175
1973.00	19%	36%	41%	73,097	1,753
1974.10	14%	35%	24%	$101,273	1,653
1974.20	16%	52%	56%	$52,051	1,350
1990.00	25%	66%	65%	$47,250	1,625
9800.10	23%	46%	78%	$11,938	55
Study Area	17%	60%	48%	$54,594	20,225
LA County	23%	48%	40%	$61,015	3,295,198

POVERTY RATES

All but six of the eighteen census tracts within one mile of the Taylor Yard G2 River Park Project site have higher poverty rates than the LA County's poverty rate of 40 percent. The entire study area has a poverty rate of 48 percent.

Demographic and income data for the census tracts are detailed in Tables 2 and 3.

ENGLISH PROFICIENCY

There are fourteen census block groups within a quarter mile radius of the Taylor Yard G2 River Park Project site. Ten of the fourteen block groups within a quarter mile of the Taylor Yard G2 River Park Project site have a higher percentage of individuals, compared to LA County, who speak English either not well or not at all.

EMPLOYMENT

Of the 50,999 individuals over the age of 16 years in the study area, nearly 35,000 are employed, resulting in a 5 percent unemployment rate. Table 3 shows that most jobs within the study area provide monthly earnings of between $1,251 to $3,333.

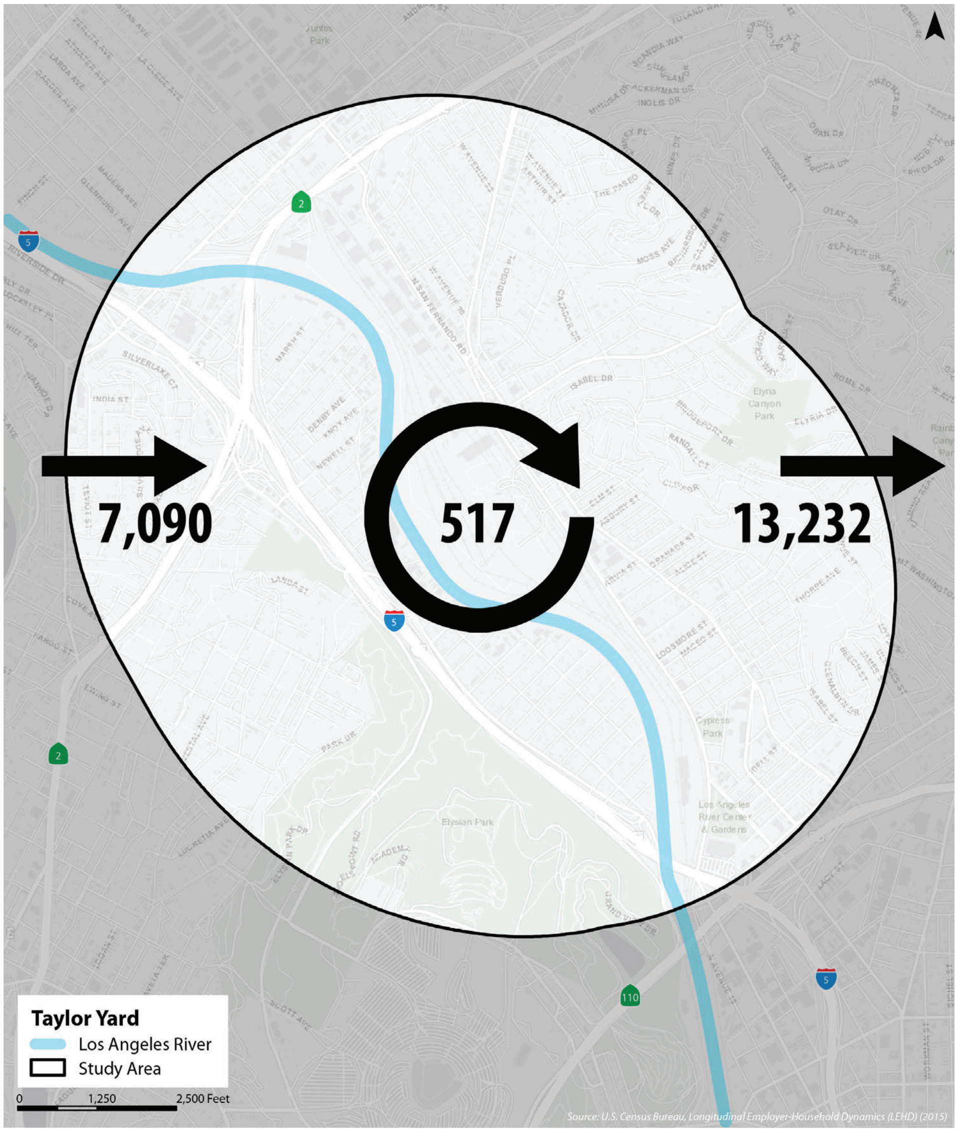
Table 3. Income Data

Number of Jobs Within Study Area	
Monthly Earnings of $1,250 or less	1,333
Between $1,251 - $3,333	3,175
Greater than $3,333	3,099
Total Jobs	7,607
Study Area as a Home Area	
Monthly Earnings of $1,250 or less	2,854
Between $1,251 - $3,333	7,964
Greater than $3,333	5,553
Total Jobs	16,371

TRAVEL TO WORK

Figure 6 shows that the majority of residents in the project area (13,232 individuals or 96 percent) commute outside of it to work. The remainder commutes within the project area to work (517 individuals or 4 percent). Over 7,000 workers travel into the project area for employment.

Figure 6: Commute Patterns



This Page Intentionally Left Blank

APPENDIX

B BIOLOGICAL AND JURISDICTIONAL SUPPLEMENTARY ANALYSIS TECHNICAL MEMORANDUM

March 5, 2018
(2017-284)

Mr. Michael Drennan, P.E.
Vice President
WSP USA
444 South Flower Street, Suite 800
Los Angeles, CA 90071

RE: Biological and Jurisdictional Supplementary Analysis Technical Memorandum for the Taylor Yard River Park Project – Project No. 165 of the Los Angeles River Revitalization Master Plan

Dear Mr. Drennan:

ECORP Consulting, Inc. (ECORP) conducted a Biological Supplementary Analysis for the Taylor Yard River Park Project (hereafter referred to as Project, Project Area, or site) which is known as Project No. 165 of the Los Angeles River Revitalization Master Plan (L.A. River Master Plan). ECORP has prepared this Technical Memorandum to present existing conditions; opportunities and constraints to accomplish specific objectives; and recommendations for how each objective could be maximized. In addition, this document seeks to describe and contextualize the benefits of Project implementation. The information in this document has been prepared as a reference to support the internal design workshop/charrette, grant applications, and environmental documentation. The information provided herein is solely based on desktop analysis and has not included any field verifications or studies. Sources referenced include the California Natural Diversity Database (CNDDB) (2017 dataset), Calflora website (Calflora.org), California Native Plant Society (CNPS) Online Inventory of Rare Plants, and various reports. This document was prepared in consideration of Envision®: Quality of Life, Leadership, Resource Allocation, Natural World, and Risk and Resilience, although, the focus is within the context of Natural World.

PROJECT LOCATION

The Project is located in Los Angeles County, in the City of Los Angeles and immediately adjacent (west) of the Rio de Los Angeles State Park and bordering the Los Angeles River (L.A. River). Neighborhoods surrounding the Project include Atwater Village, Cypress Park, Elysian Valley, Glassell Park, and Lincoln Heights. Elevations range from approximately 320 to 365 feet above mean sea level.

PROJECT DESCRIPTION

The Project would restore approximately 42 acres of a decommissioned railroad maintenance yard that is situated adjacent to the L.A. River. Ultimately the Project seeks to remediate contaminated soils that exist on the site and conduct habitat restoration so that native flora and fauna can inhabit the area. In addition, the Project would integrate design features that could be used by the citizens of Los Angeles and abroad. The restoration of this area would be iterative and include an initial phase where portions of the Project Area could be used as a park and natural habitat while contaminated soils are addressed. The long-term phase would include complete restoration of the Project site along with integration of features that are typical of a neighborhood park, or recreation area. The ultimate design of the site would take into consideration the L.A. River Master Plan, and seeks to achieve goals of Alternative 20, or Riparian Integration via Varied Ecological Restoration (RIVER) Alternative (USACE 2015a).

EXISTING CONDITIONS

TAYLOR YARD RAILROAD MAINTENANCE AREA

The decommissioned railroad maintenance yard is currently in a very disturbed state. The site is mostly flat and although all structures have been removed, the concrete foundations still remain and cover approximately 35 to 40 percent of the site. There is a high-voltage power line that traverses along the western edge of the Project Area, and at the top of the bank of the L.A. River. The vegetation that exists comprises a mixture of ruderal species (non-native weeds typical of disturbed areas) as well as what appear to be remnant ornamental trees. There are culverts that flow under the site and daylight on the west-facing bank of the river. It appears that the culverts drain the site itself and most likely the adjacent streets to the east, north, and south. An active double rail line exists along the eastern side of the Project Area and is situated approximately 50 feet away.

LOS ANGELES RIVER CHANNEL

Adjacent to the Project Area, the L.A. River currently comprises concrete banks and a natural bottom. Within the riverbed portion of the channel, there is a mixture of open water, and disturbed riparian and wetland vegetation that is dominated by non-native plant, tree, and vine species. The most prominent non-native plant species is a rhizomatous monocot known as giant reed (*Arundo donax*). The riverbed is braided in some areas, however in most locations there are primary and secondary terraces that have various types of riparian and wetland vegetation communities.

SPECIAL-STATUS SPECIES AND HABITAT

For the purposes of this section, special-status refers to species that are listed under the state and/or federal Endangered Species Acts, species of special concern, species or habitat that are afforded special protection due to their rarity or limited distribution, or species that are being tracked or monitored by conservation groups (e.g., CNPS, Western Bat Working Group, etc.).

Special-Status Habitats

Special-status habitat is not likely to be present within the Project Area (i.e., G2 Parcel) however, it is likely that within L.A. River channel special-status vegetation communities are present. For example, there is likely southern willow scrub which is categorized as a S2.1 vegetation community in the Manual of California Vegetation (Very threatened; 6 – 20 viable occurrences worldwide/statewide, and/or more than 518 -2,590 hectares) (Sawyer et al. 2012).

Special-Status Plants and Wildlife

Historically, there have been numerous special-status plants and wildlife observed in the vicinity of the Project, including the federally- and state-listed as endangered least Bell's vireo (*Vireo bellii pusillus*; LBVI). Protocol-level surveys for the federally- and state-listed as endangered southwestern willow flycatcher (*Empidonax trailii extimus*; SWFL), LBVI, and the federally-listed as threatened and California species of special concern coastal California gnatcatcher (*Polioptila californica californica*; CAGN) were conducted in 2005 and 2007 in U.S. Army Corps of Engineers (USACE)-managed areas (USACE 2015a). The survey area included the Project Area.

Surveys for SWFL and CAGN were negative. LBVI were detected in 2007, in 2009 during another survey, and again in 2013 (incidental), but breeding or nesting behavior has not been observed (USACE 2015a).

There do not appear to be records of special-status species within the Project Area. Attachment A presents the results of a CNDDB records search using the 2017 dataset[1]. Only records from 1980 to the present are shown. The reason for using these parameters is due to the fact that the majority of records prior to 1980 are from the early 1900's and with the heavy development in the vicinity since that time the possibility of those species persisting is low. The Final Integrated Feasibility Report for the Los Angeles River Ecosystem Restoration states that the study area is not likely to have federal or state-listed species, or species of special concern (special-status species) because the site has been developed for many decades (USACE 2015a). The data provided by the CNDDB has been provided under a license agreement with the California Department of Fish and Wildlife (CDFW). It is requested that imagery depicting locations of these species not be shared with the public, however, summarized data such as a list of species known to occur is acceptable.

JURISDICTIONAL WETLANDS AND WATERS

The presence of jurisdictional features was assessed (i.e., desktop analysis) for the Project and adjacent L.A. River channel. The Project Area does not appear to have any jurisdictional features present based on review of aerial imagery. There does appear to be two substantial culvert outlets that release surface flows from urban areas adjacent to the Project Area. The flows are released directly to the L.A. River channel. These culverts likely run underneath the Project Area and are not expected to be considered jurisdictional by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or the CDFW.

The L.A. River channel is assumed to have jurisdictional features and is currently designated as a Traditional Navigable Water (USACE 2015a). Using ordinary high water mark (OHWM) as a basis for USACE jurisdiction, it is assumed that the majority of the riverbed will be considered Waters of the U.S. When the Los Angeles River Ecosystem Restoration Feasibility Study, Appendix M, is referred to, the OHWM for the Los Angeles River was conservatively estimated to be halfway up the embankment (USACE 2015b). This was based on examination of debris lines. Attachment B depicts the anticipated USACE jurisdictional waters within the L.A. River channel. In addition, RWQCB jurisdictional waters (Waters of the State) will likely cover the same areas as Waters of the U.S. (see Attachment B), and could also include the entire channel to the top of bank. CDFW jurisdictional waters will likely cover the same areas as Waters of the U.S., and would include the entire channel, top of bank to top of bank, including any area of riparian canopy cover. Attachment B depicts only the CDFW jurisdictional habitat, even though their jurisdiction is likely to extend further up the banks.

[1] The occurrences shown on the map provided as Attachment A represent the known locations of the species listed here as of the date of this version (i.e., 2017). There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

OPPORTUNITIES AND CONSTRAINTS

OPPORTUNITIES

With regard to habitat restoration, there are several opportunities that exist if this Project is implemented. Most important would be the opportunity to transform land that was once developed and disturbed into a more natural state that supports native flora and fauna. Conducting habitat restoration within the Project Area would increase biodiversity tremendously by creating additional space for plants and animals to establish and persist, as well as, provide a stopover point for transient or migratory wildlife. Restoration is currently planned to include a phased approach that involves an interim solution (e.g., over the next four years) and a long term solution (e.g., over the next 10 years).

The interim habitat restoration phase will occur while remediation of contaminated soil in select portions of the site occurs. This phase will provide opportunities for people visit and experience the planned park area even though it will not be constructed. The interim solution will seek to give people a glimpse at what it will be like while still providing a connection to nature with usable areas for recreation such as viewing the river, exercising, and other leisure activities such as picnicking in a grassy area with wild flowers. Temporary landscaping and strategic placement of boxed trees are just a couple of the ways that the public will be able to envision how the park will look in the future. Native species that produce showy flowers and trees that provide shade will be appreciated by all people who visit the park. Boxed native trees could either be anchored above ground, or in a pit so that their trunks appear more naturally positioned across the landscape.

The long term habitat restoration phase will be implemented concurrently with Project construction and is anticipated to continue for approximately 10 years. During this phase the Taylor Yard River Park will be restored with native species as portions of the site are completed. It is important to commence with habitat restoration activities during construction so that native habitat can begin to establish and any areas requiring special attention can be identified so that remedial measures can be completed during the construction period of performance. In addition, this will allow for some areas that may be subjected to river flows during storm events to develop vegetation early so that increased protection of river bed and banks can be achieved. The long term habitat restoration phase will include planting species that will develop into several different vegetation communities.

Another opportunity of this Project would be the chance to increase suitable habitat that is usable for special-status species. For example, recent studies reveal that LBVI have used the native habitat in the river for a stopover point. If suitable LBVI habitat was established within the Project Area there is a chance that this species could use this as future foraging and breeding grounds. Additionally, habitat could be created for other special-status plants, fish, birds, and invertebrates. For example, Greata's aster (*Symphyotrichum greatae*) is a rare plant (CNPS Rare Plant Rank 1B.3) that is known to grow in damp places in canyons (Baldwin et al. 2012) including adjacent to waterways (pers. obs.). It is primarily found in Los Angeles County (Calflora 2017). The closest record discovered during literature review is from 1932, located in Elysian Park (approximately one mile southwest of the Project Area). There are records of this species that are located in Arroyo Seco, approximately five miles to the east of the Project Area. This plant could grow well in the restoration area, which would increase its range within Los Angeles County.

We have reviewed the Final Integrated Feasibility Report (IFR) (USACE 2015) which envisions creation of native habitat within an area along the L.A. River from Griffith Park to downtown Los Angeles known as the ARBOR reach (ARBOR - Area with Restoration Benefits and Opportunities for Revitalization). The IFR analyzed different alternatives to revitalize the L.A. River and has identified Alternative 20 as the Locally Preferred Plan (LPP), and the USACE's recommended Plan. Alternative 20, or Riparian Integration via Varied Ecological Reintroduction (RIVER), seeks to achieve the following key objectives: (1) Restore valley foothill riparian strand and freshwater marsh habitat; (2) Increase habitat connectivity; and (3) Increase passive recreation that is compatible with the restored environment. In consideration of the objectives of the IFR, we have determined that there are a number of potential grading and planting scenarios that would support those objectives, including creation of terraces adjacent to the L.A. River to support a variety of habitat types. Terracing would allow for a greater number of habitat types that would support increased biodiversity while protecting those habitats from natural forces that can be detrimental during inclement weather. For example, lowland areas could be designed for wetland habitat with a multi-terraced structure and an ecotone that transitions into other habitat types such as open water, riparian scrub, and riparian forest. In higher elevations amongst the terraces, other habitat types including riparian-upland transitional areas, and upland habitat could be created. Upland habitat could be very diverse and be designed for creation of native grassland and wildflower fields, scrub and chaparral, maritime succulent scrub, walnut forest, and oak woodland. Terracing is a novel approach for this type of project and is expected to be effective as the foundation for habitat restoration and appropriate for protection of river banks and habitat during large storm events that generate torrential flows.

This Project also provides an opportunity to improve water quality through the creation of bio-filter areas. Including features such as constructed (artificial) wetlands and bio-swales can benefit water quality. These features can capture storm water runoff, or daily runoff from irrigation seepage, as well as, slow the rate at which water enters the river by "filtering" it through vegetation and soil. Another benefit is that constructed wetlands can provide foraging and nesting habitat for bird species that primarily live in or around water.

Based on alternatives being considered, this Project will likely result in an increase of Waters of the U.S., Waters of the State, and CDFW-jurisdictional waters (includes habitat). Generally speaking, the Project would likely decrease the elevation of a portion of the site so that the L.A. River channel bed is widened to the east, thereby creating additional Waters of the U.S. The slope that connects this widened channel to the upland area of the site would be planted with riparian vegetation.

CONSTRAINTS

The potential constraints that may be encountered when planning or implementing this Project include biological constraints and jurisdictional constraints. Because LBVI have been previously detected in the area this will trigger the need for additional LBVI surveys. In addition to LBVI, surveys for rare plants and wildlife will also need to occur in support of permits and environmental documents. The results of these surveys could require a biological monitor present during vegetation removal or trimming, or there may be a need for translocation (fish) or transplantation (plants) of select species. In addition, the presence of certain wildlife species could require the need for noise attenuation measures, full-time biological monitoring, or the establishment of a temporary no-work buffer (e.g., if a red-tailed hawk builds a nest, a 500-foot buffer is typically required until the young have fledged).

Another biological constraint could include availability of water. The site design will have to consider the interplay of groundwater and artificial inputs of water whether through irrigation or storm water runoff. The fluctuations of water availability through the seasons will also play a role.

The presence of jurisdictional waters and jurisdictional habitat could potentially be a constraint to the implementation of this Project. Although this Project would certainly improve conditions adjacent to and within the L.A. River, coordination with the USACE, RWQCB, and CDFW is expected to be required. However, the level of effort needed for coordination and consultation with these regulatory agencies will likely vary depending on how similar the Project implementation plan is to Alternative 20 (RIVER).

RECOMMENDATIONS

BIOLOGICAL RECOMMENDATIONS

To minimize the effects that biological constraints have on this Project, updated surveys and vegetation community mapping is recommended. Biological surveys will assist with identifying any current suitable habitat for special-status species, the presence of special-status species or habitat, and provide a solid baseline dataset that can be referred to during the permitting process. Vegetation community mapping will assist with characterizing the native vegetation within and adjacent to the site (river channel), and also allow for the mapping of non-native plant species, which can be included in the permit application packages.

A robust dataset for biological resources within the Project Area is expected to decrease the amount of time required for the permitting process. A robust dataset would require that surveys be conducted at different times of the year and certain species would require protocol-level surveys, or adherence to survey guidelines. In addition, it is recommended to not only survey for one year, but each year leading up to the implementation start date because the presence or absence of biological resources can fluctuate year to year. Increasing the knowledge of biological resources on the site, or with the potential to be on site, will lower the chances for project delays due to the presence of unanticipated biological resources.

Water availability is a very important factor for the initial and long-term survival of vegetation used for this Project. Some tree species may need to be provided with supplemental water for years until their roots reach the water table. Some shrubs will need to be watered on a regular basis to ensure they do not become so dry that they become a fire hazard. The use of reclaimed water is expected to be the most beneficial means for maintaining vegetation within the Project Area. Providing planted areas with the appropriate amount of water for the season is also important. If rainfall is average or above average then supplemental irrigation must be reduced or trees and shrubs could perish. Conversely, the winter season in southern California can be very dry and in those circumstances, vegetation would need to be provided with supplemental irrigation to mimic natural rainfall patterns.

JURISDICTIONAL RECOMMENDATIONS

The presence of jurisdictional features within the Project Area is not expected, however, in order to verify this a formal jurisdictional delineation is recommended. A formal jurisdictional delineation of the L.A. River channel that abuts the Project Area has already been completed as part of the Feasibility Study and EIR/EIS (USACE 2015a). However, it is recommended that prior to Project implementation that this be completed again to verify conditions and document any conditions that may have changed.

HABITAT RESTORATION RECOMMENDATIONS

In order to provide locally sourced plant material for the long term phase, seed should be collected from within five miles of the site and used during habitat restoration activities. Seed could be collected and saved for use during hydroseeding, as well as, used to grow tree, shrub, vines, and herbs/forbs at a nursery for use at the site. A seed company such as S&S Seeds should be utilized for seed collection since they are the leader in our state for seed collection with regard to qualifications and experience throughout the state.

Plant propagation contracts should be set up to utilize only native plant nurseries that specialize in growing native plants and can certify that they have an anti-*Phytophthora* program. Rancho Santa Ana Botanic Garden in Claremont, California has overhauled their plant propagation operations to include Best Management Practices (BMPs) provided by the California Native Plant Society (CNPS) and the *Phytophthora* Working Group. *Phytophthora* is a water mold that can affect native plants and cause their roots to rot and in most cases die. Current research suggests that many habitat restoration projects can be adversely affected by this soil-born pathogen.

If you have any questions concerning this document, please contact me at (858) 279-4040.

Sincerely,

Josh Corona-Bennett
Project Manager/Senior Restoration Ecologist
ECORP CONSULTING, INC.

REFERENCES

Baldwin, B. G., D.H Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual; Vascular Plants of California, Second Edition. University of California Press, Berkeley, California.

Calflora: Information on California plants for education, research and conservation. [web application]. 2017. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/. Accessed January 10, 2018.

California Natural Diversity Database (CNDDB). 2017. Rarefind 3, updated April, 2017. Sacramento, CA. Accessed January 10, 2018.

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Accessed January 10, 2018.

Everest International Consultants, Inc. 2002. Taylor Yard Multiple Objective Feasibility Study, Final Report. June 2002

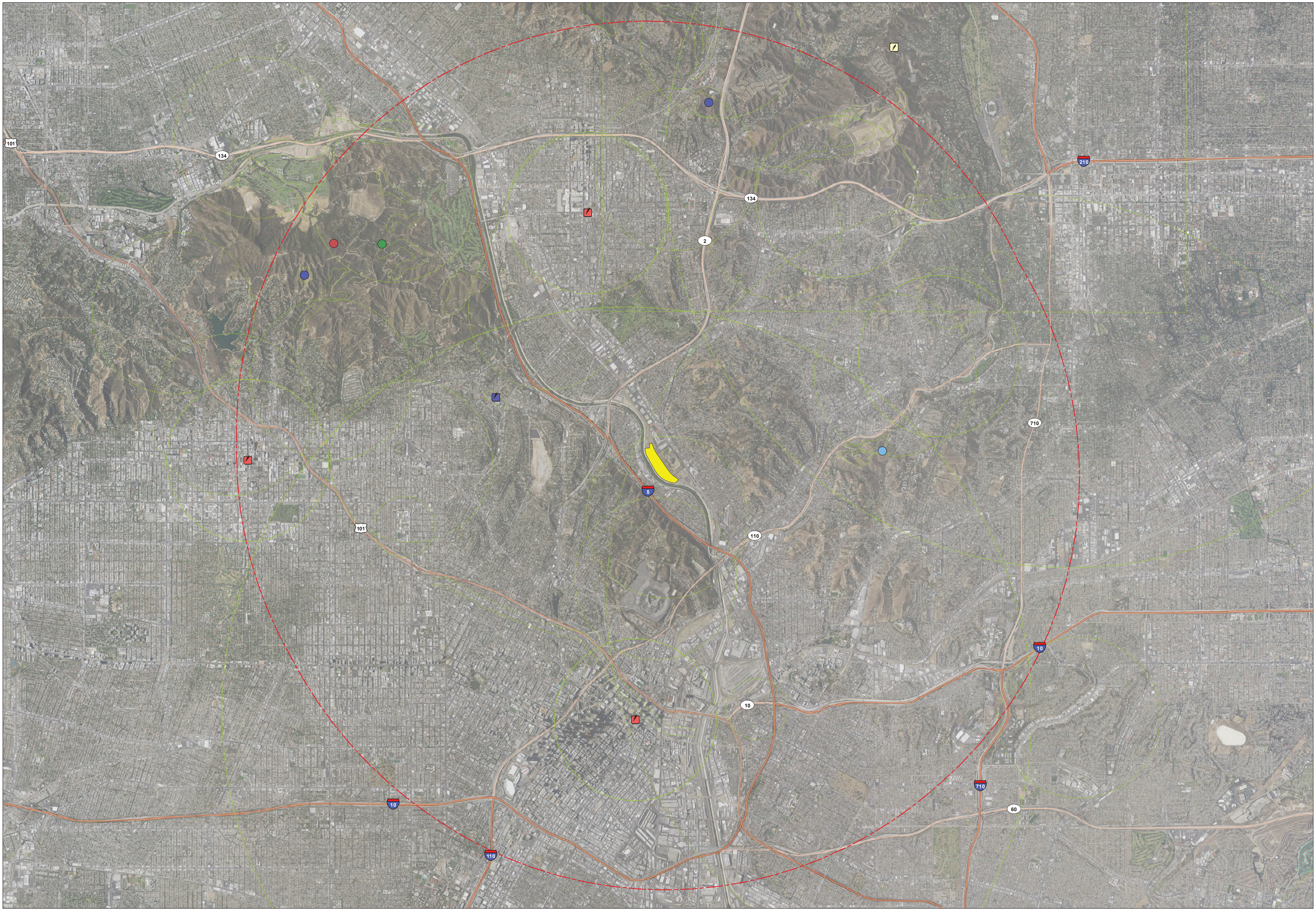
Sawyer, J.O., T. Keeler-Wolf, J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society. Sacramento, California.

U.S. Army Corps of Engineers. 2015a. Los Angeles River Ecosystem Restoration Integrated Feasibility Report: Final Feasibility Report and Environmental Impact Statement/Environmental Impact Report. September 2015.

U.S. Army Corps of Engineers. 2015b. Los Angeles River Ecosystem Restoration Feasibility Study: Appendix M – Draft Clean Water Act Section 404(b)(1) Evaluation. September 2015.

ATTACHMENT A

Figure 1. CNDDB Records: Biological Resources (2017 Dataset)



NOTES

Aerial Photo Source: NAIP 2016, CNDDB version 2017.

1 " = 2,000 '

MAP FEATURES

- Project Area
- 5 Mile Buffer
- Coastal California Gnatcatcher Critical Habitat
- CNDDB Occurrence

Plant - Status Code

- Nevin's Barberry - FE/SE
- Plummer's Mariposa-lily - Rank 4.2
- Slender Mariposa-lily - Rank 1B.2
- Walnut Forest - Sensitive

Bird

- American Peregrine Falcon - FP

Mammal

- Big Free-tailed Bat - SSC
- Hoary Bat - MP
- Western Mastiff Bat - SSC
- Western Yellow Bat - SSC

Common Name	Scientific Name	Status Code	Status Description
Nevin's Barberry	Berberis nevinii	FE/SE	Federally Listed as Endangered / State Listed as Endangered
Plummer's Mariposa-lily	Calochortus plummerae	Rank 4.2	CNPS Rare Plant Rank
Slender Mariposa-lily	Calochortus clavatus var. gracilis	Rank 1B.2	CNPS Rare Plant Rank
Big Free-tailed Bat	Nyctinomops macrotis	SSC	CDFW Species of Special Concern
Western Mastiff Bat	Eumops perotis californicus	SSC	CDFW Species of Special Concern
Western Yellow Bat	Lasiurus xanthinus	SSC	CDFW Species of Special Concern
Hoary Bat	Lasiurus cinereus	MP	WBWG Medium Priority
American Peregrine Falcon	Falco peregrinus anatum	FP	CDFW Fully Protected
Walnut Forest		Sensitive	CDFW Sensitive Habitat

VICINITY MAP

TAYLOR YARD G2 PARCEL

Figure 1. Biological Records

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale: 1 " = 2,000 ' | Project Number: 2017-284

This Page Intentionally Left Blank

ATTACHMENT B

Figure 2. Jurisdictional Features

Figure 2
Jurisdictional Features

Map Features

Project Area

Potential Jurisdictional Resources

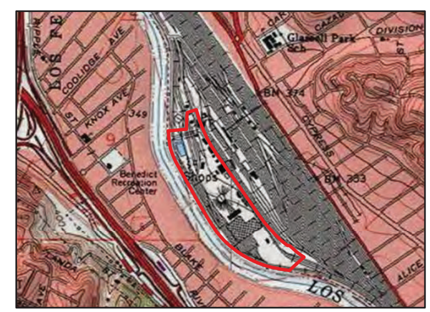
Waters of the U.S./Waters of the State [1]

CDFW Jurisdictional Habitat [2]

[1] This boundary was hand-digitized by Josh Corona-Bennett on 1-9-18. It is not an accurate boundary but shows the anticipated limits of Waters of the U.S. under the jurisdiction of the U.S. Army Corps of Engineers. It is also expected that the Regional Water Quality Control Board would share this same boundary and consider it to be Waters of the State. For reference purposes only. Used Google Earth aerial image from October 2016 while digitizing polygon.

[2] This boundary was hand-digitized by Josh Corona-Bennett on 1-9-18. It is not an accurate boundary but shows the anticipated limits of riparian habitat that would be under the jurisdiction of the California Department of Fish and Wildlife (for reference purposes only). Used Google Earth aerial image from October 2016 while digitizing polygon.

Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Map Date: 1/10/2018

Photo Source: NAIP 2016
Delineator: Josh Corona-Bennett
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet

Scale in Feet
0 300

2017-284 Taylor Yard G2 Parcel

ECORP: N:\2017\2017-284 TAYLOR YARD G2 PARCEL\MAPS\JURISDICTIONAL_DELINEATION\DESKTOP_JD\V1\TY_DESKTOP_JD_V1.MXD-MGUIDRY 1/12/2018

This Page Intentionally Left Blank

This Page Intentionally Left Blank

APPENDIX

C

EASEMENT AND CONSTRAINTS EXHIBIT

TAYLOR YARD G2 RIVER PARK PROJECT

EASEMENT AND CONSTRAINTS EXHIBIT

ENGINEERING
CITY OF LOS ANGELES

DRAFT

JUNE 20, 2018

WSP

This Page Intentionally Left Blank

This Page Intentionally Left Blank

APPENDIX

D

WATER QUALITY SUPPLEMENTARY ANALYSIS

MEMORANDUM

To: Sam Morrissey, MBA, PE
WSP

From: Ben Willardson, PhD, PE, ENV SP, D.WRE, QSD

Date: February 8, 2019

Subject: **Taylor Yard G2 River Park Project**
Water Quality Supplementary Analysis

The purpose of this memorandum is to present the opportunities and constraints to accomplish water quality objectives for the Taylor Yard G2 River Park project. The memorandum discusses the existing conditions, opportunities, and constraints associated with water quality improvements for the Taylor Yard G2 River Park Project.

1. Existing Conditions

Taylor Yard, a 244-acre site located in the City of Los Angeles (City), was used for railroad maintenance operations. Portions of the site have been developed for transportation facilities, industrial buildings, and commercial uses since the early 1900s. The historical uses on site and past land uses in offsite areas led to contamination of the groundwater beneath Taylor Yard. The introduction of pollutants related to rail maintenance contaminated the subsurface soils. Contaminated groundwater from up-gradient sources also impacts the site. The location of the site adjacent to the Los Angeles River (LAR) provides a potential source of water for habitat restoration and an opportunity to increase storage of flood flows via diversion of river flows to the site. Riparian and wetland habitats require a steady source of water to survive, so diversion of river flows as well as groundwater and local runoff could be used for the vegetation. Some of these water sources require regulatory and water rights approvals. Implementation of a multiple objective project at Taylor Yard is one step in restoring the floodplain of the LAR to support existing and potential beneficial uses such as riparian habitat, flood protection, groundwater recharge, water quality enhancement, and recreational opportunities.

1.1 Site Location

Taylor Yard is located in Los Angeles, California and is bound to the west by the LAR, east by San Fernando Road, north by the Glendale Freeway, and south by the Interstate 5 Freeway (I-5). Taylor

Yard historically consisted of one large 244-acre parcel that was subsequently divided into 10 parcels; designated Parcels A, B, C, D, E, F, G, H, I, and J. Parcel G, also known as the Active Yard, was further divided into two parcels, and occupied approximately 61.2 acres of the property. This project focuses on the G2 area that is shown in **Figure 1-1**. The map shows the major storm drains for areas outside the G2 Parcel. The land to the east of the railroad slopes east, while the land west of the railroad slopes towards LAR. There are several small parcel outlets along the top of the eastern river bank that appear to drain the G2 parcel. There are two locations where there may be pipes embedded or connected to the eastern bank lining that are shown as red lines in **Figure 1-1**. These will need to be further investigated during the project planning phase.

Figure 1-1 Taylor Yard Parcel G2 with Storm Drains

1.2 Hydrology

The hydrologic regime of Taylor Yard and surrounding area consists of direct precipitation, LAR flows, local runoff, and groundwater flowing under the site. These sources could be used individually or in combination to restore various types of habitat at Taylor Yard under various restoration alternatives. Each source of water is described in more detail below. The watersheds for the drains that could be used for delivery of stormwater and urban runoff are shown in **Figure 1-2**. The watersheds have a total combined watershed area of 4,297 acres.

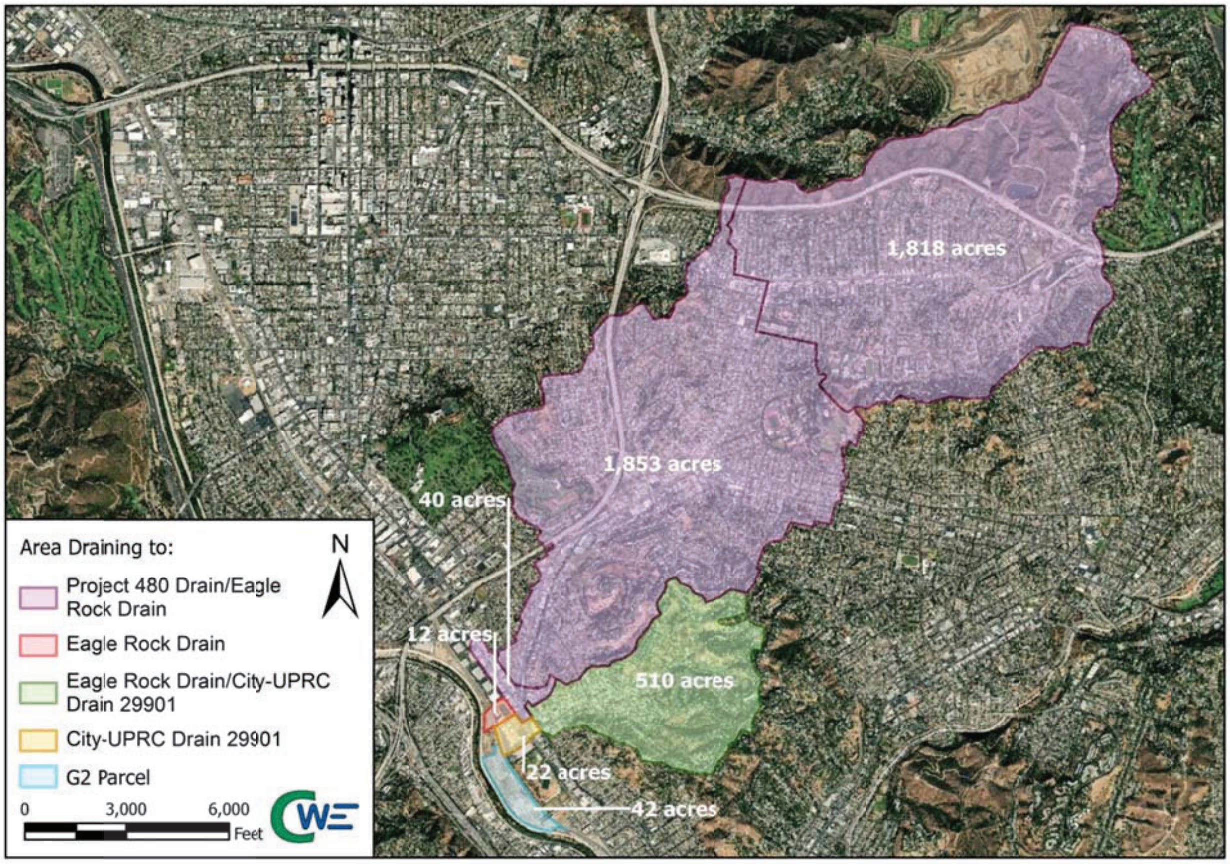


Figure 1-2 Watersheds Draining Near Taylor Yard G2 Parcel

1.2.1 Precipitation

Precipitation at the site is typical of other near-coastal areas in Southern California. The hydrologic climate is characterized by a wet season that extends from October to April and a dry season that extends from April to September. Most of the precipitation falls during the wet season and the region may go without rain from April to September. Monthly precipitation varies from a minimum of no rainfall to a maximum of almost 15 inches in the winter months. Summer months can see monthly precipitation ranging from 0 to 2 inches, depending on the year.

1.2.2 Local Runoff

Runoff from areas outside Taylor Yard, including the surrounding neighborhoods of Glassell Park, Cypress Park, and Mt. Washington, is directed into storm drains running under or around Taylor Yard. These storm drains empty into the LAR through culverts along the northeastern flood control levee. The railroad embankment isolates the site from runoff generated by adjacent parcels within Taylor Yard. Direct runoff from the site is routed to outlets along the river levee. Water from the LAR is kept out of the property by the levee.

1.2.3 Los Angeles River

The LAR drains a watershed that covers 834 square miles. Only a portion of this runoff passes Taylor Yard. The LAR conveys flood flows, urban runoff, and treated wastewater effluent from the northern reaches of Los Angeles to the Pacific Ocean at Long Beach. Historically, the river flowed continuously through this section fed by groundwater that was forced up by relatively shallow, impermeable geologic strata within the Narrows (Coastal Conservancy, 2002). An extensive water extraction program in the San Fernando Valley (SFV) lowered groundwater levels upstream of the Narrows and eliminated dry season flows.

In the 1980s, dry season flows returned to the LAR, fed by wastewater treatment effluent from the Tillman and Glendale Wastewater Treatment and Reclamation Plants (WTRPs) and local urban runoff. These water sources continue to provide flows throughout the year and provide a base flow during the dry season. As a result, riparian vegetation and associated wildlife have increased throughout the LAR, enhancing the habitat that was impacted through implementation of flood control measures.

The increase in stream vegetation has increased the flood control maintenance effort required to clear debris and vegetation from the channel. This material has the potential to decrease the channel flood conveyance capacity.

The hydrology of the LAR has two distinct regimes. The dry season regime has limited storm runoff, and is supplemented by treated wastewater effluent and urban runoff. These river flows are relatively small comprising a base flow that rarely rises above the bottom of the river channel. The wet season is characterized by storm runoff that varies depending on the magnitude of the storm and antecedent moisture conditions. The winter river flows vary substantially, sometimes producing little change over base flow conditions during relatively dry years. At other times, tropical storms create torrential river flows that carry large volumes of water, sediment, and debris. The wet season water levels are normally a few feet above the channel invert. Extreme storm event flows (e.g. 100-year event) can cause the water level to rise to just below the levee top. The LAR has not exceeded its channel capacity since construction in 1956. However, there is now an extensive growth of trees and shrubs that have increased channel roughness within the earthen-bottom reach, decreasing the system capacity. Increased development and an associated increase in impermeable surfaces have also led to an increase in stormwater runoff. The US Army Corps of Engineers (USACE) currently estimates the existing channel condition can only pass the 25-year runoff event.

1.2.4 Groundwater

Groundwater flows beneath Taylor Yard continuously throughout the year. Groundwater in the Narrows occurs under unconfined conditions, with a regional gradient to the southeast. Groundwater contamination in the San Fernando Basin is linked to historical and current industrialization in the SFV. The contaminants of potential concern are volatile organic compounds (VOCs), including chlorinated hydrocarbons and associated products. A factor affecting hydrologic conditions in the Narrows has been the increasing releases of reclaimed waters. These large year-round releases tend to keep the alluvium of the Narrows area full, even in dry years. There is the opportunity for percolation in the unlined reach of the LAR, both upstream and downstream of the paved section near the junction of the LAR and the Verdugo Wash. The general groundwater flow direction beneath Taylor Yard is to the south-southeast with an average hydraulic gradient across the entire yard of 0.0021 foot per foot (ft/ft). Groundwater in the Active Yard is found at depths between 20 and 35 feet below ground surface (bgs).

2. Water Quality

This section discusses the quality of existing water sources that could be used for habitat restoration of Taylor Yard based on a review of available data. The water sources include dry season LAR flows, wet season LAR storm flows, local runoff, and groundwater.

2.1 Los Angeles River

The LAR runs past Taylor Yard and the current planning will modify the river to restore wetland and riparian functions within this reach of the river. The LAR has been classified as a receiving water body by the United States Environmental Protection Agency (USEPA) and the Los Angeles Regional Water Quality Control Board (LARWQCB). Recently, an Enhanced Watershed Management Program for the Upper Los Angeles River (ULAR EWMP) was developed to address water quality in this section of the LAR. The EWMP describes a customized compliance pathway that participating agencies will follow to address the pollutant reduction requirements of the 2012 Municipal Separate Storm Sewer System (MS4) Permit Order No. R4-2012-0175; National Pollutant Discharge Elimination System [NPDES] Permit No. CAS004001). By electing the optional compliance pathway in the MS4 Permit, the Upper Los Angeles River Watershed Management Group (EWMP Group) has leveraged the EWMP to facilitate a robust, comprehensive approach to stormwater planning for the Upper Los Angeles River watershed. This EWMP builds upon multiple previously-developed planning efforts and identifies a detailed implementation strategy that provides not only water quality improvement, but also environmental, aesthetic, recreational, water supply and/or other community enhancements. The strategy was developed through an extensive stakeholder coordination process including three public workshops and numerous one-on-one meetings. The vision for development of the EWMP was to utilize a multi-pollutant approach that maximizes the retention and use of urban runoff as a resource for groundwater recharge and irrigation, while also creating additional benefits for the communities in the ULAR watershed.

2.1.1 Beneficial Uses

The following existing and potential beneficial uses were designated by the LARWQCB for the surface water in the section of the LAR near Taylor Yard.

- Existing Water Contact Recreation (REC-1)
- Existing Non-Contact Water Recreation (REC-2)
- Existing Warm Freshwater Habitat (WARM)
- Existing Wildlife Habitat (WILD)
- Existing Wetland Habitat (WET)
- Existing Groundwater Recharge (GWR)
- Municipal and Domestic Supply (MUN)

- Industrial Service Supply (IND)

2.1.2 Water Quality Objectives

The 2012 MS4 Permit contains effluent limitations, receiving water limitations (RWLs), minimum control measures (MCMs), and Total Maximum Daily Load (TMDL) provisions, and outlines the process for developing watershed management programs, including the EWMP. The MS4 Permit incorporates the TMDL Wasteload Allocations (WLAs) applicable to dry- and wet-weather as water quality based effluent limits (WQBELs) and/or RWLs. Section V.A of the Permit requires compliance with the WQBELs as outlined by the respective TMDLs. The EWMP provides a compliance pathway for attaining these limitations.

The MS4 Permit also requires Permittees to implement MCMs to protect water quality in receiving waters (Part VI.D). Unlike previous Permits, the 2012 Permit allows for the modification of MCMs to more effectively address the highest priority water quality conditions. Permittees can evaluate current MCMs, identify potential modifications that will address Water Quality Priorities, and provide justification for modification and/or elimination of any MCM that is determined to not be applicable to the Permittee (with the exception of MCMs in the Planning and Land Development Program, which may not be eliminated). Customization may include replacement of an MCM for a more effective measure, reduced implementation of an MCM, augmented implementation of the MCM, focusing the MCM on the water quality priority (WQP), or elimination of an MCM.

A primary driver of the extent and scheduling of control measures that make up the EWMP Implementation Strategies are the applicable TMDLs in the Los Angeles River watershed. Section 303(d) of the Clean Water Act (CWA) requires states to prepare a list of water bodies that do not meet water quality standards and establish for each of these water bodies load and waste load allocations (load refers to pollutants), that is, a TMDL that will ensure attainment of water quality standards. A TMDL represents an amount of pollution that can be released by anthropogenic and natural sources of a watershed into a specific water body without causing a decline in water quality and beneficial uses. Unlike federal law, State law requires Regional Boards to include an implementation plan for TMDLs and these plans generally include compliance schedules.

A summary of the existing TMDLs for the ULAR is presented in the following tables:

- **Table 2-1** presents TMDLs developed for water bodies within the ULAR EWMP area and also TMDLs for downstream waterbodies.
- **Table 2-1** (mainstem and tributaries) show where the Permit assigns WQBELs, RWLs, or WLAs to Permittees within the ULAR EWMP area. The numeric WQBELs and RWLs as well as the WLAs for the USEPA TMDLs listed in **Table 2-2** can be found in Attachments N and O of the Permit.

Table 2-1 TMDLs Applicable to the ULAR

TMDL	LARWQCB Resolution Number	Effective Date and/or USEPA Approval Date
LA River Nitrogen Compounds and Related Effects	2003-009	03/23/2004
	2012-010 (amended)	08/07/2014
Legg Lake Trash TMDL	2007-010	03/06/2008
LA River Trash	2007-012	09/23/2008
LA River Metals TMDL	2007-014	10/29/2008
	2010-003 (amended)	11/03/2011
LA River Bacteria TMDL	2010-007	03/23/2012
Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL	2011-008	03/23/2012
Los Angeles Area Lakes TMDLs for Lake Calabasas, Echo Park Lake, and Legg Lake	NA (USEPA TMDL)	03/26/2012

2.1.3 Wet- and Dry-Season Requirements

Based on available information and data analysis, Water Body-Pollutant Combinations (WBPCs) were classified in one of the three Permit categories, as described in the EWMP. The Permit outlines a prioritization process that defines how pollutants in the various categories will be considered in scheduling. The factors to consider in the scheduling include the following based on the compliance approaches outlined in the Permit:

- Regional Board-adopted TMDLs with past due interim and/or limits and those with interim and/or limits within the Permit term (schedule according to TMDL schedule)
- Regional Board-adopted TMDLs with interim and/or limits outside the Permit term (schedule according to TMDL schedule)
- Other receiving water exceedances

USEPA TMDLs, 303(d) listings without a TMDL adopted, and other exceedances of RWLs do not contain milestones or an implementation schedule. As such, these Water Quality Priorities do not have a defined schedule for attainment/implementation. To address this issue for USEPA TMDLs, Part VI.E.3.c of the Permit allows MS4 Permittees to propose a schedule in the EWMP. To address this issue for exceedances of RWLs associated with WBPCs not addressed through a TMDL (i.e., 303(d) listings and other exceedances of RWLs), Part VI.C.2.a of the Permit (page 49) specifies how interim numeric milestones and compliance schedules must be set for each WBPC based on its placement in one of the following groups that were developed as part of the EWMP:

- Group 1: Pollutants that are in the same class as those addressed in a TMDL in the watershed and for which the water body is identified as impaired on the 303(d) List as of December 28, 2012;

- Group 2: Pollutants that are not in the same class as those addressed in a TMDL for the watershed, but for which the water body is identified as impaired on the 303(d) List as of December 28, 2012;
- Group 3: Pollutants for which there are exceedances of RWLs, but for which the water body is not identified as impaired on the 303(d) List as of December 28, 2012; or
- USEPA TMDL: Pollutants addressed by USEPA TMDL without an implementation plan/schedule.

Table 2-2 contains the classified pollutants for the reaches of the LAR, with the information for Reach 3 shown being the reach of interest for the Taylor Yard project. Both wet- and dry-weather requirements for the pollutant are classified.

The schedule for compliance with the classified pollutants was provided in the EWMP. Trash TMDL requirements are already expected to be met, while other pollutant load compliance dates range between 2024 and 2037 based on TMDL requirements.

Table 2-2 Summary of ULAR WMA Water Body-Pollutant Categories for Mainstem Reaches (ULAR EWMP, 2015)

Constituent	Water Body	Category	Relevant TMDL	TMDL in Watershed with Same BMP Class	TMDL in Watershed with Same Scheduling Class	Classification
2,3,7,8-TCDD (Dioxin)		3A (Wet)	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			
Bis(2-ethylhexyl)Phthalate	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Mercury Total	LAR	2c (Dry)/ 3c (Wet)	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Thallium Total	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Dibenzo(a,h)Anthracene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Indeno(1,2,3-cd)Pyrene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Nickel Total	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
$Zinc_2$	LAR Reach 3	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Cyanide	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Benzo(a)Anthracene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Chrysene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Chlorine (Total)	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Dichlorobromomethane	LAR Reach 3	3C	MS4 determined to not be a source that may be causing or contributing to observed exceedances (water reclamation plant effluent is identified source)			
Chlorodibromomethane	Burbank Western	2A	MS4 determined to not be a source that may be causing or contributing to observed exceedances (water reclamation plant effluent is identified source)			

Constituent	Water Body	Category	Relevant TMDL	TMDL in Watershed with Same BMP Class	TMDL in Watershed with Same Scheduling Class	Classification
	Channel					
Selenium	LAR Reach 3	3C	MS4 determined to not be a source that may be causing or contributing to observed exceedances. As noted in the LAR Metals TMDL, originates from natural sources			
pH	LAR Reach 3	3B	Reflective of a condition of pollution, not necessarily a result of MS4 discharge			
Dissolved Oxygen	LAR Reach 3	3B	Reflective of a condition of pollution, not necessarily a result of MS4 discharge			

1 – Based on fate and transport mechanisms during wet weather.

2 – The LAR Metals TMDL states that "Dry-weather impairments related to zinc only occur in Rio Hondo Reach 1". As a result, dry weather impairments related to zinc in other water bodies are not addressed by the Regional Board adopted TMDL.

3 – The LAR Metals TMDL does not address dry weather impairments related to copper or lead in Rio Hondo Reach 2, Rio Hondo Reach 3, or Caballero Creek.

2.2 Local Runoff

A preliminary estimate of onsite and offsite pollutant loading to Taylor Yard was made using the Los Angeles County Department of Public Works (LACDPW) watershed land use-based monitoring data that characterizes the mass emissions of constituents from specific land uses.

Bioinfiltration Best Management Practices (BMPs) improve water quality by filtering out pollutants before they enter the receiving water body. Wetlands remove pollutants through settling, filtration, and biologic uptake. Mechanical treatment systems use settling, filtration, and chemical reactions to improve water quality. The pollutant loads delivered on an average annual basis were estimated for the Project 480, Eagle Rock Drain, and the City-Union Pacific Railroad Company (UPRC) storm drains near the Taylor Yard G2 Parcel. Pollutant loading attributed to onsite runoff was also estimated. The estimation used event mean concentrations (EMCs) that correlate pollutants to land use and are based on the most recent data available in Los Angeles County. This same data was used to develop the EWMPs for the NPDES permit. The EMC data is based on land use, which is also correlated to runoff coefficients where each different land use conveys water at a rate that is proportional to the area within that subarea.

Seven pollutants were included in this analysis: trash, nitrate, total copper, total lead, total zinc, fecal coliform, and total suspended solids (TSS). **Table 2-3** presents the average EMCs associated with land use. It comes from the User's Guide for the Structural BMP Prioritization and Analysis Tool (SBPAT) and was derived from data collected by the LACDPW for the NPDES permit.

Table 2-3 Average EMCs by Land Use for Los Angeles County

Land Use	Trash	Nitrate	Total Copper	Total Lead	Total Zinc	Fecal Coliform	TSS
	cf/ac	mg/L	µg/L	µg/L	µg/L	MPN/100ml	mg/L
Commercial	1	0.55	31.4	12.4	237.1	79,900	67
Education	1	0.61	19.9	3.6	117.6	79,900	99.6
Industrial	1	0.87	34.5	16.4	537.4	3,760	219
MF Residential	1	1.51	12.1	4.5	125.1	11,800	39.9
SF Residential	1	0.78	18.7	11.3	71.9	31,100	124.2
Transportation	1	0.74	52.2	9.2	292.9	1,680	77.8
Vacant	0	1.17	10.6	26.3	26.3	6,310	216.6

To determine the quantity of pollutants to be treated by BMPs, the amount of each land use type within the drainage subareas tributary to the Taylor Yard G2 parcel was determined using Geographic Information System (GIS). Land uses were based on a shapefile of SBPAT land uses and are presented, along with their respective areas, in **Table 2-4**. The table further shows the percent impervious for each land use which was derived from the SBPAT shapefile. The table includes the 42-acre G2 parcel which was assumed to have a future land use of "Education" type EMCs since the area will be used as a park and community event location.

Table 2-4 Summary of Land Uses in Areas Tributary to G2

Land Use	Area in Acres	% Impervious
Commercial	242	94%
Education	191	50%
Industrial	123	73%
MF Residential	356	69%
SF Residential	2,267	41%
Transportation	112	96%
Vacant	1,006	2%
Total	**4,297**	**-**

2.2.1 Pollutant Loading Attributed to Wet-Weather Flows

For each land use within each drainage area, the assumed annual water quality volume was calculated by determining the 85th percentile rainfall in inches and determining how many 85th percentile events could be captured in an average year. The 85th percentile rainfall depth was obtained through a hydrology map provided by LACDPW. The multiplication factor was developed by evaluating the average annual stormwater capture for BMPs in Los Angeles County and developing a ratio of the average annual volume of stormwater capturable by a BMP sized for the 85th percentile rainfall. A summary of these parameters and results can be found in **Table 2-5**.

Table 2-5 Calculation of Average Water Quality Volume

Parameter	Value
85th percentile rainfall in inches	0.95
Average annual water quality volume in inches	9.98
Average annual water quality volume in feet	0.83

To determine the average capturable water quality volume for each land use, a runoff coefficient for each first had to be determined. By assuming only small weather events and that 100% of the runoff from impervious surfaces would enter the BMPs while 100% of the runoff from soil would infiltrate, the runoff coefficient could be estimated as the land area's percent impervious, which was calculated and presented in **Table 2-6**. From this, the average capturable water quality volume was calculated by taking the product of the area of each land use, the runoff coefficient or percent impervious, and the average annual water quality volume that can be captured from **Table 2-6**. This number was then multiplied by the relevant EMC for that land use type to determine the mass of pollutants removed from stormwater runoff per land use type within the entire drainage area, except in the case of trash in which the EMC was multiplied by the area. Conversion factors were used where appropriate. Total estimated loads attributed to wet-weather flows that can be captured are presented in **Table 2-6**. The analysis shows approximately 150 acre-feet of stormwater runoff conveyed to the G2 site from the tributary watersheds and on-site flows per event.

Table 2-6 Expected Wet-Weather Pollutant Loads Tributary to G2

Land Use	Runoff Coefficient / % Impervious	Annual Average Capturable Water Quality Volume	Total Trash	Nitrate	Total Copper	Total Lead	Total Zinc	Fecal Coliform	TSS
	%	**acre-feet**	**cf**	**kg**	**kg**	**kg**	**kg**	**MPN**	**kg**
Commercial	94	190	242	129	7	3	55	1.87E+14	15,663
Education	50	76	149	57	2	0	11	7.46E+13	9,293
Industrial	73	75	123	80	3	2	50	3.47E+12	20,209
MF Residential	69	204	355	381	3	1	32	2.98E+13	10,064
SF Residential	41	781	2,266	751	18	11	69	2.99E+14	119,578
Transportation	96	92	122	84	6	1	33	1.91E+12	8,855
Vacant	2	21	0	30	0	1	1	1.62E+12	5,552
Total	**-**	**1,438**	**3,257**	**1,512**	**40**	**18**	**251**	**5.98E+14**	**189,214**

2.2.2 Pollutant Loading Attributed to Dry-Weather Flows

Dry-weather flows in the drain systems near the site vary by drain. The Draft Concept Report (Bureau of Sanitation [BOS], 2007), indicated that the Eagle Rock drain carries 0.38 cubic feet per second (cfs) and Project 480 carries 0.81 cfs for a total flow of 1.19 cfs, or 534 gallons per minute (gpm). This is equal to approximately 0.13 gpm/ac. Recent studies and projects within the City of Los Angeles have shown approximately 0.1 gpm/ac according to the BOS. These numbers provide a range of potential water available for conservation of 700 to 900 ac-ft per year. The portion of this flow available in the Eagle Rock Drain is approximately 220 ac-ft per year.

Total estimated loads attributed to dry-weather flows that can be captured are presented in **Table 2-7** and **Table 2-8**. Note that the 42-acre G2 parcel was excluded from the dry-weather analysis as it is not expected to produce dry-weather runoff. In addition, the 22-acre subarea, shown in **Figure 1-2**, was also excluded as it drains directly to the City-UPRC storm drain, which demonstrated negligible dry-weather flows in the Draft Concept Report (BOS 2007). It can also be noted that dry-weather flows are not expected to be impacted by trash due to implementation of trash screening and street sweeping measures to meet regulatory requirements.

2.3 Groundwater

Groundwater exists at depths between 20 feet bgs and 35 feet bgs. However, "perched" groundwater has been encountered at depths of less than 5 feet bgs within the Service Track and Diesel Shop areas of the site. Monitoring activities at the site have shown groundwater contamination with VOCs at levels exceeding state drinking water standards or Maximum Contamination Levels (MCLs).

Table 2-7 Expected Dry-Weather Pollutant Loads Tributary to G2 BMP (Low Estimate)

Land Use	Runoff Coefficient / % Impervious	Capturable Dry-Weather Volume	Total Trash	Nitrate	Total Copper	Total Lead	Total Zinc	Fecal Coliform	TSS
	%	acre-feet	cf	kg	kg	kg	kg	MPN	kg
Commercial	94	39	0	26	2	1	11	3.85E+13	3,226
Education	50	31	0	23	1	0	4	3.04E+13	3,785
Industrial	73	20	0	21	1	0	13	9.20E+11	5,359
MF Residential	69	57	0	107	1	0	9	8.36E+12	2,826
SF Residential	41	366	0	352	8	5	32	1.40E+14	56,020
Transportation	96	18	0	16	1	0	7	3.74E+11	1,734
Vacant	2	162	0	234	2	5	5	1.26E+13	43,354
Total	**-**	**693**	**0**	**780**	**16**	**12**	**82**	**2.31E+14**	**116,303**

Table 2-8 Expected Wet-Weather Pollutant Loads Tributary to G2 BMP (High Estimate)

Land Use	Runoff Coefficient / % Impervious	Capturable Dry-Weather Volume	Total Trash	Nitrate	Total Copper	Total Lead	Total Zinc	Fecal Coliform	TSS
	%	acre-feet	cf	kg	kg	kg	kg	MPN	kg
Commercial	94	51	0	34	2	1	15	5.00E+13	4,194
Education	50	40	0	30	1	0	6	3.95E+13	4,920
Industrial	73	26	0	28	1	1	17	1.20E+12	6,967
MF Residential	69	75	0	139	1	0	12	1.09E+13	3,674
SF Residential	41	475	0	457	11	7	42	1.82E+14	72,826
Transportation	96	23	0	21	2	0	8	4.87E+11	2,254
Vacant	2	211	0	304	3	7	7	1.64E+13	56,360
Total	**-**	**901**	**0**	**1015**	**20**	**16**	**107**	**3.01E+14**	**151,194**

3. Infrastructure

There are several significant components of infrastructure located throughout the project site. The site is used for transportation, utilities, storm flow conveyance, and flood protection. The various water infrastructure components within or near the project site are described below.

3.1 Storm Drains

There are several storm drains that cross the Taylor Yard G2 Parcel at various depths below ground surface. Three major storm drains were identified by and are described below.

- Project 480, Unit 3, Portion of Line B: This drainage facility consists of a 10-foot by 12-foot reinforced concrete box (RCB) (Project 479, Unit 1, Line F) that runs along Eagle Rock Boulevard then transitions to an 11.5-foot horseshoe arch tunnel. The arch tunnel begins as the box culvert curves away from Eagle Rock Boulevard, continuing under San Fernando Road and the railroad tracks to the Los Angeles River. The capital discharge for this storm drain is 2,550 cfs (BOS, 2007).
- Eagle Rock Drain: This drainage facility consists of a 14-foot by 8-foot RCB that runs along Eagle Rock Boulevard. As it curves towards the Los Angeles River, the culvert transitions to an 8.5-foot by 10.5-foot arch section. It transitions to a 10-foot by 10-foot RCB for approximately 1,000 feet under the UPRC Taylor Yard right-of-way. The capital discharge for this storm drain is 4,550 cfs (BOS, 2007).
- City-UPRC Drain 29901: This drainage facility consists of a 48-inch RCP that transitions to a 42-inch reinforced concrete pipe (RCP) as it nears San Fernando Road transitioning again to a 30-inch RCP as it crosses San Fernando Road. The pipe splits into two 48-inch RCPs for the next 1,250 feet and then transitions to a 72-inch by 67-inch RCB before transitioning into a 78-inch corrugated metal pipe (CMP) for the last 100 feet before emptying into the Los Angeles River. The capital discharge for this drainage facility is 130 cfs (BOS, 2007).
- City Drain 1805 – This drainage facility runs along San Fernando Road near the Rio De Los Angeles State Park and captures flows that are carried through a 48-inch RCP and into an open channel that discharges into the Los Angeles River just downstream of the Taylor Yard G2 Parcel.
- Local surface runoff drains to outlets along the top of the river levee.

3.2 Los Angeles River Flood Protection Levee

The LAR flood control system adjacent to Taylor Yard was completed in 1956. The channel cross-section is trapezoidal in configuration with 3:1 (horizontal to vertical) side slopes and a base width of 220 feet (USACE, 1961). The levee is approximately 23 feet in height from the invert of the river channel. The southwestern side slope is protected by grouted riprap and the northeastern slope is protected with concrete. Due to the relatively high groundwater elevation in this reach of the river at the time of construction, the channel bottom is lined with large concrete blocks instead of the concrete. The river channel was originally designed to convey a flow of 83,700 cfs upstream of the confluence with Arroyo Seco and 104,000 cfs downstream from Taylor Yard.

4. Water Quality Improvement Opportunities

The Taylor Yard project provides many opportunities to improve water quality, create habitat, reduce flooding, and improve the community. The opportunities for water quality include treatment of surface water, water quality improvement through pollutant uptake with wetland use of groundwater, capture and settling of water from the LAR, and use of Low Impact Development (LID) strategies and BMPs to enhance groundwater recharge at the site. The Taylor Yard site provides many opportunities for improving surface water quality through BMPs. The BMPs that potentially could be implemented at Taylor Yard include bioretention and downstream treatment facilities.

4.1 Proposed Improvements and Expected Pollutant Loads

Four alternatives are proposed to treat varying volumes of stormwater. Each will treat varying pollutant loads. This section discusses the design of each alternative and their benefit to water quality.

4.1.1 Alternative 1

The first water quality alternative will capture all the on-site flows for the G2 parcel and collect the design control volume (DCV) to the Bioretention BMP and a water quality feature that will treat the water prior to release to the Los Angeles River. The site will be graded so that the local runoff from 42 acres is collected in the water quality BMP features and treated. This system will capture only stormwater and no dry-weather flows from offsite areas. Appendix A provides the Bioretention BMP location for capturing flows from the site. The overall site configuration for Alternative 1 has the Bioretention BMP near the northeast corner of the Mountains Recreation and Conservation Authority (MRCA) easement area. It is expected that the grading will be sloped towards the Bioretention BMP. Treated flows will discharge from the Bioretention BMP into the Los Angeles River via an RCP in a lined trench. The system includes rip-rap for concentrated on-site flows to enter the upstream end of the facility and a small sedimentation basin to allow any heavier sediments to settle out. Flows will be treated as they seep through biofiltration media and into a perforated 15-inch high density polyethylene (HPDE) pipe. Flows will then discharge into an 18-inch RCP and outlet into the Los Angeles River. Both the Bioretention BMP and the discharge pipe trench will be lined with an impermeable liner to prevent water interacting with contamination in the existing soil profile.

Sizing criteria from the Los Angeles LID Manual were used to determine the footprint of the Bioretention BMP featured in Alternative 1.

4.1.1.1 Sizing

- **Step 1: Calculate the Design Volume**

$$V_{design} = 1.5 \times 0.0625 \text{ (ft)} \times \text{Catchment Area (sf)}$$

or

$$V_{design} = 1.5 \times 85^{th} \text{ percentile depth (ft)} \times \text{Catchment Area (sf)}$$

where

Catchment Area = (Impervious Area x 0.9) + [(Pervious Area + Undeveloped Area) x 0.1]

Catchment area was estimated by assuming a future imperviousness of 10% for the G2 site.

$$\textit{Catchment Area} = (4.2\ ac \times 0.9) + [(37.8) \times 0.1]$$
$$= 7.56\ ac$$

This results in a catchment area of 7.56 acres. The 85th percentile depth was determined to be 0.95 inches as discussed in **Pollutant Loading** Attributed to Wet-Weather Flows. This is greater than the 0.0625 feet used in the first equation, so the second equation must be used.

$$V_{design} = 1.5 \times 0.079\ ft \times 7.56\ ac$$
$$= 0.9\ ac\text{-}ft$$

The design volume is 0.9 acre-feet.

- **Step 2: Determine the Design Infiltration Rate**

$$K_{sat,\ design} = K_{sat,\ media} / FS$$

A K_{sat} value of 5 inches per hour is assumed. A factor of safety (FS) of 2 is assumed.

$$K_{sat,\ design} = (5\ in/hr) / 2$$
$$= 2.5\ in/hr$$

- **Step 3: Calculate BMP Ponding Depth**

$$d_{p,\ max}\ (ft) = 18\ inches$$

and

$$d_{p,\ max}\ (ft) = (K_{sat,\ design} \times T) / 12$$

where
T = Required surface drain time (hrs)

T is assumed to be 48 hours, per Table 4.3 in the LID Manual.

$$d_{p,\ max}\ (ft) = (K_{sat,\ design} \times T) / 12$$
$$= (2.5\ in/hr \times 48\ hr) / 12$$
$$= 10\ feet$$

Maximum ponding depth is 18 inches.

- **Step 4: Calculate the BMP Surface Area**

$$A_{min} = V_{design} / [T_{fill} \times K_{sat,\ design} / 12 + d_{p,\ max}]$$

where
T_{fill} = Time to fill to max ponding depth with water (hours)
T_{fill} is assumed to be 3 hours.

$$A_{min} = 0.9 \text{ ac-ft} / [3 \text{ hr} \times 2.5 \text{ in/hr} / 12 + 1.5 \text{ ft}]$$

$$0.42 \text{ ac}$$

The minimum surface area of the Bioretention BMP is 0.42 acres.

4.1.1.2 Expected Pollutant Loads

Alternative 1 has a proposed footprint of 0.42 acres and has a DCV of 0.9 acre-feet. It is expected to capture onsite, wet-weather runoff for a total of 9.4 acre-feet annually. Dry-weather is not expected on site.

Using the 9.4 acre-feet expected annual water quality volume, the expected pollutant loads were calculated using the methods described in **Local Runoff**. **Table 4-1** presents a summary of the expected pollutants loads expected to be captured by Alternative 1. This analysis assumes an expected land use of "Education" for the G2 site.

Table 4-1 Expected Pollutant Loads Captured Annually by Alternative 1

Land Use	Runoff Coefficient / % Impervious	Annual Average Capturable Water Quality Volume	Total Trash	Nitrate	Total Copper	Total Lead	Total Zinc	Fecal Coliform	TSS
	%	acre-feet	cf	kg	kg	kg	kg	MPN	kg
Commercial	0	0	0	0	0	0	0	0.00E+00	0
Education	10	9.4	42	7.09	0.23	0.04	1.37	9.29E+12	1,158
Industrial	0	0	0	0	0	0	0	0.00E+00	0
MF Residential	0	0	0	0	0	0	0	0.00E+00	0
SF Residential	0	0	0	0	0	0	0	0.00E+00	0
Transportation	0	0	0	0	0	0	0	0.00E+00	0
Vacant	0	0	0	0	0	0	0	0.00E+00	0
Total	**-**	**9.4**	**42**	**7.09**	**0.23**	**0.04**	**1.37**	**9.29E+12**	**1,158**

4.1.2 Alternative 2

The second water quality alternative will capture all the on-site flows for the G2 parcel and wet-weather runoff from the Union Pacific Railroad Company/City Drain upstream. The surface flows will deliver the DCV to the Bioretention BMP and a water quality feature that will treat the water prior to release to the Los Angeles River. The site will be graded so that the local runoff from 42 acres is collected in the water quality BMP features and treated. **Appendix A** contains a drawing of the layout for the Bioretention BMP required to treat the on-site runoff and the water diverted from the UPRC/City drain. There is a pre-treatment system prior to pumping the flows to the lined Bioretention BMP and a sedimentation basin to allow further settling of heavier entrained sediments. Like Alternative 1, flows will be treated by biofiltration media and drain into a perforated 15-inch HPDE pipe. Flows will then discharge into a 18-inch RCP in a lined trench and outlet into the Los Angeles River.

Sizing criteria from the Los Angeles LID Manual were used to determine the footprint of the Bioretention BMP featured in Alternative 2.

4.1.2.1 Sizing

- **Step 1: Calculate the Design Volume**

$$V_{design} = 1.5 \times 0.0625 \text{ (ft)} \times \text{Catchment Area (sf)}$$

or

$$V_{design} = 1.5 \times 85^{th} \text{ percentile depth (ft)} \times \text{Catchment Area (sf)}$$

where
Catchment Area = (Impervious Area x 0.9) + [(Pervious Area + Undeveloped Area) x 0.1]

Catchment area was estimated by assuming a future imperviousness of 10% for the G2 site. It also assumes that 100% of the 510-acre subarea drains to the Eagle Rock storm drain for stormwater quality events and only flows overflows to UPRC during high flow events. This means only the 22-acre subarea and 42-acre parcel was considered for the calculation of stormwater available for capture.

$$\text{Catchment Area} = ((4.2+16.7) \text{ ac} \times 0.9) + [(37.8+5) \times 0.1] = 23.1 \text{ ac}$$

This results in a catchment area of 23.1 acres. The 85^{th} percentile depth was determined to be 0.95 inches as discussed in **Beneficial Uses**. This is greater than the 0.0625 feet used in the first equation, so the second equation must be used.

$$V_{design} = 1.5 \times 0.079 \text{ ft} \times 23.1 \text{ ac} = 2.7 \text{ ac-ft}$$

The design volume is 2.7 acre-feet.

- **Step 2: Determine the Design Infiltration Rate**

$$K_{sat,\ design} = K_{sat,\ media} / FS$$

A K_{sat} value of 5 inches per hour is assumed. A factor of safety (FS) of 2 is assumed.

$$K_{sat,\ design} = (5\ in/hr) / 2$$
$$= 2.5\ in/hr$$

- **Step 3: Calculate BMP Ponding Depth**

$$d_{p,\ max}\ (ft) = 18\ inches$$

and

$$d_{p,\ max}\ (ft) = (K_{sat,\ design} \times T) / 12$$

where
T = Required surface drain time (hrs)

T is assumed to be 48 hours, per Table 4.3 in the LID Manual.

$$d_{p,\ max}\ (ft) = (K_{sat,\ design} \times T) / 12$$
$$= (2.5\ in/hr \times 48\ hr) / 12$$
$$= 10\ feet$$

Maximum ponding depth is 18 inches.

- **Step 4: Calculate the BMP Surface Area**

$$A_{min} = V_{design} / [T_{fill} \times K_{sat,\ design} / 12 + d_{p,\ max}]$$

where
T_{fill} = Time to fill to max ponding depth with water (hrs)

T_{fill} is assumed to be 3 hours.

$$A_{min} = 2.7\ ac\text{-}ft / [3\ hr \times 2.5\ in/hr / 12 + 1.5\ ft]$$
$$1.3\ ac$$

The minimum surface area of the Bioretention BMP is 1.3 acres. However, a constraint of 1.0 acre was given for the footprint of Alternative 2. To maximize the treatment volume the ponding size will be upsized to 3 feet.

$$V_{design} = A_{min} \times [T_{fill} \times K_{sat,\ design} / 12 + d_{p,\ max}]$$
$$= 1.0\ acre \times [3\ hr \times 2.5\ in/hr / 12 + 3\ ft]$$
$$= 3.625\ ac\text{-}ft$$

As a result, the design volume is 3.6 ac-ft.

4.1.2.2 Expected Pollutant Loads

Alternative 2 has a proposed footprint of 1.0 acre and a DCV of 3.6 acre-feet. It will feature a diversion at the City-UPRC storm drain that will pump wet-weather flows into the BMP at a rate of 1 cfs. The BMP is expected to capture wet-weather flows from the G2 site (9.4 ac-ft) and from the City-UPRC storm drain (28.6 acre-feet) for a total of 38 acre-feet annually. Alternative 2 will not treat off-site dry-weather flows due to the storm drain configuration that sends these lower flows to the Eagle Rock Drain.

Using the 22 acre-feet expected annual water quality volume, expected pollutant loads were calculated using the methods described in **Local Runoff**. **Table 4-2** presents a summary of the expected pollutants loads expected to be captured by Alternative 2. This analysis assumes an expected land use of "Education" for the G2 site and pro-rates existing land uses between the two subareas that drain to the City-UPRC storm drain. It assumes that of the 28.6 acre-feet of runoff captured at the City-UPRC diversion, 1.18 acre-feet will come from the 22-acre subarea, shown in yellow in **Figure 1-2**, and 27.42 acre-feet will come from the 510-acre subarea, shown in green in the same figure.

Table 4-2 Expected Pollutant Loads Captured Annually by Alternative 2

Land Use	Runoff Coefficient / % Impervious	Annual Average Capturable Water Quality Volume	Total Trash	Nitrate	Total Copper	Total Lead	Total Zinc	Fecal Coliform	TSS
	%	acre-feet	cf	kg	kg	kg	kg	MPN	kg
Onsite									
Subtotal		9.4	42	7.09	0.23	0.04	1.37	9.29E+12	1,158
22-acre Subarea									
Commercial	96	1	1	0.40	0.02	0.01	0.17	5.78E+11	48
Education	71	9	15	6.63	0.22	0.04	1.28	8.68E+12	1,083
Industrial	91	3	5	3.75	0.15	0.07	2.31	1.62E+11	943
MF Residential	0	0	0	0.00	0.00	0.00	0.00	0.00E+00	0
SF Residential	0	0	0	0.00	0.00	0.00	0.00	0.00E+00	0
Transportation	0	0	1	0.00	0.00	0.00	0.00	0.00E+00	0
Vacant	0	0	0	0.00	0.00	0.00	0.00	0.00E+00	0
Subtotal		13	22	10.77	0.39	0.12	3.76	9.42E+12	2,074
510-acre Subarea									
Commercial	96	3	3	1.75	0.10	0.04	0.75	2.54E+12	213
Education	82	5	8	3.85	0.13	0.02	0.74	5.04E+12	628
Industrial	92	1	2	1.40	0.06	0.03	0.87	6.05E+10	353
MF Residential	63	35	67	65.18	0.52	0.19	5.40	5.09E+12	1,722
SF Residential	42	95	275	91.26	2.19	1.32	8.41	3.64E+13	14,531
Transportation	0	0	0	0.00	0.00	0.00	0.00	0.00E+00	0
Vacant	1	1	0	1.87	0.02	0.04	0.04	1.01E+11	346
Subtotal		140	354	165.31	3.01	1.65	16.21	4.92E+13	17,794
Total[1]	**-**	**28.6**	**113**	**40.42**	**0.86**	**0.37**	**4.89**	**1.98E+13**	**4,830**

[1] Total is capped at a DCV of 28.6 ac-ft of capture volume and includes 9.4 ac-ft from the G2 site, 1.18 ac-ft from the 22-acre subarea and 27.42 ac-ft from the 510-acre subarea.

4.1.3 Alternative 3

The third water quality alternative will capture all the on-site flows for the G2 parcel and runoff from both the City-UPRC and Eagle Rock Drains upstream of the parcel. The surface flows will deliver the DCV to the Bioretention BMP and a water quality feature that will treat the water prior to release to the Los Angeles River. The site will be graded so that the local runoff from 42 acres is collected in the water quality BMP features and treated. The BOE report on the G2 Parcel indicated that there is negligible dry-weather flow from the City-UPRC drain. However, there is approximately 0.38 cfs of dry-weather flow in the Eagle Rock Drain that will be collected and pumped to the Bioretention BMP. The system will also utilize pumps to deliver wet-weather flows from the City-UPRC and Eagle Rock Drains to the Bioretention BMP.

This system will have separate galleries to allow a wetting and drying cycle for maintenance during operation of dry-weather flow treatment. The treatment system for dry-weather and stormwater requires a Bioretention BMP footprint of approximately 1.5 acres to handle these flow rates. **Appendix A** provides the concept drawings for Alternative 3 with the Bioretention BMP location for capturing flows and diversions from the City-UPRC and Eagle Rock Drains. It is expected that the surface grading on site will be sloped towards the Bioretention BMP. Treated flows will discharge from the Bioretention BMP into the Los Angeles River via a lined RCP in a lined trench.

The Bioretention BMP will treat water from the City-UPRC and Eagle Rock Drains. The system is sized to treat on-site flows and 2 cfs from the storm drains. The system will also treat low flows diverted from the Eagle Rock Drain. The Bioretention BMP will discharge into the Los Angeles River via a system similar to Alternatives 1 and 2. Sizing criteria from the Los Angeles LID Manual were used to determine the footprint of the Bioretention BMP featured in Alternative 3.

4.1.3.1 Sizing

- **Step 1: Calculate the Design Volume**

$$V_{design} = 1.5 \text{ x } 0.0625 \text{ (ft) x Catchment Area (sf)}$$

or

$$V_{design} = 1.5 \text{ x } 85^{th} \text{ percentile depth (ft) x Catchment Area (sf)}$$

where
Catchment Area = (Impervious Area x 0.9) + [(Pervious Area + Undeveloped Area) x 0.1]

Catchment area was estimated by assuming a future imperviousness of 10% for the G2 site. It also assumes that 23% of the 3,723-acre subarea draining to the Eagle Rock and Project 480 storm drains, drains to the Eagle Rock Drain. This 842-acre subarea, added to the 510-acre subarea that is assumed to drain directly into the Eagle Rock Drain from the City-UPRC Drain amounts to 1,352 acres.

Catchment Area = ((4.2+169+348) ac x 0.9) + [(37.8+341+494) x 0.1]
= 556 ac

This results in a catchment area of 556 acres. The 85th percentile depth was determined to be 0.95 inches as discussed in **Pollutant Loading** Attributed to Wet-Weather Flows. This is greater than the 0.0625 feet used in the first equation, so the second equation must be used.

$$V_{design} = 1.5 \times 0.079 \text{ ft} \times 556 \text{ ac}$$
$$= 66 \text{ ac-ft}$$

The design volume is 66 acre-feet.

- **Step 2: Determine the Design Infiltration Rate**

$$K_{sat,\ design} = K_{sat,\ media} / FS$$

A K_{sat} value of 5 inches per hour is assumed. A factor of safety (FS) of 2 is assumed.

$$K_{sat,\ design} = (5 \text{ in/hr}) / 2$$
$$= 2.5 \text{ in/hr}$$

- **Step 3: Calculate BMP Ponding Depth**

$$d_{p,\ max} \text{ (ft)} = 18 \text{ inches}$$

and

$$d_{p,\ max} \text{ (ft)} = (K_{sat,\ design} \times T) / 12$$

where
T = Required surface drain time (hrs)

T is assumed to be 48 hours, per Table 4.3 in the LID Manual.

$$d_{p,\ max} \text{ (ft)} = (K_{sat,\ design} \times T) / 12$$
$$= (2.5 \text{ in/hr} \times 48 \text{ hr}) / 12$$
$$= 10 \text{ feet}$$

Maximum ponding depth is 18 inches.

- **Step 4: Calculate the BMP Surface Area**

$$A_{min} = V_{design} / [T_{fill} \times K_{sat,\ design} / 12 + d_{p,\ max}]$$

where
T_{fill} = Time to fill to max ponding depth with water (hours)

T_{fill} is assumed to be 3 hours.

$$A_{min} = 66 \text{ ac-ft} / [3 \text{ hr} \times 2.5 \text{ in/hr} / 12 + 1.5 \text{ ft}]$$

$$31 \text{ ac}$$

The minimum surface area of the Bioretention BMP is 31 acres. However, a constraint of 1.5 acres was given for the footprint of Alternative 3. To maximize the treatment volume this 1.5-acre footprint is capable of providing, the ponding size will be upsized to 3 feet.

$$V_{design} = A_{min} \times [T_{fill} \times K_{sat,\ design} / 12 + d_{p,\ max}]$$

$$= 1.5 \text{ acre} \times [3 \text{ hr} \times 2.5 \text{ in/hr} / 12 + 3 \text{ ft}]$$

$$= 5.44 \text{ ac-ft}$$

As a result, the design volume is 5.4 acre-feet.

4.1.3.2 Expected Pollutant Loads

Alternative 3 has a proposed footprint of 1.5 acres and a DCV of 5.4 acre-feet. It will feature two diversions – one at the City-UPRC storm drain and one at the Eagle Rock storm drain. Wet-weather flows will be pumped into the BMP at a total rate of 2 cfs. A low flow diversion is also proposed at the Eagle Rock storm drain to pump dry-weather flows to the BMP. The BMP is expected to capture wet-weather flows from the G2 site (9.4 acre-feet), the City-UPRC storm drain (28.6 acre-feet), and the Eagle Rock storm drain (18.9 acre-feet) for a total of 56.8 acre-feet wet-weather flows annually. It is also expected to treat dry-weather runoff from the Eagle Rock storm drain.

Using the 56.8 acre-feet expected annual wet-weather water quality volume, expected pollutant loads were calculated using the methods described in **Local Runoff**. **Table 4-3** presents a summary of the expected pollutants loads expected to be captured wet-weather flows by Alternative 3. This analysis assumes an expected land use of "Education" for the G2 site. This analysis further pro-rates existing land uses between the five subareas that drain to the Eagle Rock storm drain. It assumes that of the 18.9 acre-feet of runoff captured at the Eagle Rock diversion, 7.1 acre-feet will come from the 510-acre subarea, shown in green in Error! Reference source not found., and 11.8 acre-feet will come from the 3,723-acre subarea comprised of four smaller subareas, shown in purple and red in the same figure.

Pollutant loads associated with dry-weather flows required additional assumptions because of the intricacies involved with the watersheds draining to the Project 480 Drain and Eagle Rock Drain. The Draft Concept Report (BOS 2007), discussed in **Pollutant Loading** Attributed to Dry-Weather Flows, indicated that the Eagle Rock drain carries 0.38 cfs and Project 480 carries 0.81 cfs for a total flow of 1.19 cfs in dry weather flows. The same report also showed that dry-weather flows at the City-UPRC storm drain to be negligible. Additional investigation demonstrated that the although the 510-acre subarea drains to both the City-UPRC drain and the Eagle Rock drain, the City-UPRC drain has an invert elevation approximately 4 feet higher than the Eagle Rock drain at the point of junction. As such, it was assumed that all dry-weather flows from the 510-acre subarea, drain directly to the Eagle Rock Drain.

Assuming the 510-acre subarea (shown in green) and 12-acre sub area (shown in red) drain entirely to the Eagle Rock Drain during dry-weather, and the remaining 3,711 acres that drain to the Project 480 and Eagle Rock drains at a ratio of 0.38 to 0.81, it can be shown that 1,353 acres provide dry-weather flow to the Eagle Rock Drain. This value was applied to the ranges of potential dry weather capture discussed in **Pollutant Loading** Attributed to Dry-Weather Flows, to calculate the expected pollutant loads to be captured by dry-weather flows. Results are presented in **Table 4-4** and **Table 4-5**.

Table 4-3 Expected Wet-Weather Pollutant Loads Captured Annually by Alternative 3

Land Use	Runoff Coefficient / % Impervious	Annual Average Capturable Water Quality Volume	Total Trash	Nitrate	Total Copper	Total Lead	Total Zinc	Fecal Coliform	TSS
	%	acre-feet	cf	kg	kg	kg	kg	MPN	kg
Onsite									
Subtotal	-	9.4	42	7.09	0.23	0.04	1.37	9.29E+12	1,158
City-UPRC Diversion									
Subtotal	-	28.6	71	33.0	0.62	0.33	3.52	1.05E+13	3,672
510-acre Subarea									
Commercial	96	3	3	1.75	0.10	0.04	0.75	2.54E+12	213
Education	82	5	8	3.85	0.13	0.02	0.74	5.04E+12	628
Industrial	92	1	2	1.40	0.06	0.03	0.87	6.05E+10	353
MF Residential	63	35	67	65.18	0.52	0.19	5.40	5.09E+12	1,722
SF Residential	42	95	275	91.26	2.19	1.32	8.41	3.64E+13	14,531
Transportation	0	0	0	0.00	0.00	0.00	0.00	0.00E+00	0
Vacant	1	1	0	1.87	0.02	0.04	0.04	1.01E+11	346
Subtotal	-	140	354	165.31	3.01	1.65	16.21	4.92E+13	17,794
3,723-acre Subarea									
Commercial	94	186	238	126.43	7.22	2.85	54.50	1.84E+14	15,402
Education	59	62	127	46.44	1.52	0.27	8.95	6.08E+13	7,583
Industrial	72	70	117	75.14	2.98	1.42	46.41	3.25E+12	18,914
MF Residential	71	169	289	315.69	2.53	0.94	26.15	2.47E+13	8,342
SF Residential	41	686	1992	659.71	15.82	9.56	60.81	2.63E+14	105,046
Transportation	96	88	111	80.24	5.66	1.00	31.76	1.82E+12	8,437
Vacant	3	19	0	28.12	0.25	0.63	0.63	1.52E+12	5,206
Subtotal	-	1,281	2,873	1,332	35.97	16.67	229.23	5.39E+14	168,928
Total[1]	**-**	**56.8**	**158**	**61.07**	**1.34**	**0.61**	**7.82**	**2.72E+13**	**7,287**

[1] Total is capped at a DCV of 56.8 ac-ft of capture volume and includes 9.4 ac-ft from the G2 site, 28.6 ac-ft from the City-UPRC diversion,7.13 from the 510-acre subarea and 11.77 ac-ft from the 3,723-acre subarea.

Table 4-4 Expected Dry-Weather Pollutant Loads Captured Annually by Alternative 3 (Low Estimate)

Land Use	Runoff Coefficient / % Impervious	Capturable Dry-Weather Volume	Total Trash	Nitrate	Total Copper	Total Lead	Total Zinc	Fecal Coliform	TSS
	%	acre-feet	cf	kg	kg	kg	kg	MPN	kg
Commercial	94%	9	0	6	0	0	3	9.07E+12	761
Education	64%	6	0	4	0	0	1	5.74E+12	715
Industrial	73%	5	0	5	0	0	3	2.10E+11	1,224
MF Residential	67%	21	0	40	0	0	3	3.10E+12	1,050
SF Residential	41%	117	0	113	3	2	10	4.49E+13	17,924
Transportation	96%	4	0	4	0	0	1	8.36E+10	387
Vacant	2%	56	0	81	1	2	2	4.37E+12	14,990
Total	**-**	**218**	**0**	**252**	**5**	**4**	**23**	**6.75E+13**	**37,051**

Table 4-5 Expected Dry-Weather Pollutant Loads Captured Annually by Alternative 3 (High Estimate)

Land Use	Runoff Coefficient / % Impervious	Capturable Dry-Weather Volume	Total Trash	Nitrate	Total Copper	Total Lead	Total Zinc	Fecal Coliform	TSS
	%	acre-feet	cf	kg	kg	kg	kg	MPN	kg
Commercial	94%	12	0	8	0	0	3	1.18E+13	989
Education	64%	8	0	6	0	0	1	7.46E+12	930
Industrial	73%	6	0	6	0	0	4	2.73E+11	1,591
MF Residential	67%	28	0	52	0	0	4	4.04E+12	1,365
SF Residential	41%	152	0	146	4	2	13	5.83E+13	23,301
Transportation	96%	5	0	5	0	0	2	1.09E+11	503
Vacant	2%	73	0	105	1	2	2	5.68E+12	19,487
Total	**-**	**283**	**0**	**328**	**6**	**5**	**31**	**8.77E+13**	**48,166**

4.1.4 Alternative 4

The fourth water quality alternative will capture all the on-site flows for the G2 parcel up to the 95th percentile rainfall and more runoff from the City-UPRC and Eagle Rock Drains upstream of the parcel. The surface flows will deliver the DCV to the Bioretention BMP and a water quality feature that will treat the water prior to release to the Los Angeles River. The site will be graded so that the local runoff from 42 acres is collected in the water quality BMP features and treated. The BOE report on the G2 Parcel indicated that there is negligible dry-weather flow from the City-UPRC drain. However, there is approximately 0.38 cfs of dry-weather flow in the Eagle Rock Drain that will be collected and pumped to the Bioretention BMP. The system will also utilize pumps to deliver wet-weather flows from the City-UPRC and Eagle Rock Drains to the Bioretention BMP. Each pump will convey 3 cfs, for a total of 6 cfs from the storm drains.

This system will have separate galleries to allow wetting and drying cycles for maintenance during operation of dry-weather flow treatment. The treatment system for dry-weather and stormwater requires a Bioretention BMP footprint of approximately 3.5 acres to handle these flow rates. **Appendix A** provides the concept drawings for Alternative 4 with the Bioretention BMP location for capturing flows and diversions from the City-UPRC and Eagle Rock Drains. It is expected that the surface grading on site will be sloped towards the Bioretention BMP. Treated flows will discharge from the Bioretention BMP into the Los Angeles River via a lined RCP in a lined trench.

The Bioretention BMP will treat water from the City-UPRC and Eagle Rock Drains. The system is sized to treat on-site flows and 5 cfs from the storm drains. The system will also treat dry-weather low flows diverted from the Eagle Rock Drain. The Bioretention BMP will discharge into the Los Angeles River via a system similar to Alternatives 1 and 2. Sizing criteria from the Los Angeles LID Manual were used to determine the footprint of the Bioretention BMP featured in Alternative 4.

4.1.4.1 Sizing

- **Step 1: Calculate the Design Volume**

$$V_{design} = 1.5 \times 0.0625\ (ft) \times \text{Catchment Area (sf)}$$

or

$$V_{design} = 1.5 \times 85^{th}\ \text{percentile depth (ft)} \times \text{Catchment Area (sf)}$$

where
Catchment Area = (Impervious Area x 0.9) + [(Pervious Area + Undeveloped Area) x 0.1]

Catchment area was estimated by assuming a future imperviousness of 10% for the G2 site. It also assumes that 23% of the 3,723-acre subarea draining to the Eagle Rock and Project 480 storm drains flow to the Eagle Rock Drain. This 842-acrea subarea, added to the 510-acre subarea that is assumed to drain directly into the Eagle Rock Drain from the City-UPRC Drain amounts to 1,352 acres.

$$\text{Catchment Area} = ((4.2+169+348)\ ac \times 0.9) + [(37.8+341+494) \times 0.1]$$
$$= 556\ ac$$

This results in a catchment area of 556 acres. The 85th percentile depth was determined to be 0.95 inches as discussed in **Pollutant Loading** Attributed to Wet-Weather Flows. This is greater than the 0.0625 feet used in the first equation, so the second equation must be used.

$$V_{design} = 1.5 \times 0.079 \text{ ft} \times 556 \text{ ac}$$
$$= 66 \text{ ac-ft}$$

The design volume is 66 acre-feet.

- **Step 2: Determine the Design Infiltration Rate**

$$K_{sat,\ design} = K_{sat,\ media} / FS$$

A K_{sat} value of 5 inches per hour is assumed. A factor of safety (FS) of 2 is assumed.

$$K_{sat,\ design} = (5 \text{ in/hr}) / 2$$
$$= 2.5 \text{ in/hr}$$

- **Step 3: Calculate BMP Ponding Depth**

$$d_{p,\ max} \text{ (ft)} = 18 \text{ inches}$$

and

$$d_{p,\ max} \text{ (ft)} = (K_{sat,\ design} \times T) / 12$$

where
T = Required surface drain time (hrs)

T is assumed to be 48 hours, per Table 4.3 in the LID Manual.

$$d_{p,\ max} \text{ (ft)} = (K_{sat,\ design} \times T) / 12$$
$$= (2.5 \text{ in/hr} \times 48 \text{ hr}) / 12$$
$$= 10 \text{ feet}$$

Maximum ponding depth is 18 inches.

- **Step 4: Calculate the BMP Surface Area**

$$A_{min} = V_{design} / [T_{fill} \times K_{sat,\ design} / 12 + d_{p,\ max}]$$

where
T_{fill} = Time to fill to max ponding depth with water (hours)

T_{fill} is assumed to be 3 hours.

$$A_{min} = 66 \text{ ac-ft} / [3 \text{ hr} \times 2.5 \text{ in/hr} / 12 + 1.5 \text{ ft}]$$

31 ac

The minimum surface area of the Bioretention BMP is 31 acres. However, a constraint of 3.5 acres was given for the footprint of Alternative 4. To maximize the treatment volume this 3.5-acre footprint is capable of providing, the ponding depth will be upsized to 3 feet.

$$V_{design} = A_{min} \times [T_{fill} \text{ x } K_{sat,\ design} / 12 + d_{p,\ max}]$$
$$= 3.5 \text{ acre} \times [3 \text{ hr x } 2.5 \text{ in/hr} / 12 + 3 \text{ ft}]$$
$$= 12.68 \text{ ac-ft}$$

As a result, the design volume is 12.7 acre-feet.

4.1.4.2 Expected Pollutant Loads

Alternative 4 has a proposed footprint of 3.5 acres and a DCV of 12.7 acre-feet. It will feature two diversions – one at the City-UPRC storm drain and one at the Eagle Rock storm drain. Wet-weather flows will be pumped into the BMP at a total rate of 6 cfs. A low flow diversion is also proposed at the Eagle Rock storm drain to pump dry-weather flows to the BMP. Annually, the BMP is expected to capture wet-weather flows from the G2 site (9.4 acre-feet), the City-UPRC storm drain (74.6 acre-feet), and the Eagle Rock storm drain (49.4 acre-feet) for a total of 133.4 acre-feet wet-weather runoff. It is also expected to treat dry-weather runoff from the Eagle Rock storm drain.

Using the 133.4 acre-feet of average annual wet-weather water quality volume, expected pollutant loads were calculated using the methods described in **Local Runoff**. **Table 4-10** presents a summary of the expected pollutants loads expected to be captured from wet-weather flows. This analysis assumes an expected land use of "Education" for the G2 site. This analysis further pro-rates existing land uses between the five subareas that drain to the Eagle Rock storm drain. It assumes that of the 49.4 acre-feet of runoff captured at the Eagle Rock diversion, 18.6 acre-feet will come from the 510-acre subarea, shown in green in Error! Reference source not found., and 30.8 acre-feet will come from the 3,723-acre subarea comprised of four smaller subareas, shown in purple and red in the same figure.

Alternative 4 is expected to treat the same dry-weather flows as Alternative 3, which is conservatively estimated at 218 acre-feet per year. Refer to **Section 4.1.3.2** for this analysis and results.

Table 4-6 Expected Wet-Weather Pollutant Loads Captured Annually by Alternative 4

Land Use	Runoff Coefficient / % Impervious	Annual Average Capturable Water Quality Volume	Total Trash	Nitrate	Total Copper	Total Lead	Total Zinc	Fecal Coliform	TSS
	%	acre-feet	cf	kg	kg	kg	kg	MPN	kg
Onsite									
Subtotal	-	9.4	42	7.09	0.23	0.04	1.37	9.29E+12	1,158
City-UPRC Diversion									
Subtotal	-	74.6	187	87.32	1.64	0.87	9.22	2.75E+13	9,619
Eagle Rock Diversion									
Subtotal	-	49.4	118	54.72	1.28	0.63	7.77	1.98E+13	6,513
Total[1]	**-**	**133.4**	**346**	**149.14**	**3.15**	**1.54**	**18.35**	**5.65E+13**	**17,291**

[1] Total is capped at a DCV of 133.4 ac-ft of capture volume and includes 9.4 ac-ft from the G2 site, 74.6 ac-ft from the City-UPRC diversion, and 49.4 ac-ft from the Eagle Rock Diversion.

4.2 Expected Load Reduction

Bioretention BMPs vary in efficiency for reducing different pollutant loads. **Table 4-7** below, shows the expected efficiency of the proposed BMP. Trash is expected to be removed by both the pre-treatment system and the bioretention basin, allowing for an efficiency of 100%. Remaining efficiencies were based on values provided by the National Pollutant Removal Performance Database for Stormwater Treatment Practices (Winer, 2000) and a paper entitled, "Hydrologic and pollutant removal performance of stormwater biofiltration systems at the field scale," (Hatt et al., 2009).

Table 4-7 Expected BMP Efficiency

Constituent	Unit	Efficiency
Total Trash	ft^3	100%
Nitrate	kg	50%
Total Copper	kg	90%
Total Lead	kg	90%
Total Zinc	kg	90%
Fecal Coliform	MPN	35%
TSS	kg	90%

Using the values presented above, the expected pollutants load reductions were calculated for each alternative. Results are presented in **Table 4-8**, **Table 4-9**, **Table 4-10**, and **Table 4-11**.

Table 4-8 Expected Load Reductions for Alternative 1

Constituent	Unit	Expected Influent Load	Expected Load Reduction
Total Trash	ft3	42	42
Nitrate	kg	7.09	3.55
Total Copper	kg	0.23	0.21
Total Lead	kg	0.04	0.04
Total Zinc	kg	1.37	1.23
Fecal Coliform	MPN	9.29E+12	3.25E+12
TSS	kg	1,158	1,042

Table 4-9 Expected Load Reductions for Alternative 2

Constituent	Unit	Expected Influent Load	Expected Load Reduction
Total Trash	ft3	113	113
Nitrate	kg	40.42	20.21
Total Copper	kg	0.86	0.77
Total Lead	kg	0.37	0.34
Total Zinc	kg	4.89	4.40
Fecal Coliform	MPN	1.98E+13	6.92E+12
TSS	kg	4,830	4,347

Table 4-10 Expected Load Reductions for Alternative 3

Constituent	Unit	Wet-Weather		Dry-Weather	
		Expected Influent Load	Expected Load Reduction	Expected Influent Load	Expected Load Reduction
Total Trash	ft3	158	158	0	0
Nitrate	kg	61.07	30.54	252 - 328	126 - 164
Total Copper	kg	1.34	1.21	5 - 6	4 - 6
Total Lead	kg	0.61	0.55	4 - 5	3 - 5
Total Zinc	kg	7.82	7.04	23 - 31	21 - 27
Fecal Coliform	MPN	2.72E+13	9.53E+12	6.75E+13 - 8.77E+13	2.36E+13 - 3.07E+13
TSS	kg	7,287	6,559	37,051 - 48,166	33,346 - 43,349

Table 4-11 Expected Load Reductions for Alternative 4

Constituent	Unit	Wet-Weather		Dry-Weather	
		Expected Influent Load	Expected Load Reduction	Expected Influent Load	Expected Load Reduction
Total Trash	ft3	346	346	0	0
Nitrate	kg	149.14	74.57	252 - 328	126 - 164
Total Copper	kg	3.15	2.83	5 - 6	4 - 6
Total Lead	kg	1.54	1.39	4 - 5	3 - 5
Total Zinc	kg	18.35	16.52	23 - 31	21 - 27
Fecal Coliform	MPN	5.65E+13	1.98E+13	6.75E+13 - 8.77E+13	2.36E+13 - 3.07E+13
TSS	kg	17,291	15,562	37,051 - 48,166	33,346 - 43,349

5. Constraints

Descriptions of the major constraints related to hydrology and hydraulics and water infrastructure are presented below. Any existing legal mandates and memorandums of understanding (e.g., agencies, land owner, operators, and lessees) will have to be considered. The most significant hydrologic and hydraulic constraints are listed below.

- Water rights could limit water sources and/or increase costs associated with water use.
- High groundwater elevations might pose a constraint to project development due to hydrostatic pressures. Detailed groundwater modeling may be required to develop project alternatives that do not adversely affect groundwater flow and associated contaminant plume migration.

- The upstream portion of the site is located on the outside of a channel bend and is subject to high channel velocities and hydrodynamic forces. This area may have a mixed flow regime with both subcritical and supercritical flows. These conditions would make it difficult to design a side weir structure capable of diverting flood flows during peak flow conditions.

- There are many constraints associated with the water quality of the surface and groundwater underlying the site. The water quality must meet applicable criteria, standards, and objectives set by the USEPA and State Water Resources Control Board (SWRCB)/LARWQCB, and meet constraints related to plant establishment.

- The functional performance of the flood control levee must be maintained. The analysis by the USACE indicates that Alternative 20 provides sufficient protection.

- Flow capacity of the existing storm drains must be maintained during and after the project.

6. References

Bureau of Sanitation, City of Los Angeles. 2007. Draft Concept Report Taylor Yard G-2 Parcel. December 24, 2007.

California Regional Water Quality Control Board, Los Angeles Region, 2012, Order No. R4-2012-0175, NPDES Permit No. CAS004001 Waste Discharge Requirements for Municipal Separate Storm System (MS4) Discharges Within the Coastal Watersheds of Los Angeles County.

City of Los Angeles, 2015. Upper Los Angeles River Enhanced Watershed Management Plan, May 2015. http://www.lastormwater.org/green-la/enhanced-watershed-management-plans/

City of Los Angeles, Bureau of Engineering. Los Angeles County Flood Control District. 1958 Storm Drain Bond Issue. Fletcher Drive, Project 480. Drawing 275-D480.1, 2 Sheets. April 1958.

City of Los Angeles, Bureau of Engineering. Los Angeles County Flood Control District. 1958 Storm Drain Bond Issue. Project No. 480 Unit 1, Fletcher Dr. Line A. D-14727, Sheets 1 to 6 of 6.. May 4, 1959.

City of Los Angeles, Bureau of Engineering. Los Angeles County Flood Control District. 1958 Storm Drain Bond Issue. Project No. 480 Unit 2, Fletcher Dr. Portion Line B and Line C. D- 16481, 275-480-D4 series and D2 series. Sheets 1 to 9 of 9. June 1961.

City of Los Angeles, Bureau of Engineering. Los Angeles County Flood Control District. 1958 Storm Drain Bond Issue. Project No.- 479 Eagle Rock Blvd, Line "F", Project No. 480 - Fletcher Drive, Lines "B" & "C" Hydrologic Map. Data referenced to City of Los Angeles Letter #7831 dated May 23, 1961. Date illegible, Stamped with Received Date August 23, 1960.

City of Los Angeles, Bureau of Engineering. Los Angeles County Flood Control District. 1958 Storm Drain Bond Issue. Project No. 480 Unit 3, Fletcher Drive, Portion of Line "B". Vicinity Map, Location Map & Index to Drawings. Drawing No. 278-480-D5.1 to D5.7. Sheet 1 to 7 of 7. August 1961.

City of Los Angeles, Bureau of Engineering. Los Angeles County Flood Control District. 1958 Storm Drain Bond Issue. Project No. 480 Unit 3, Fletcher Drive, Portion of Line "B". Concrete Conduit Sta. 71+94.76 to Sta. 77+50 Plan, Profile & Section. Drawing No. 278-480-D5.3 Sheet 3 of 7. August 1961.

City of Los Angeles, Bureau of Engineering. Los Angeles County Flood Control District. 1970 Storm Drain Bond Issue. Project No. 3841 Unit 1, Line A, Glassell Par. Plan and Profile. Drawing No. 470-3841-D3.3. June 1975.

City of Los Angeles, Bureau of Engineering. NaviGate LA!. City of Los Angeles GIS Database. http://navigatela.lacity.org/stgis/maps/stgis.mwf. April 16, 2001.

Hatt, Belinda, Tim Fletcher, and Ana Deletic. "Hydrologic and pollutant removal performance of stormwater biofiltration systems at the field scale." Journal of Hydrology 365.3-4 (2009): 310-321. ScienceDirect. Web. January 2019.

Los Angeles County Department of Public Works, 2006. Los Angeles County Department of Public Works Hydrology Manual, January 2006.

Coastal Conservancy, 2002. Taylor Yard Multiple Objective Feasibility Study Final Report. Prepared by Everest International Consultants Inc, June 2002.

United States Army Corps of Engineers, 2015. Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Volumes 1-4. September 2015.

Winer, Rebecca. 2000. National Pollutant Removal Performance Database for Stormwater Treatment Practices, 2nd Edition. March 2000.

Appendix A

Concept Drawings

PREPARED BY:

1561 E. ORANGETHORPE AVE.
SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
www.cwecorp.com

PROJECT TITLE

TAYLOR YARD G2 RIVER PARK

PREPARED FOR: CITY OF LOS ANGELES, CALIFORNIA

SHEET TITLE

CONCEPT 1

PROJECT NO. 18262

SHEET 1 OF 2

PROJECT NO.	PROJECT TITLE	PREPARED BY:
18262	TAYLOR YARD G2 RIVER PARK PREPARED FOR: CITY OF LOS ANGELES, CALIFORNIA	CWE 1561 E. ORANGETHORPE AVE. SUITE 240 FULLERTON, CA 92831 TEL (714) 526-7500 www.cwecorp.com
SHEET 2 OF 2	SHEET TITLE CONCEPT 1	

PROJECT NO. 18262	PROJECT TITLE TAYLOR YARD G2 RIVER PARK PREPARED FOR: CITY OF LOS ANGELES, CALIFORNIA	PREPARED BY: CWE 1561 E. ORANGETHORPE AVE. SUITE 240 FULLERTON, CA 92831 TEL (714) 526-7500 www.cwecorp.com
SHEET 1 OF 2	SHEET TITLE CONCEPT 2	

PREPARED BY:

1561 E. ORANGETHORPE AVE.
SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
www.cwecorp.com

PROJECT TITLE

TAYLOR YARD G2 RIVER PARK

PREPARED FOR: CITY OF LOS ANGELES, CALIFORNIA

SHEET TITLE

CONCEPT 2

PROJECT NO. 18262

SHEET 2 OF 2

PREPARED BY:

CWE
1561 E. ORANGETHORPE AVE.
SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
www.cwecorp.com

PROJECT TITLE

TAYLOR YARD G2 RIVER PARK

PREPARED FOR: CITY OF LOS ANGELES, CALIFORNIA

SHEET TITLE

CONCEPT 3

PROJECT NO. 18262

SHEET 1 OF 2

PREPARED BY:

1561 E. ORANGETHORPE AVE.
SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
www.cwecorp.com

PROJECT TITLE

TAYLOR YARD G2 RIVER PARK

PREPARED FOR: CITY OF LOS ANGELES, CALIFORNIA

SHEET TITLE

CONCEPT 3

PROJECT NO. 18262

SHEET 2 OF 2

PREPARED BY:

1561 E. ORANGETHORPE AVE.
SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
www.cwecorp.com

PROJECT TITLE

TAYLOR YARD G2 RIVER PARK

PREPARED FOR: CITY OF LOS ANGELES, CALIFORNIA

SHEET TITLE

CONCEPT 4

PROJECT NO. 18262

SHEET 1 OF 2

PROJECT NO.	PROJECT TITLE	PREPARED BY:
18262	TAYLOR YARD G2 RIVER PARK PREPARED FOR: CITY OF LOS ANGELES, CALIFORNIA	CWE
SHEET 2 OF 2	SHEET TITLE CONCEPT 4	1561 E. ORANGETHORPE AVE. SUITE 240 FULLERTON, CA 92831 TEL (714) 526-7500 www.cwecorp.com

This Page Intentionally Left Blank

APPENDIX

E

ALTERNATIVES 1 - 3 QUANTITY AND COST SUMMARY

QUANTITY AND COST SUMMARY

The water quality treatment system alternatives have varying costs based on the amount of grading, piping, and pumping facilities needed to achieve the system requirements. Water Quality Alternative 1 is the least expensive because of the smaller Bioretention BMP footprint and no additional system components. Water Quality Alternative 4 is the most expensive due to the larger Bioretention BMP footprint and a more extensive pumping system than Alternative 3. The cost for these alternatives is summarized in Tables E-1 E-2 and E-3.

1.1 ALTERNATIVE 1

The cost analysis for Water Quality Alternative 1 includes the grading and excavation related only to the Bioretention BMP, and not the overall site. Cost of excavation assumes a basin bottom footprint of approximately 0.42 acres. Depth to the top of the Bioretention BMP media is 3 feet and has a 3:1 side slope. Depth to the Bioretention BMP invert is an additional 3 feet at no slope. Cost of excavation also includes the excavation necessary for the 18" RCP which assumes a 3.5-foot width and 6-foot depth for the length of the pipe for cost estimating purposes. It is assumed that contaminated soils will be placed and capped on-site. Cost of capping assumes a depth of 2-feet to determine the area of fill to be covered. The cost for capping can range from $240,000 at a 3-foot depth to $730,000 at a 1-foot depth due to the surface area to be capped.

An impermeable liner (Line Item No. 11), composed of a synthetic polymer, is proposed at this site to prevent infiltration into underlying soils due to the existing soil contamination found on-site from the previous industrial uses.

Table E-1. Water Quality Alternative 1 Quantities and Cost Estimate

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE ($)	EXTENDED AMOUNT ($)
1	Pre-Design	LS	1	19,800	19,800
2	Design	LS	1	76,310	76,400
3	Bid and Award	LS	1	9,540	9,600
4	Construction Soft Cost	LS	1	85,850	85,900
5	Excavation	CY	5,070	22	111,600
6	Fill	CY	5,070	22	111,600
7	Capping	AC	1.5	250,000	375,000
8	Rip Rap	CY	40	150	6,000
9	Vegetation	SF	18,597	5	93,000
10	3" Mulch	CY	172	90	15,500
11	2' Soil Media	CY	1,378	13	18,000
12	1' Gravel	CY	689	162	111,600
13	HDPE Liner	SY	3,082	10	30,900
14	15" HDPE Underdrain	LF	368	10	3,700
15	18" RCP Outlet Pipe	LF	427	180	76,900
				Total	1,144,800
				30% Contingency	343,500
				GRAND TOTAL	**1,488,300**

1.2 ALTERNATIVE 2

The cost analysis for Alternative 2 includes the grading and excavation related only to the Bioretention BMP, and not the overall site grading. Cost of excavation assumes a basin bottom footprint of approximately 1.0 acre. Depth to the top of the Bioretention BMP media is 3 feet and has a 3:1 side slope. Depth to the Bioretention BMP invert is an additional 3 feet at no slope. Cost of excavation includes the excavation for the 18" RCP which assumes a 3.5-foot width and 6-foot depth for the length of the pipe for cost estimating purposes. It is assumed that contaminated soils will be placed and capped on-site. Cost of capping assumes a depth of 2-feet to determine the area of fill to be covered. Cost for capping of soil can range from $590,000 at a 3-foot depth to $1,770,000 at a 1-foot depth. In addition, costs also include the diversion structure at the UPRC/City Drain, the pre-treatment system and the pump sump. The pumps and pipe system to capture the 1 cfs from the drain are also included in the costs.

Table E-2. Water Quality Alternative 2 Quantities and Cost Estimate

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE ($)	EXTENDED AMOUNT ($)
1	Pre-Design	LS	1	52,700	52,700
2	Design	LS	1	198,710	198,800
3	Bid and Award	LS	1	25,160	25,200
4	Construction Soft Cost	LS	1	226,370	226,400
5	Excavation	CY	11,380	22	250,400
6	Fill	CY	11,380	22	250,400
7	Capping	AC	3.5	250,000	875,000
8	Rip Rap	CY	40	150	6,000
9	Vegetation	SF	44,601	5	223,100
10	3" Mulch	CY	413	90	37,200
11	2' Soil Media	CY	3,304	13	43,000
12	1' Gravel	CY	1,652	162	267,700
13	HDPE Liner	SY	6,299	10	63,000
14	15" HDPE Underdrain	LF	696	10	7,000
15	18" RCP Outlet Pipe	LF	480	180	86,400
16	Diversion Structure	LF	60	100	6,000
17	Pretreatment System	EA	1	200,000	200,000
18	Pump System	EA	1	200,000	200,000
				Total	3,018,300
				30% Contingency	905,500
				GRAND TOTAL	**3,923,800**

1.3 ALTERNATIVE 3

The cost analysis for Alternative 3 includes the grading and excavation related only to the Bioretention BMP, and not the overall site grading. Cost of excavation assumes a basin bottom footprint of approximately 1.5 acres. Depth to the top of the Bioretention BMP media is 3 feet and has a 3:1 side slope. Depth to the Bioretention BMP invert is an additional 3 feet at no slope. Cost of excavation also includes the excavation necessary for the 18" RCP which assumes a 3.5-foot width and 6-foot depth for the length of the pipe for cost estimating purposes. It is assumed that contaminated soils will be placed and capped on-site. Cost of capping assumes a depth of 2-feet to determine the area of fill to be covered. Cost of capping assumes a depth of 2-feet to determine the area of fill to be covered. Cost for capping of soil can range from $826,000 at a 3-foot depth to $2,476,000 at a 1-foot depth. In addition, costs also include the diversion structure at the UPRC/City and Eagle Rock drains, the pre-treatment system and the pump sumps. The pumps and pipe system to capture the 2 cfs from the drain are also included in the costs.

Table E-3. Water Quality Alternative 3 Quantities and Cost Estimate

Item #	Description	Unit	Quantity	Unit Price ($)	Extended Amount ($)
1	Pre-Design	LS	1	77,400	77,400
2	Design	LS	1	309,200	309,200
3	Bid and Award	LS	1	38,700	38,700
4	Construction Soft Cost	LS	1	347,900	347,900
5	Excavation	CY	15,980	22	351,600
6	Fill	CY	15,980	22	351,600
7	Capping	AC	5.0	250,000	1,250,000
8	Rip Rap	CY	60	150	9,000
9	Vegetation	SF	64,843	5	324,300
10	3" Mulch	CY	600	90	54,000
11	2' Soil Media	CY	4,803	13	62,500
12	1' Gravel	CY	2,402	162	389,100
13	HDPE Liner	SY	8,459	10	84,600
14	15" HDPE Underdrain	LF	691	10	7,000
15	18" RCP Outlet Pipe	LF	430	180	77,400
16	Diversion Structure	LF	940	100	94,000
17	Pretreatment System	EA	2	200,000	400,000
18	Pump System	EA	2	200,000	400,000
19	Low Flow Pump	EA	1	10,000	10,000
				Total	4,638,400
				30% Contingency	1,391,600
				GRAND TOTAL	**6,030,000**

1.4 COST PER POUND OF POLLUTANT REMOVED

Table E-4, below provides the cost of each alternative in terms of pollutants removed. The estimates include only constituents measured in units of weight – metals, nitrate, and TSS.

Table E-4. Unit Cost of Pollutants Removed

	Wet-Weather								
	Alternative 1			Alternative 2			Alternative 3		
Constituent	Load	Unit	Unit Cost ($)	Load	Unit	Unit Cost ($)	Load	Unit	Unit Cost ($)
Total Trash	1.56	cy	956,764	4.20	cy	935,232	5.84	cy	1,032,388
Nitrate	7.80	lb	190,762	44.46	lb	88,245	67.18	lb	89,759
Total Copper	0.46	lb	3,248,594	1.69	lb	2,316,615	2.65	lb	2,274,264
Total Lead	0.08	lb	17,957,504	0.74	lb	5,285,128	1.21	lb	4,976,663
Total Zinc	2.71	lb	549,720	9.67	lb	405,671	15.48	lb	389,607
Fecal Coliform	9.29E+12	MPN	-	1.40E+13	MPN	-	1.85E+13	MPN	-
TSS	2,293	lb	649	9,563	lb	410	14,429	lb	418

This Page Intentionally Left Blank

APPENDIX

F

GRANT OPPORTUNITY QUARTERLY UPDATE

Taylor Yard G2 River Park Grant Opportunity Quarterly Update - June 2020

Opportunities are listed by order of application due date.

Grant Opportunity	Due Date	Applicability	Potential Project Components
CA Natural Resources Agency Urban Greening	07/15/20	**Low Applicability** The Urban Greening Program, funded by the GGRF, continues the legacy of these programs but with a specific focus of achieving greenhouse gas reductions. The Urban Greening Program will fund projects that reduce greenhouse gases by sequestering carbon, decreasing energy consumption and reducing vehicle miles traveled, while also transforming the built environment into places that are more sustainable, enjoyable, and effective in creating healthy and vibrant communities. These projects will establish and enhance parks and open space, using natural solutions to improving air and water quality and reducing energy consumption, and creating more walkable and bike-able trails.	Projects must either: 1) Sequester and store carbon by planting trees, 2) Reduce building energy use by strategically planting trees to shade buildings, or 3) Reduce commute vehicle miles traveled by constructing bicycle paths, bicycle lanes or pedestrian facilities that provide safe routes for travel between residences, workplaces, commercial centers, and schools.
LA County Measure A Competitive Grants Category 3 & 4	09/30/20	**High Applicability** Measure A, the Safe, Clean Neighborhood Parks, Open Space, Beaches, Rivers Protection, and Water Conservation Measure of 2016, includes annual allocations for grant projects; maintenance and servicing; technical assistance; and innovation and oversight funds. Category 3 includes Regional Recreation Facilities, Multi-Use Trails and Accessibility. Category 4 includes Natural Lands, Local Beaches, Local Water Conservation and Protection.	• Plan for, acquire, develop, improve, or restore multi-benefit regional park projects • Promote, improve, or protect natural lands, open spaces, local beaches, watersheds, and water resources • Provide connectivity between regional recreational facilities, rivers, mountains, and urban areas • Acquire, develop, improve, restore, and/or rehabilitate land for regional recreational facilities, multi-use trails, and/or accessibility

Grant Opportunity	Due Date	Applicability	Potential Project Components
CA Natural Resources Agency Environmental Enhancement and Mitigation (EEM) Program	1/01/21	**Low Applicability** Every EEM project must mitigate, either directly or indirectly, the environmental impacts of the modification of an existing Transportation Facility or the environmental impacts of the construction of a new Transportation Facility (hereafter referred to as Related Transportation Facility or RTF). The EEM project can be the required mitigation for the RTF or enhancement to mitigation required for the RTF.	Projects categories include: 1) Urban Forestry projects designed to offset vehicular emissions of carbon dioxide, 2) Resource Lands projects for the acquisition or enhancement of resource lands to mitigate the loss of, or the detriment to, resource lands lying within the right-of-way acquired for transportation improvements, 3) Mitigation Projects Beyond the Scope of the Lead Agency projects to mitigate the impact of proposed Transportation Facilities or to enhance the environment, where the ability to effectuate the mitigation or enhancement measures is beyond the scope of the lead agency responsible for assessing the environmental impact of the proposed transportation improvement.
CA Department of Fish and Wildlife Prop 1 & Prop 68 Multibenefit Ecosystem Restoration Projects	TBD - 2020-21	**Medium Applicability** The Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1) and the California Drought, Water, Parks, Climate, Coastal Protection and Outdoor Access For All Act of 2018 (Proposition 68) provide funding to implement the objectives of the California Water Action Plan. These objectives include more reliable water supplies, restoration of important species and habitat, and a more resilient and sustainably managed water resources system.	The Watershed Restoration Grant Program uses Prop 1 and Prop 68 funds for: • Large-scale wildfire recovery response and prevention; Managing headwaters for multiple benefits; • Protecting and restoring mountain meadow ecosystems; • Protecting and restoring anadromous and other non-game native fish habitat; • Protecting and restoring coastal wetland ecosystems; or • Protecting and restoring cross-border urban creeks and watersheds. Grants fund planning, acquisition, implementation, and scientific studies to achieve the grant program purposes.

Grant Opportunity	Due Date	Applicability	Potential Project Components
CA Department of Parks and Recreation Prop 86 New Parks Grant Program	TBD 2020-21	**High Applicability** The Statewide Park Program (SPP) will create new parks and recreation opportunities in critically underserved communities across CA. The fourth round is anticipated to have approximately $300 million for projects that have a recreation feature, that will create a new park, expand an existing park, or renovate an existing park. The maximum grant award is $8.5 million.	Applies to: • Habitat Restoration Projects • Park Property Acquisition • Enhancements to existing park infrastructure • Development of New Parks and Amenities
CA Strategic Growth Council Transformative Climate Communities	TBD 2020-21	**Medium Applicability** Empowers the communities most impacted by pollution to choose their own goals, strategies, and projects to reduce greenhouse gas emissions and local air pollution.	Funds development and infrastructure projects that achieve major environmental, health, and economic benefits in California's most disadvantaged communities. TCC is one of many California Climate Investments programs.
NPS and CA Department of Parks and Recreation Land and Water Conservation Fund (LWCF)	02/2022	**High Applicability** Provides funding for the acquisition or development of land to create new outdoor recreation opportunities for the health and wellness of Californians. Since 1965, over one thousand parks throughout California have been created or improved with LWCF assistance. Limited per project of $6 million and only $40 million available to the entire state every two years.	Supports Acquisition or Development. Acquisition must result in a New Recreation Opportunity for the public within three years. Development of recreation features must be for outdoor recreation, not indoor recreation. LWCF funds are intended to increase outdoor recreational opportunities for the health and wellness of Californians.

This Page Intentionally Left Blank

APPENDIX

G CLEAN WATER ACT 404 CERTIFICATION

U.S. ARMY CORPS OF ENGINEERS **APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT** 33 CFR 325. The proponent agency is CECW-CO-R.	***Form Approved - OMB No. 0710-0003 Expires: 31-AUGUST-2013***

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Middle - Last - Company - E-mail Address -	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Middle - Last - Company - E-mail Address -
6. APPLICANT'S ADDRESS: Address- City - State - Zip - Country -	9. AGENT'S ADDRESS: Address- City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. w/AREA CODE a. Residence b. Business c. Fax	10. AGENTS PHONE NOs. w/AREA CODE a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, ________________________ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable) Address City - State- Zip-
15. LOCATION OF PROJECT Latitude: ∘N Longitude: ∘W	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID Municipality

Section - Township - Range -

17. DIRECTIONS TO THE SITE

18. Nature of Activity (Description of project, include all features)

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres

or

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

24. Is Any Portion of the Work Already Complete? ☐ Yes ☐ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address-

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a
Department of the Army Permit Application

Blocks 1 through 4. To be completed by Corps of Engineers.

Block 5. Applicant's Name. Enter the name and the E-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the application. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by applicant, if an agent is to be employed.

Block 12. Proposed Project Name or Title. Please provide name identifying the proposed project, e.g., Landmark Plaza, Burned Hills Subdivision, or Edsall Commercial Center.

Block 13. Name of Waterbody. Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Project Street Address. If the proposed project is located at a site having a street address (not a box number), please enter it here.

Block 15. Location of Proposed Project. Enter the latitude and longitude of where the proposed project is located. If more space is required, please attach a sheet with the necessary information marked Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality that the site is located in.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed project site if known

Block 18. Nature of Activity. Describe the overall activity or project. Give appropriate dimensions of structures such as wing walls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 18.

Block 19. Proposed Project Purpose. Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.

Block 20. Reasons for Discharge. If the activity involves the discharge of dredged and/or fill material into a wetland or other waterbody, including the temporary placement of material, explain the specific purpose of the placement of the material (such as erosion control).

Block 21. Types of Material Being Discharged and the Amount of Each Type in Cubic Yards. Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description will agree with your illustrations. Discharge material includes: rock, sand, clay, concrete, etc.

Block 22. Surface Areas of Wetlands or Other Waters Filled. Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a waterbody. If more space is needed, attach an extra sheet of paper marked Block 22.

Block 23. Description of Avoidance, Minimization, and Compensation. Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. Also provide a brief description of how impacts to waters of the United States will be compensated for, or a brief statement explaining why compensatory mitigation should not be required for those impacts.

Block 24. Is Any Portion of the Work Already Complete? Provide any background on any part of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, acres filled, if a wetland or other waterbody (in acres or square feet). If the work was done under an existing Corps permit, identity the authorization, if possible.

Block 25. Names and Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Project Site. List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the waterbody or aquatic site where the work is being proposed so that they may be notified of the proposed activity (usually by public notice). If more space is needed, attach an extra sheet of paper marked Block 24.

Information regarding adjacent landowners is usually available through the office of the tax assessor in the county or counties where the project is to be developed.

Block 26. Information about Approvals or Denials by Other Agencies. You may need the approval of other federal, state, or local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for a Corps permit.

Block 27. Signature of Applicant or Agent. The application must be signed by the owner or other authorized party (agent). This signature shall be an affirmation that the party applying for the permit possesses the requisite property rights to undertake the activity applied for (including compliance with special conditions, mitigation, etc.).

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number.

Please submit one original, or good quality copy, of all drawings on 8½ x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations.

Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). **While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.**

This Page Intentionally Left Blank

APPENDIX

H

CLEAN WATER ACT 401 CERTIFICATION

APPLICATION FOR
CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND/OR WASTE DISCHARGE REQUIREMENTS FOR PROJECTS INVOLVING DISCHARGE OF DREDGED AND/OR FILL MATERIAL TO WATERS OF THE U.S. AND/OR WATERS OF THE STATE

California Regional Water Quality Control Board, Lahontan Region (Water Board)

IMPORTANT: Complete this form if you are proposing dredge and/or fill activities in (1) waters of the U.S. subject to a Clean Water Act (CWA) section 404 permit from the U.S. Army Corps of Engineers (Corps) and a state section 401 water quality certification (WQC), or (2) waters of the State, subject to State issuance of Porter-Cologne Water Quality Control Act Waste Discharge Requirements (WDRs) [1]. If the project involves a Federal Energy Regulatory Commission (FERC) license or amendment to a FERC license, a 401 WQC application should be sent to the State Water Resources Control Board's Division of Water Rights. Please use the *Instructions for Completing the Application* (*Instructions*) for guidance in filling out this form (see http://www.waterboards.ca.gov/lahontan/water_issues/programs/clean_water_act_401/index.shtml). **If this application form is not complete, action on your application may be delayed and/or certification may be denied.** When attaching additional sheets to supplement information provided within the form, the **supplemental documents must be specifically referenced (by page number) within the application.**

1. OWNER AND AGENT INFORMATION

a) Applicant name and/or organization:	b) Agent Name and/or Organization (if applicable):
Address:	Address:
Phone No.	Phone No.
Fax No.	Fax No.
E-mail address:	E-mail address:
Have you previously contacted the Water Board staff regarding this project? ☐ NO ☐ YES	
Staff contacted ______________________________	Date(s) contacted ______________________________

STATEMENT OF AUTHORIZATION

I hereby authorize ____________________________ to act in my behalf as my agent in the processing of this Clean Water Act Section 401, or other proposed dredge/fill activity, Application (Application), and to furnish upon request, supplemental information in support of this Application.

_________________________ _________________________ _________________________

Applicant's Title and Name Applicant's Signature Date

---

[1] In some cases where a CWA section 404 permit will not be issued by the Corps for the project, coverage under General WDRs (GWDRs) may be appropriate. This application can be used to apply for coverage under the following GWDRs:

- Lahontan Water Board Order No. R6T-2003-0004, *GWDRs for Minor Streambed/Lakebed Alteration Projects Excluding the Lake Tahoe Hydrologic Unit*, for soil disturbing work within the high water mark of water bodies (excluding the Tahoe basin) in the Lahontan Region or the 100-year floodplain areas in the Truckee and Little Truckee River Hydrologic Units, and is not regulated by the Army Corps of Engineers under Clean Water Act section 404.
- State Water Resources Control Board Order No. 2004-0004-DWQ, *Statewide GWDRs for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction*, for projects with proposed dredged and/or fill discharges to waters of the State that do not exceed two-tenths of an acre, 400 linear feet of stream bank or shoreline, and 50 cubic yards of dredged material. ("Waters of the State" is defined pursuant to Water Code section 13050, subdivision (e) as "any surface water or groundwater, including saline waters, within the boundaries of the state.") Additional information and applications for the above-cited Orders can be found at the Water Board's website (http://www.waterboards.ca.gov/lahontan/) under links to Permitting Questions/General Permits.

2. PROJECT INFORMATION

Project Name or Title:	
Project Location Information	
Street Address (if applicable):	
City, Town or Place Name:	
County:	
<u>Latitude and Longitude</u> (in decimal format) for center of project, <u>and</u> either end of project for linear projects <u>or</u> at least 3 locations for non-linear projects	**Latitude _____________ Longitude _____________ (center)** **Latitude _____________ Longitude _____________** **Latitude _____________ Longitude _____________** **Latitude _____________ Longitude _____________** **Latitude _____________ Longitude _____________** **Latitude _____________ Longitude _____________**
Directions to access site:	
Parcel Number(s) (if applicable):	
Other locating information:	

☐ Attach topographic maps and site plans of required quality and detail that clearly indicate the (1) regional location of the project area, (2) existing pre-project conditions, and (3) proposed post-project conditions and the location existing waters on-site or in proximity to the site. **See Attachment 1 for map and drawing recommendations.**

Overall Project scope, purpose(s) and final goal (for example: development, stabilization, restoration, replacement, etc.):

Project Description (Provide a complete detailed description of entire activity. Refer to the checklist in Section 2 of the *Instructions* for assistance on what information to include. Attach additional pages as necessary.)

Total Project Size (area within the boundaries of the project in square feet and/or acres)**:**

Site description of the entire project area (including areas outside jurisdictional waters)**:**

Area and linear feet of waterbodies present within the Project area:

Total Area: ____________ square feet ____________ acres; Total Linear Feet: _____________ feet

Type (stream, wetland, lake, playa, riparian):

Proposed Schedule (proposed start date, duration, inactive periods, and completion dates)**:**

3. WATERBODY IMPACT: **(The following must be completed for each proposed action where fill or other material will be temporarily or permanently discharged to a wetland or other waters of the U.S. or State, and/or where material will be excavated from a waters of the U.S or State. Include any temporary disturbance to wetland or other waters.)**

a) Waterbody Name(s) Clearly indicate on a published (for example, USGS) map of suitable detail, quality, and scale to allow the certifying agency to easily identify the area(s) and waterbody(ies) receiving any discharge. Information below should be included on the map. **See Attachment 1 for map and drawing recommendations.**

b) Photos: Original, dated photographs clearly illustrating impact area (location of photo views should be noted on plans; for repairs include photos of existing structures).

c) Fill and Excavation Information: Indicate in ACRES and/or LINEAR FEET the proposed waters to be impacted, and identify the impact(s) as permanent and/or temporary for each waterbody type listed below:

i. Fill-related Impacts (for definition of fill, see *Instructions*)

Waterbody Type	*Permanent*			*Temporary*		
	Acres	Linear Feet	Fill Volume	Acres	Linear Feet	Fill Volume
Wetland						
Lake						
Stream						
River						
Riparian						
Playa						
Other						

Mark with X all wetland and/or other waters that would be impacted by proposed project:

Riverine	Lacustrine (assoc. w/ lakes)	Palustrine (wet areas – either connected or isolated)	
☐ Intermittent Stream	☐ Lake	☐ Freshwater Marsh	☐ Spring
☐ Ephemeral Stream	☐ Pond	☐ Salt Marsh (non-tidal)	☐ Bog
☐ Creek	☐ Lagoon	☐ Seasonal Wetland	☐ Fen
☐ Swale	☐ Reservoir	☐ Vernal Pool	
☐ River	☐ Playa	☐ Seep	☐ Other (________)
☐ Floodplain	☐ Other (___________)	☐ Wet Meadow/Pasture	

If the proposed Project is in flowing waters:

(a) Describe how water will be diverted around work area (include Water Diversion Plan, if applicable).

(b) Flow rates and volumes for the two-, ten-, fifty- and 100-year storm events (Q_2, Q_{10}, Q_{50}, Q_{100}), or any other recurrent interval determined to be necessary for the full evaluation of effects of the proposed activity, may be required for the completion of the application, at the discretion of the Water Board. If the applicant has knowledge indicating that flow rates and volumes or other pertinent hydrological data would be necessary for the full evaluation of the project, the applicant should provide that information with the application.

(c) If the proposed Project includes bank hardening, hydraulic constrictions (e.g.; undersized culverts, bridges, etc.) or other potentially channel destabilizing influences, describe how the Project proposes to mitigate these influences.

Indicate all type(s) of material, including earthen, proposed to be discharged to wetlands and/or other waters of State or U.S.:

ii. Dredge/Excavation Impacts (for definition of dredge, see *Instructions*)

Purpose: ____

____

Is this ☐ new dredging or ☐ maintenance dredging?

Type of material to be dredged: ____

Dredging Method: ____

Depth below ordinary high water (OHW): __________ Area in acres or square feet: ______________________

Cubic Yards: above OHW: _______________below OHW: ____________________

Method of Transfer and Containment: ____

Method and location of spoil disposal: ____

Results of analyses conducted on dredged material composition: __________________________________

Mark with X all wetland and/or other waters that would be impacted by proposed dredging project:

Riverine	**Lacustrine** (assoc. w/ lakes)	**Palustrine** (wet areas – either connected or isolated)	
☐ Intermittent Stream	☐ Lake	☐ Freshwater Marsh	☐ Spring
☐ Ephemeral Stream	☐ Pond	☐ Brackish Marsh	☐ Bog
☐ Creek	☐ Lagoon	☐ Seasonal Wetland	☐ Fen
☐ Swale	☐ Reservoir	☐ Vernal Pool	
☐ Riparian	☐ Playa	☐ Seep	☐ Other (__________)
☐ Floodplain	☐ Other (____________)	☐ Wet Meadow/Pasture	

d) Is the water body "isolated" (excluded from CWA regulation per Court decisions or CWA exemptions – see *Instructions* for definition of "isolated")? ☐ Yes ☐ No If yes, provide U.S. Army Corps of Engineers (Corps) disclaimer letter or other source of disclaimer information.

e) Does the proposed project involve in-channel hydromodification, floodplain modification, stream restoration, or bank stabilization? ☐ Yes ☐ No

If yes, completing the checklist in Attachment 2 may be required. If the applicant has knowledge sufficient to complete the checklist, the applicant should provide that information with the application. See *Instructions* for more information.

f) Is any portion of the proposed project in a Stream Environment Zone (Lake Tahoe watershed only) or 100-year floodplain of Lake Tahoe or its tributaries (see *Instructions* for definitions)?

☐ Yes ☐ No If yes, see Basin Plan prohibition requirements in Attachment 3 for the Lake Tahoe basin. Attach information to support the Water Board findings required to consider exempting the Project from applicable Basin Plan prohibitions.

g) Is any portion of the proposed project in the 100-year floodplain of the Truckee River or its tributaries (see *Instructions* for definitions)? ☐ Yes ☐ No

If yes, see Basin Plan prohibition requirements in Attachment 4 for Truckee or Little Truckee River watersheds. Attach information to support the Water Board findings required to consider exempting the Project from applicable Basin Plan prohibitions.

4. DELINEATION INFORMATION for WETLANDS AND OTHER WATERS:

Name of person delineating extent of waters of U.S. and/or waters of the State:	Date(s) of delineation (attach delineation worksheets):

Title:

Affiliation and Statement of Qualifications:

Was the delineation performed according to the Corps' Supplemental Guidelines?

a) Arid West Supplement: ☐ Yes ☐ No **b)** Western Mountains, Valleys and Coast Supplement: ☐ Yes ☐ No

Has the delineation been verified by the Corps? ☐ Yes ☐ No

If no, provide delineation map sent to Corps for verification. If yes, provide date of verification _________.

Provide a copy of the verification letter from Corps ☐ and verified delineation map ☐.

5. IMPACT AVOIDANCE

AVOIDANCE OF DIRECT IMPACTS Describe alternatives considered, including alternative sites to avoid impacts to waterbodies within the project area, including, but not limited to, redesigning the project to completely avoid all impacts to waters. See checklist within *Instructions* for assistance on what information to include.

6. IMPACT MINIMIMIZATION

MINIMIZATION OF DIRECT IMPACTS

a) If project impacts are unavoidable, describe alternatives analyzed to minimize impacts to water bodies within the project area. Examples include, but are not limited to, bridge or arch culvert instead of round culvert, bioengineering stabilization practices instead of riprap alone. Discuss both in terms of temporary (for example, land disturbance by grading) and permanent impacts (for example, new paving). See *Instructions* for assistance on what information to include.

b) List ALL Best Management Practices (BMPs) proposed to minimize impacts during project implementation and post-project to ensure water quality impacts are minimized. See the checklist in the *Instructions* for assistance on what information to include.)

1. **Construction BMPs**
    - **Summary of Erosion and Sediment Control and Stormwater Treatment Measures**
    - **Summary of Source Control Measures**
2. **Post-Construction BMPs**

7. COMPENSATORY MITIGATION

This section must be completed if there are unavoidable impacts.

a) Goals of Mitigation:

b) Describe the mitigation area and mitigation site characteristics in a Draft Compensatory Mitigation Plan using the Minimum Requirements for a Draft Compensatory Mitigation Plan in Attachment 5.

7. COMPENSATORY MITIGATION (continued)

c) Proposed Mitigation Site:

Does mitigation involve OFFSITE (outside project area) temporary or permanent impacts not included in this application? ☐ Yes ☐ No

If yes, has an Application been provided for dredge and fill impacts at the site used for mitigation? ☐ Yes ☐ No

If not, explain:

d) Indicate in ACRES and LINEAR FEET (where appropriate) the total quantity of wetlands or other **waters** proposed to be created, restored and/or enhanced for purposes of providing compensatory mitigation (see *Instructions* for the terms created, restored, enhanced, preserved):

Water Body Type	***Created*** (acres, linear feet)	***Restored*** (acres, linear feet)	***Enhanced*** (acres, linear feet)	***Preserved*** (acres, linear feet)
Wetland				
Stream				
Lake/Reservoir				
Riparian				
Other				
Isolated Waters				

Is the mitigation site owned by the applicant? ☐ **Yes** ☐ **No**

If no, provide the name(s), address(es), and phone number(s) of the land owner and evidence (e.g., agreements, contracts, etc.) that the applicant has the necessary approvals to implement mitigation at this location. If the land is to be purchased, provide the expected date that the purchase will be complete.

e) Provide the location of the Compensatory Mitigation:

Street Address ____

County ______________________ City ________________________

Assessor's Parcel Number(s) _________________________________

Hydrologic Unit, Area, and Subarea ___________________________

Latitude ________________ Longitude ________________ (Center Reading)

Latitude ________________ Longitude ________________

Latitude ________________ Longitude ________________

Latitude ________________ Longitude ________________

Latitude ________________ Longitude ________________

f) Expected Construction Completion Date for Mitigation:

g) Contact information for person or organization monitoring:

Name: ______________ Phone: ________________

Address: ________________________ Fax: ________________

Email: ____________________

h) MITIGATION BANK/IN-LIEU FEE PROGRAM (If proposed, See *Instructions*.)

Mitigation Bank/In-Lieu Fee Name: ___________________________________

Name of Mitigation Bank/In-Lieu Fee Operator:___________________________

Office Address of Operator/Phone Number:______________________________

Mitigation Bank/In-Lieu Fee Location: Latitude:______________ Longitude:________________

County:__________________ City:__________________

Mitigation Bank/In-Lieu Fee Water Body type(s): ______________________

Mitigation Area Purchased (acres or linear feet) and cost (dollar): ___________________________

8. THREATENED/ENDANGERED SPECIES

Attach any Biological Assessments, Surveys, Formal Consultation Determination letters, and Mitigation Proposals as necessary, completed or available.

Is coordination with the US Fish and Wildlife Service required for this project according to the Federal Endangered Species Act? **If yes, list species that could be impacted: ____** **____,** **and provide Biological Report or Assessment.** ☐ **Yes (provide copy of Biological Report)** ☐ **No (explain basis of determination below)** **If you have attached additional documentation, cite here and index them within the application package: ____**
Is coordination with the State of California Department of Fish and Game required for this project according to the California Endangered Species Act? ☐ **Yes (provide copy of Biological Report)** ☐ **No (explain basis of determination below)**

9. FEDERAL PERMIT(S) APPLIED FOR OR ISSUED (e.g., Army Corps of Engineers Clean Water Act Section 404 Permit – Individual or Nationwide) Provide copies of the permit application(s) and name(s) of staff contacts within each agency.

AGENCY & CONTACT INFO	**PERMIT TITLE**	**FILE DATE**	**FILE NUMBER** (if known)	**Issuance Date (if issued):**	**PERMIT TYPE** (if known, i.e. Nationwide Permit Number(s), Regional General Permit No.(s), or Individual Permit)
Does the project require a Federal Energy Regulatory Commission (FERC) license or amendment to a FERC license? ☐ **Yes** ☐ **No If yes, please submit 401 WQC application to State Water Board.**					

10. STATE LICENSE(S), PERMIT(S) OR AGREEMENT(S) APPLIED FOR OR ISSUED

(Please list all other required license(s), permit(s), or agreement(s), including local regulatory approvals, and submit a final or draft copy if available. Include information on any de-watering, NPDES permit, storm water construction permits, or Streambed or Lakebed Alteration Agreements).

AGENCY & CONTACT INFORMATION	**LICENSE, PERMIT, or AGREEMENT**	**PERMIT NUMBER**	**APPROVAL DATE**
Does the project involve more than one acre of land disturbance and thus require an NPDES Storm Water Construction Permit? ☐ **Yes** ☐ **No** **Has a Storm Water Pollution Prevention Plan been prepared?** ☐ **Yes (attach copy)** ☐ **No** **If no, explain why no copy has been prepared:**			

11. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) COMPLIANCE

(California Public Resources Code section 21000 et seq.)

CEQA Document Type: (Environmental Impact Report, Negative Declaration, etc.) ________________

CEQA Project Title: ____________________________

Lead Agency and Contact Information:

Agency: _________________ **Contact Name:** ___________________ **Phone No.: (___)**________________

Address:

____

State Clearinghouse No.: ____________________________

Has the document been certified/approved by the Lead Agency and/or has a Notice of Exemption been filed?

☐ Yes ☐ No

If yes, include a copy of the certification. If no, provide the expected approval date and document type.

12. APPLICATION FEE

Provide the base fee according to the fee schedule and calculator located at http://www.waterboards.ca.gov/water_issues/programs/cwa401 under "Resources for Applicants" with the application per Title 23, Division 3, Chapter 9, Article 1, Sections 2200, 2200.4, 2200.5, and 2200.6 of the California Code of Regulations. Additional fees, based on the extent of impacts, may be due upon certification. If additional fees are required, you will be notified in writing.

Make checks payable to: State Water Resources Control Board.

Is a check enclosed?

☐ Yes: Check Number:________________________, Amount: $____________________

☐ No (explain why)

13. PAST/FUTURE PROPOSALS BY THE APPLICANT

Briefly list/describe any projects carried out in the last five years or planned for implementation in the next five years that are in any way related to the proposed activity or that impact the same receiving body of water.

14. HAS ANY PORTION OF THE WORK BEEN INITIATED?

☐ No work within waters of the State and or U.S. has occurred.

☐ Yes. Describe the initiated work within waters of the State and/or U.S., and explain why it was initiated prior to obtaining a permit. Indicate whether any enforcement action has been taken by any government agency (federal, state, or local agency). Attach additional pages as necessary.

15. CERTIFICATION

The person certifying this application must meet one of the following descriptions and be acting on behalf of the applicant listed in Item 1:

☐ I certify that I am the owner of property on which proposed project would occur.

☐ I certify that as a municipal agency, I am a principal executive officer or ranking elected official.

☐ I certify that as a state agency or other non-federal public agency, I am a principal executive officer or ranking elected official.

☐ I certify that for a federal agency, I am the chief executive officer of the agency, or I am the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

☐ I certify that I am a general partner for a partnership.

☐ I certify that I am the proprietor for a sole proprietorship.

☐ I certify that for a corporation or association, I am the President, Vice President, Secretary, or Treasurer of the corporation or association and in charge of a principal business function, or I perform similar policy or decision making functions for the corporation or association:

☐ I certify that for a corporation, I am the Manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), and authority to sign documents has been assigned or delegated to me in accordance with corporate procedures.
☐ I certify that for a trust, I am a trustee.

This application and/or discharge report is filed for proposed work impacting waters of the State and/or waters of the U.S. described in this application. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further certify that I possess the authority to undertake the work described herein. In addition, if impacts to waters deemed by the US Army Corps of Engineers to be outside federal jurisdiction are proposed, I certify that the provisions of Water Board Order R6T-2003-0004 or State Water Board Order No. 2004-0004-DWQ will be complied with.

____________________________________ ____________
Signature of Applicant Date

____
Print Name & Title of Applicant

Mail the completed application package to the appropriate office based on project location:

<u>For projects north of Conway Summit:</u>
Lahontan Regional Water Quality Control Board
Water Quality Certification Program
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96151

<u>For projects south of Conway Summit:</u>
Lahontan Regional Water Quality Control Board
Water Quality Certification Program
14440 Civic Drive, Suite 200
Victorville, CA 92392

Is your application complete? Did you:

- ☐ Include the application fee?
- ☐ Complete all fields within this application, and refer to the *Instructions* for additional guidance on what information is required?

Attachments:

1) Minimum Requirements for Maps and Drawings
2) Stream Hydrology Checklist
3) Exemption criteria for Basin Plan Prohibition for Lake Tahoe and its tributaries
4) Exemption criteria for Basin Plan Prohibition for Truckee and Little Truckee Rivers and its tributaries
5) Minimum Requirements for a Draft Compensatory Mitigation Plan

Instructions for Completing the Application for Clean Water Act §401 Water Quality Certification and/or Waste Discharge Requirements for Projects Involving Discharge of Dredged and/or Fill Material To Waters of the U.S. and/or Waters of the State

These instructions are to assist you in providing information needed to complete the application for dredge and/or fill impacts associated with your project. <u>For definitions of terms, see "Definitions" section (pg. 13).</u> The California Regional Water Quality Control Board, Lahontan Region (Water Board) requires this information when applying for:

- Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) for dredge or fill activities to waters of the U.S.
- Authorization to dredge, fill, or otherwise impact waters not regulated by the U.S. Army Corps of Engineers under CWA section 404, i.e. waters of the State.

<u>Is this the correct form for your project?</u>

Yes, if you propose to conduct a project that involves dredging, filling, or otherwise impacting, either temporarily or permanently, waters of the U.S.[1] and/or waters of the State[2]. All dredge or fill impacts to waters of the U.S. require a 401 water quality certification from the Water Board prior to proceeding with your project. If you are proposing to discharge dredged or fill material, including earthen or rock material, to waters deemed by the U.S. Army Corps of Engineers (Corps) to be <u>outside</u> of Federal jurisdiction, this application may also be used to obtain coverage under either:

- State Water Resources Control Board Order No. 2004-0004-DWQ[3] provided the project is involves dredge or fill discharges of <u>*not more than*</u>: (1) two-tenths of an acre, (2) 400 linear feet[4], (3) and 50 cubic yards of dredge material; or
- Lahontan Water Board's Order R6T-2003-0004[5] if your project exceeds the above impact limits to waters of the State.

In cases where a CWA section 404 permit will not be issued by the Corps for the project, coverage under one of the above General WDRs (GWDRs) or individual WDR may be appropriate. The Water Board will make the final determination of concerning the appropriate requirements in cases involving discharges of dredged or fill materials and associated wastes to surface waters of the Lahontan Region.

---

[1] Prior to completing this form, Water Board staff recommends the project proponent contact the U.S. Army Corps of Engineers to determine whether they will assert jurisdiction over waters within the project area.

[2] All waters under the jurisdiction of the California Regional Water Quality Control Board are referred to as "waters of the State." In the context of this application form for discharges of dredged and fill material, "waters of the State" typically implies waters that the Army Corps of Engineers have <u>not</u> asserted jurisdiction over. "Waters of the State" is defined pursuant to Water Code section 13050, subdivision (e) as "any surface water or groundwater, including saline waters, within the boundaries of the state."

[3] State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ, *Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction*. This Order regulates discharges of dredged or fill material to waters of the State not subject to Clean Water Act Section 404. (See State Board's website at http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf .)

[4] Measurements in linear feet of proposed impacts shall be disclosed if the excavation and fill activity runs along a drainage or shoreline.

[5] These projects are typically regulated under Board Order No. R6T-2003-0004, *General Waste Discharge Requirements for Small Construction Projects, Including Utility, Public Works, and Minor Streambed/Lakebed Alteration Projects in the Lahontan Region Excluding the Lake Tahoe Hydrologic Unit*.

For other questions regarding Clean Water Act (CWA) section 401 WQC, see *Frequently Asked Questions for 401 Water Quality Certifications*.

An application for 401 Water Quality Certification or a Report of Waste Discharge must provide sufficient information for the Water Board to determine whether the proposed project complies with State water quality standards and will not result in adverse impacts to waters of the State, including Waters of the U.S. State water quality standards refer to both the beneficial uses and State water quality objectives for the water body in which the project is proposed. Water quality standards and the Water Board's policies for protecting waters of the State are defined in the *Water Quality Control Plan for the Lahontan Region* (Basin Plan). The Basin Plan may be viewed at www.waterboards.ca.gov/lahontan. Additional state regulations governing Water Board actions are found in the Porter-Cologne Water Quality Control Act (Sections 13000-14958 of the California Water Code) and Titles 14, 23, and 27 of the California Code of Regulations (CCR). Contents of a complete application for water quality certification are described in CCR Title 23 Section 3856. Similar information is required for evaluating proposed discharges of waste, dredged, and fill material to waters of the State. Federal regulations applicable to 401 Water Quality Certification actions are found in the Code of Federal Regulations (CFR), Title 33 Part 330, and Title 40 Parts 121, 131, and 230.

The following instructions are intended to help the Applicant prepare a complete application in compliance with CCR Title 23 Section 3856. Following these guidelines will help reduce delays in processing your application. Once an application is determined to be complete, additional information may be requested for clarification. Please contact the Water Board's South Lake Tahoe office at (530) 542-5400, or the Victorville Office at (760) 241-6583 if you need assistance.

Answer each question completely. If there is insufficient room on the form for a complete response, please provide an attachment and identify the answer via the corresponding block number. **Additional documents must support information given within the application form; they are *not* a substitute for completing the form.** For example "see attached" is not an adequate response to any question or field within the application form. Supplemental documents must be specifically cited within the application form. If necessary, page number(s) must be included within the citation, and documents indexed.

Incorrect, incomplete, and/or inaccurate applications may result in delays in application processing or a denial of 401 WQC. You will be notified within 30 days of receipt of the application if your application is incomplete. A resubmittal of the application begins a new 30-day review period. A review period of 60 days, as required by 33 CFR 325.2 (b)(ii), will commence when the Water Board **receives a complete application package**. The application is deemed complete if the Water Board has not notified the applicant by the 30th day of receiving the application that the application is incomplete. Once an application has been deemed complete, the Water Board can request materials to clarify impacts, mitigation, or other aspects of the application. The 60-day review period can be extended up to one year under certain circumstances. If processing and review of the 401 WQC application will take more than 60 days, the Water Board may request additional time from the Corps or issue a Denial without Prejudice. Also, if an application is incomplete for more than one year, the Water Board may issue a Denial without Prejudice or request that the applicant withdraw their application. Once complete, the Water Board proceeds with the CEQA process, and the authorization or denial of the project.

Section 1: Owner and Agent Information

Provide the name, full mailing address, daytime phone number(s), and email address of the legal Applicant or "responsible party" in (a) of Section 1, and the same information for the Applicant's agent in (b) of Section 1. The Applicant will be the entity or individual to whom the permit will be issued and is the legal applicant responsible for the proposed discharge. The address of the Applicant is where legal notice may be served. If the Applicant is an agency, company, corporation, or other organization, indicate the responsible officer and title.

Statement of Authorization

The applicant, which is the legal owner of property where proposed discharge of dredged and/or fill material would occur, must sign this section if an authorized agent is acting on behalf of applicant.

Section 2: Project Information

A detailed project plan and description of associated environmental impacts is required with every application. Clarification of information may be requested by Water Board staff during application review. This checklist is provided to aid applicants. Not all items on the checklist apply to every project, rather they are to be used as general guidelines for required information to be included. In addition, there may be items not covered on this checklist that may be requested by Water Board staff on a project-by-project basis. Attach additional pages as necessary.

- **Project Name or Title:** Provide a project name or title consistent with other agency applications.
- **Project Location:** Provide the address, city, county, latitude/longitude coordinates, directions where the project site lies. Directions to the site should be from a known location or landmark, including highway, street names and numbers. Consult the map on the following website to ensure you are sending the application to the appropriate Water Board: http://www.waterboards.ca.gov/waterboards_map.shtml. Note that, if the project site is in two or more regions, the application must be submitted to the State Water Resources Control Board, not the regional boards, for action.
- **Map:** Provide a map that clearly indicates the project site location and the boundary of the watershed within which the project lies, including an estimation of the drainage area (in acres) upstream of the project (USGS 7 ½ minute quadrangle is recommended).
- **Overall Project Scope, Purpose(s) and Project Goal:** Describe the overall scope, purpose and goal of the project that is proposed. For example (e.g.): bank

stabilization, crossing installation (bridge, culvert, etc.) for development purposes, repair and/or maintenance, development, restoration, etc.

- **Project Description:** Provide a full, technically accurate description of the entire activity and associated environmental impacts, both temporary and permanent, including areas outside of jurisdictional waters. The description should include, but should not be limited to, the following points, as applicable (if required later in the application, a brief description may be provided):
  - Locations and dimensions of existing and proposed structures or fill within waters of the State, including Waters of the U.S., such as culverts, gabions, riprap, wing walls, dikes, cofferdams, and excavations;
  - Impacts and potential impacts to beneficial uses as described in the Basin Plan, for any affected waterbody(ies). *Note: if the waterbody is not named in the Basin Plan, the beneficial uses of the nearest downstream named waterbody apply. For wetlands, see discussion on Wetlands Protection and Management in the Basin Plan beginning on page 4.9-8*;
  - Pre- and post-construction stormwater management and pollution control measures. If a Stormwater Pollution Prevention Plan (SWPPP) is being prepared for the project, it may be submitted for this requirement as long as it fully describes post-construction control measures proposed;
  - Existing functions and values of waterbody proposed to be impacted;
  - Direct or indirect changes in streambed slope, cross sectional dimension or area, vegetation, and/or surfacing;
  - Changes in the drainage patterns and potential impacts to onsite and downstream waterbodies, including groundwater;
  - The location and dimension of all associated access roads, work staging areas, and structures to be constructed on fill, piles, or floating platforms in waterbodies. Indicate if the structures are permanent or temporary. If temporary, provide a schedule or otherwise describe how long they will be placed in waterbodies, and how the site will be revegetated, restored, or otherwise reconditioned on their removal;
  - Temporary or permanent dewatering or water diversions; and,
  - Construction methods, schedule, and phasing plan.
- **Total Project Size:** Provide the total acreage size of entire project.
- **Site Description of Project Area:** Describe in a few words what a picture of the proposed project site would show; e.g., predominant vegetation in the area if project area is in rural setting; site is previously disturbed by past activities (grazing, etc.); site is adjacent to roadway. Include type(s) of receiving water body(ies) present on site and a brief list/description of applicant's previous and future projects related to the proposed activity or that may impact the same receiving water body(ies).
- **Area and Linear Feet of Waters in the Project Area:** In order to the ascertain the percentage of waters that will be impacted by the project, provide the extent (area and linear feet) of all waters of the State or U.S. within the project area, including both those that are proposed to be impacted and those that will be avoided by the project. For example, the length of the stream or shoreline, or total wetland area, within the project boundary.

- **Proposed Schedule:** Provide the time period that the project is proposed for implementation.

Section 3: Waterbody Impact

This is an important part of the application. If you think this part of the application does not apply to your project, you may have the wrong application.

a) **Waterbody Name(s):** Provide the name (if available) and type of any affected waterbody(ies). Indicate on a site location map the exact location of any waterbody(ies) or special aquatic site(s) that may be permanently or temporally affected either directly or indirectly by the project. If the project affects an unnamed tributary, clearly show the location of the tributary on a map and indicate the name of the nearest named waterbody to which it drains. The term "waterbody," as used in this document, refers to any wetland, stream, creek, intermittent drainage, drainage ditch, drainage swale, seep, pond, bay, vernal pool, marsh, ground water basin, or other waters of the State. (Also, see definitions section of these *Instructions*.)

b) **Photos:** Provide photographs of the project site and the location where impacts are proposed.

c) **Fill and Excavation Information:** In the row or rows that correspond to the type of waterbody impacted by the Project, estimate the quantity of waters to be adversely impacted by any discharge (temporary or permanent) in acres and linear feet (for channels, shorelines, riparian corridors, and other linear habitat). Also, estimate the volume of fill for each type of impact, temporary or permanent.

   i. Fill-related Impacts: "Fill" refers to material placed in waters of the U.S. [or State] where the material has the effect of either replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of a waterbody. Examples of "fill material" include rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in waters of the U.S.

   Water Type: See Definitions for description of each waterbody type.

   Proposed Project's Influences on Channel Processes: In order for Water Board staff to assess potential detrimental off-site impacts from channel destabilization due to the proposed Project, complete this section with information obtained from the Stream Protection Circular located at the following website: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/available_documents/stream%20protection%20circular.pdf. The concepts and principles presented in this Circular are applicable to all Water Boards around the State. For projects involving fill or dredge discharges to rivers and streams, either perennial and intermittent, (for instance, river restoration projects, bank stabilization projects, culvert installation projects, bridge projects that span less than 1.5 times the bankfull width of the stream, etc.) provide flow information for the two-, ten-, fifty-, and 100-year storm event (Q_2, Q_{10}, Q_{50}, Q_{100}) and a description of the potential hydrogeomorphic impacts from the project. Include flow rates, velocities, and shear stresses for the above storm events.

Fill Material: Describe as completely as possible all the types of fill material that will be used in the proposed Project.

ii. Dredge/Excavation Impacts: *discharge of dredged material* means any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States.

Purpose: Describe the reason(s) why dredging is required.

New Dredging vs. Maintenance Dredging: If the proposed Project area has been dredged in the past AND the dredging depths proposed are no deeper than those dredged previously, then the Project is maintenance dredging. Otherwise, the Project is new dredging.

Type of Material to be Dredged: Describe the dominant substrate type (e.g., sand, clay, etc.) at the location of the proposed project.

Dredging Method: What type of dredge will be used; e.g., suction, clam shell, etc.

Depth below Ordinary High Water Level (see Definitions): Indicate the depth to which the proposed Project will dredge to (e.g., 6219 feet, Lake Tahoe Datum).

Quantity of Proposed Dredging: Indicate the upper maximum volume of dredged material proposed to be removed from the waterbody, and the area from which it will be obtained. Dredging material estimates must be reported in cubic yards.

Method of Transfer and Containment: Describe how and where the dredged material will be removed, transferred and disposed of.

Results of analyses conducted on dredged material composition: Report on laboratory analysis of dredged sediment sampling results.

d) Is the water body "isolated?"

All Waters of the State are protected under California law. Additional protection is provided for Waters of the U.S, under the Federal Clean Water Act. Determinations of the jurisdictional extent of the Waters of the U.S. are made by the Corps of Engineers. Some Waters of the State are "isolated" from Federal jurisdictional waters. If you believe the waterbody impacted by your project is isolated, a letter disclaiming federal jurisdiction (or other formal determination by the Corps) must accompany the application in order to proceed with processing the application.

According to the U.S. Environmental Protection Agency's (USEPA) June 2007 Guidance, an isolated wetland does not have a significant nexus to a navigable waterway, or in everyday terms, no readily identifiable surface connection to a larger body of water. There is no definition of "isolated wetland," but the Supreme Court has ruled that an isolated wetland is determined by finding a "significant nexus" with traditional navigable waters, which are required for the following waters:

(i) non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally (e.g., typically at least 3 months each year);

(ii) wetlands that are adjacent to such tributaries; and

(iii) wetlands that are adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

e) Does the proposed project involve in-channel hydromodification, floodplain modification, stream restoration, or bank stabilization?

If yes, complete the checklist in Attachment 2. Call Tobi Tyler at (530) 542-5435 if you have questions about filling this checklist out. This checklist is derived from concepts in the Stream Protection Circular[6] written by staff at the San Francisco Bay Regional Water Quality Control Board. The purpose of the checklist in Attachment 2 is to ascertain the degree to which the applicant has evaluated relevant watershed processes affecting the project site and that may be impacted by the proposed project. The level of detail required to evaluate the watershed influences on a project site and develop strategies to avoid environmental impacts is going to increase with the complexity and scale of a project. For cases in which the landscape is composed of inherently unstable features, such as active landslides and/or alluvial fans, a detailed geotechnical report may be needed to identify these features and avoid impacts. Projects with complex hydrology and hydraulics involving the interactions of wetland, stream channels, and floodplains may need the latest generation of hydraulic models. Projects supported by government grants to restore critical habitats may need detailed habitat assessments. The parameters in the Attachment 2 checklist address and encourage geomorphic equilibrium, protection of drainage networks, avoidance and/or correction of hydraulic constrictions, avoidance of creating gullies and headcuts, repair of existing gullies and headcuts, and protection of floodplains and riparian functions and processes.

f) Is the proposed project in a Stream Environment Zone (Lake Tahoe watershed only) or 100-year floodplain of Lake Tahoe or its tributaries?

This section is required to comply with the Lahontan Basin Plan's discharge prohibition to Stream Environment Zones (SEZs) and 100-year floodplains in the Lake Tahoe Basin. See Basin Plan's Chapter 5 available at the following website: http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml.

g) Is any portion of the proposed project in the 100-year floodplain of the Truckee River or its tributaries?

This section is required to comply with the Lahontan Basin Plan's discharge prohibition to 100-year floodplains in the Truckee River and Little Truckee River Hydrologic Units. See Chapter 4 of the Basin Plan at: http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml.

Section 4: Delineation Information for Wetland and Other Waters

Provide the name, title and affiliation of the qualified professional who performed the delineation and the date the delineation was performed. Indicate the Supplement(s)[7] used during the delineation and the date the delineation was verified by the Corps, if

---

[6] The Stream Protection Circular is available at http://www.waterboards.ca.gov/sanfranciscobay/water_issues/available_documents/stream%20protection%20circular.pdf.

[7] The Corps of Engineers has developed Supplements to the 1987 Corps Delineation Manual. See http://www.usace.army.mil/CECW/Pages/reg_supp.aspx for a list of all Supplements and their links, or http://www.usace.army.mil/CECW/Documents/cecwo/reg/trel08-28.pdf for the Arid West Supplement and http://www.usace.army.mil/CECW/Documents/cecwo/reg/west_mt_intersupp.pdf for the Western Mountains Supplement.

available. If a delineation map has been sent to the Corps, this map must be provided with the application.

Section 5: Impact Avoidance

The applicant must demonstrate that the project is designed to avoid and minimize impacts to wetlands and other waters of the state and/or U.S. within the project area to the maximum extent practicable.

The contents of a complete WQC application are specified in the California Code of Regulations (CCR) title 23, section 3856. Section 3856(h)(6) specifies that a complete application must provide: "A description of any other steps that have been or will be taken to avoid, minimize, or compensate for loss or significant adverse impacts to beneficial uses of waters of the State."[8]

Describe, in detail, measures that have been taken to avoid and minimize direct impacts to waters of the State, including waters of the U.S. If it is not possible to avoid or minimize impacts to waters of the State, the applicant must provide the reasoning and evidence for that conclusion. The following represents the sequence in which proposals should be approached: (1) Avoid – avoid impacts to waters; (2) Minimize – modify project to minimize impacts to waters; (3) Mitigate – Where impacts cannot be avoided, adequate mitigation for the loss of water body acreage and function must be provided. An Alternatives Analysis, pursuant to the CWA section 404(b)(1) guidelines, may be required to determine the least environmentally damaging practicable alternative. *CFR 40 Part 230 Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material* is available at the following website: http://www.usace.army.mil/CECW/Documents/cecwo/reg/materials/40cfr230.pdf

Information that may be relevant to this section of the application include:

- Alternatives considered that may involve less impact to waters of the U.S. and/or waters of the State.
- Measures to avoid impacts to wetlands or riparian vegetation within the project area.

Section 6: Impact Minimization

Provide a description of the efforts to minimize direct and indirect impacts to waters of the State, including waters of the U.S. For construction projects, describe how the project will achieve runoff reduction or maintenance such that pre-project hydrology matches post-project hydrology using principles such as Low Impact Development (LID) strategies. Minimization may also include, but is not limited to, the following:

- Explanation of how water quality will be maintained after the proposed project is complete in order to serve beneficial uses and pre-construction hydrologic functions of waters within the project area.
- For stream diversion plans, describe specific measures that will be taken and structures that will be installed to effectively isolate work areas from stream flows.

---

[8] "Waters of the state" within this quote includes waters of the U.S."

- Plans for disposal of water from dewatering activities (i.e., removing water from excavated areas).
  NOTE: Disposal of water from dewatering activities to land or surface waters requires coverage under General Waste Discharge Requirements or a National Pollutant Discharge Elimination System (NPDES) Permit, respectively.

Proposed Erosion Control and Storm Water Treatment Measures:
Provide a description of the efforts to avoid and minimize impacts to water during the project implementation. Provide a discussion of both the erosion and sediment control measures, project scheduling, flow diversions, staging and material storage yards, and winterization plans. Describe how control measures incorporated into the proposed project will <u>prevent</u> and <u>minimize indirect impacts</u> to waterbodies, such as upland impacts which may affect water quality. These measures should include Best Management Practices (BMPs) to avoid (or, if impacts are unavoidable, to minimize) impacts to waters of the State, including waters of the U.S., such as:

- Erosion control and sediment retention measures or other stormwater management, including stormwater management facilities.
- Maps and description of material stockpiles, staging areas, equipment access routes, etc. Access routes should be planned to minimize disturbance of vegetation. Describe how equipment will cross streams, and any measures that will be taken to prevent discharge of sediment during stream crossings.
- Plans for responding to inclement weather. Describe how work areas and materials will be protected in the event of adverse weather to prevent a discharge of earthen materials or other wastes from the site.
- Revegetation plans, including revegetation success criteria. (The applicant may wish to contact an advisor such as the Natural Resource Conservation Service for recommendations.)
- Winterization strategies to stabilize all bare soils and re-vegetation proposals. Please submit a map indicating the approximate locations of each method.
- Describe the methods proposed to treat storm water runoff from the project site prior to entering the storm drainage system, wetlands, streams, etc.
- Site dewatering for either diversion or inundated excavation.
- Solid waste disposal for dredged material.

Proposed Source Control Measures
Describe the methods that will be used to reduce sources of pollutants, such as fertilizers, pesticides, hydraulic fluid, etc. Proposed measures may include, but are not limited to, the following:

- Spill contingency plans. Describe measures to prevent and respond to potential spills of stored materials (e.g., chemicals, construction materials, fuels), mechanical fluids from leaking equipment or equipment washing, etc.
- Waste handling plans (for example, disposal of construction materials, and water from steam cleaning and concrete washout activities).

Post-Construction Treatment Controls

Describe the methods that will be used to reduce hydrogeomorphic impacts from increased peak flows due to increased impervious surfaces, and methods to reduce sources of pollutants in the long-term:

- Provide a description of the efforts to avoid and minimize impacts to water quality following project construction.
- Provide a description of each proposed land use (e.g., residential, street, commercial). Identify the expected pollutants, specific post-construction BMPs, their effectiveness with regards to the expected pollutants, maintenance requirements, and party(ies) responsible for maintenance.
    - The applicant must submit verify and document that the parties designated as responsible for BMP maintenance have accepted the maintenance responsibility and are aware of the maintenance requirements.
- Provide a detailed description of how the project will address post-construction changes in flow rates, velocities, and shear stresses.
- Provide a description of the LID strategies to be implemented.
- Provide a figure showing the location and type of all post-construction BMPs.
- Provide the latitude and longitude for each post-construction BMPs.

Section 7: Compensatory Mitigation

If it is determined that a watercourse will be unavoidably affected by the proposed project, mitigation will likely be necessary to preserve the functions and beneficial uses of the site. Water Board staff may request clarification of information during application review. The checklist in Attachment 5 is intended to aid applicants in submitting complete and proper information regarding mitigation plans and to enable staff to effectively evaluate the project for WQC or Waste Discharge Requirements. Attach additional pages and supporting documentation (such as a Bill-of-Sale for the purchase of mitigation credits) as necessary. *Wetlands should not be disturbed unless absolutely necessary.* If it is determined that a wetland will be affected by the proposed project, mitigation will need to be implemented at a minimum of least a 1.5:1 mitigation-to-impact ratio to result in no net loss of function and values, including temporary loss, of the wetland and its associated beneficial use. Appropriate assessment methodologies will be used by the applicant to demonstrate that the proposed compensatory mitigation site is capable of providing, and ultimately does provide, aquatic functions of equal or greater measure than the impact site.

a. Mitigation Goal: Describe the intent of mitigation proposed for impacts.
b. Complete a Draft Mitigation and Monitoring Plan for review by the Board that meets all the criteria in Attachment 5, Minimum Requirements for a Draft Mitigation and Monitoring Plan.
c. Indicate whether there would temporary or permanent impacts at the mitigation site due to the mitigation proposed.
d. Indicate in ACRES and LINEAR FEET (channels, shorelines, riparian corridors, and other linear habitat) the total quantity of waters of the United States proposed to be Established, Restored, Enhanced, or Preserved for purposes of providing Compensatory Mitigation. Establishment is defined as the creation of vegetated or unvegetated waters of the U.S./State where the resource has never previously

existed. Restoration is divided into two activities, re-establishment and rehabilitation. Re-establishment is defined as the return of natural/historic functions to a site where vegetated or unvegetated waters of the State, including waters of the U.S., previously existed. Rehabilitation is defined as the improvement of the general suite of functions of degraded vegetated or unvegetated waters of the State, including waters of the U.S. Enhancement is defined as the improvement to one or two functions of existing vegetated or unvegetated waters of the U.S./State. Preservation is defined as the acquisition and legal protection from future impacts in perpetuity of existing vegetated or unvegetated waters of the U.S./State.

e. Provide the location information for the mitigation site if it is off-site mitigation.
f. Provide the expected construction date of the mitigation project.
g. Provide contact information of the implementers and/or monitors of the mitigation project.
h. Provide Mitigation Bank or in-lieu fee information if available or appropriate.

Section 8: Threatened and Endangered Species

Indicate whether or not any threatened or endangered species are present or potentially impacted by this project.

- If yes, provide a list of the potentially impacted species (including common name).
- Provide a copy of the Biological Report or Assessment

Section 9: Federal Permit(s) Applied for, or Approved

If the project affects waters of the U.S., a copy of the CWA section 404 application sent to the Corps of Engineers must be included in the application. Provide information on Federal Permits/Licenses being sought or acquired for the proposed project. Identify any federal agency(ies) (e.g., the U.S. Army Corps of Engineers) from which permits/licenses are required or being sought for the proposed activities. Indicate permit/license type (e.g., for a U.S. Army Corps of Engineers permit, indicate whether an individual or Nationwide permit is being sought). Indicate license/permit number (e.g., Nationwide Permit number), if applicable. Attach copies of documentation such as federal permit applications, any final signed permits/licenses, notifications by federal agencies concerning the proposed activities, other pertinent communication with federal agencies regarding the proposed activities.

Section 10: State Permit(s)

Provide information on all other required license(s), permit(s), or agreement(s), including local regulatory approvals acquired or being sought. Attach a copy of any final signed Agreement if available. If final documents are not available, attach copies of any draft documents and/or pertinent correspondence if available. Include information on any de-watering, NPDES, storm water permits, or Streambed or Lakebed Alteration Agreements.

Attach a copy of your application for a Streambed or Lakebed Alteration Agreement.

Section 11: California Environmental Quality Act (CEQA) Compliance

Submittal of completed, approved and/or signed CEQA documentation is required prior to approval of WQC. Ample time must be provided to the certifying agency to properly review a final copy of a valid CEQA documentation before certification can occur.

If a Notice of Exemption had been filed indicate the type and basis for exemption being claimed. If a CEQA document is in the process of being prepared, indicate the lead CEQA agency preparing the document and approximate expected completion date.

- Provide the document type and title.
- Provide the lead agency and contact information (name, address, and phone number).
- Provide the State Clearinghouse number.
- Indicate whether or not the document has been certified/approved or if a Notice of Exemption has been filed.
    - If yes, provide a copy of the certification.
    - If no, provide the expected approval date.
- Provide a copy of the draft or final CEQA document with this application.
- The Regional Board is required to comply with CEQA before issuing a certification. Ample time must be provided to the certifying agency to properly review a final copy of valid CEQA documentation before certification can occur.
- Section 401 certification will not be granted without a certified CEQA document.[9]

Section 12: Application Fee

As part of a complete application, an application fee of $200 must be submitted with the application. Make check payable to the State Water Resources Control Board. The application fee must be received with the application. If an application is not received with the application fee, the application may be returned to the applicant.

The review period of 60 days as required by 33 CFR 325.2 (b)(ii) will commence when the Water Board **receives a complete application package, including the application fee**.

Additional fees may be required depending on the nature of the project and the amount of impacts projected to occur once the proposed project is certified. The total fee amount will be assessed according to 23 CCR Sections 2200 (e) and 3833 (b)(2)(A), and will be specified as a condition of your certification order, if issued.

Section 13: Past/Future Proposals by the Applicant

Provide information on other projects planned or implemented by the applicant. Provide a brief list/description, including estimated adverse impacts of any projects implemented by the applicant within the last five years or planned for implementation by the applicant

[9] Although CEQA documentation is not required to complete an application, pursuant to California Code of Regulations (CCR), title 23, section 3856(f), the certifying agency (Water Board) must be provided with and have ample time to properly review a final copy of valid CEQA documentation before taking a certification action. U.S. Army Corps of Engineers guidelines allow the Water Board 60 days to take action on a complete application. If the federal period for certification will expire before the Water Board has opportunity to consider the necessary environmental documentation, certification may be denied “without prejudice” pursuant to CCR title 23 section 3836(c) until an environmental document can be completed and considered.

within the next five years that are in any way related to the proposed activity or that may impact the same receiving water body(ies) as the proposed activity. Attach additional pages as necessary.

Section 14: Has Any Portion of the Work Been Initiated
Indicate whether any work has begun on the project.

Section 15: Certification
Mark the most appropriate box(es) that apply. Sign and date.

DEFINITIONS

100-year floodplain: A 100-year floodplain is defined as the extent of a flood that has a statistical probability of occurring once in 100 years. Floods of this extent may occur more than once every 100 years, and floods of even greater extent are possible. Most state, federal and local floodplain protection planning is based upon the 100-year floodplain. Floodplains often include wetland and riparian areas which may extend beyond the limits of the 100-year floodplain. Riparian areas are typically defined as the terrestrial moist soil zone immediately adjacent to wetlands, lakes, and both perennial and intermittent streams. (Lahontan Basin Plan, page 4.9-13) A one-hundred-year flood is calculated to be the level of flood water expected to be equaled or exceeded every 100 years on average. The 100-year flood is more accurately referred to as the 1% flood, since it is a flood that has a 1% chance of being equaled or exceeded in any single year. Based on the expected flood water level, a predicted area of inundation can be mapped out as the floodplain.

Bankfull: The term bankfull was originally used to describe the incipient elevation on the bank where flooding begins. In many stream systems, the bankfull stage is associated with the flow that just fills the channel to the top of its banks and at a point where the water begins to overflow onto a floodplain (Leopold et al. 1964). The bankfull stage and its attendant discharge serve as consistent morphological indices which can be related to the formation, maintenance and dimensions of the channel as it exists under the modern climatic regime. The terms effective and/or dominant discharge are synonymous with bankfull discharge as used in this procedure; see the federal manual Stream Corridor Restoration: Principles, Processes and Practices (FISRWG 1999) at http://www.epa.gov/warsss/sedsource/bankfull.htm for more detailed discussion.

Beneficial Uses: As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best management practices (BMPs): BMPs are schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States from discharges of dredged or fill material. BMPs include methods, measures, practices, or design and performance standards which facilitate compliance with the section 404(b)(1) Guidelines (40 CFR part 230), effluent limitations or prohibitions under section 307(a), and applicable water quality standards. (40 C.F.R. § 232.2)

Salt marsh (non-tidal)**:** Marsh associated or located on the fringes of salty playas.

Bogs are characterized by spongy peat deposits, acidic waters, and a floor covered by a thick carpet of sphagnum moss. Bogs receive all or most of their water from precipitation rather than from runoff, groundwater or streams. As a result, bogs are low in the nutrients needed for plant growth, a condition that is enhanced by acid forming peat mosses. (See http://www.epa.gov/owow/wetlands/types/bog.html)

Compensatory mitigation: The restoration, establishment (creation), enhancement, or preservation of aquatic resources for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. (33 CFR part 328)

Condition means the relative ability of an aquatic resource to support and maintain a community of organisms having a species composition, diversity, and functional organization comparable to reference aquatic resources in the region. (33 CFR part 328)

Credit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The measure of aquatic functions is based on the resources restored, established, enhanced, or preserved. (33 CFR part 328)

Discharge: The term ''discharge'' means any discharge of dredged or fill material and any activity that causes or results in such a discharge.

Dredge Activities: Except as provided below, the term "discharge of dredged material" means any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the State, including waters of the United States. The term includes, but is not limited to, the following (40 C.F.R. § 232.2 (Jul. 1, 1999) (Corresponding changes were also made to Corps regulations at 33 C.F.R. § 323.2(d)(1), (2) (Jul. 1, 1999):

- (1) The addition of dredged material to a specified discharge site located in waters of the U.S.;
- (2) The runoff or overflow, associated with a dredging operation, from a contained land or water disposal area; and
- (3) Any addition, including redeposit other than incidental fallback, of dredged material, including excavated material, into waters of the U.S. which is incidental to any activity, including mechanized land-clearing, ditching, channelization, or other excavation.

Dredging*:* The intentional or inadvertent excavation, movement or removal of any substrate material from any waters of the State, including Waters of the U.S., by any means.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area. (33 CFR part 328)

Erosion Control: the practice of preventing or controlling wind or water erosion in agriculture, land development and construction. "Vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc., placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution." (State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ, Construction General Permit)

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present at a given upland site to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area. (33 CFR part 328)

Fens are peat-forming wetlands that receive nutrients from sources other than precipitation: usually from upslope sources through drainage from surrounding mineral soils and from groundwater movement. Fens differ from bogs because they are less acidic and have higher nutrient levels. They are therefore able to support a much more diverse plant and animal community. These systems are often covered by grasses, sedges, rushes, and wildflowers. Some fens are characterized by parallel ridges of vegetation separated by less productive hollows. The ridges of these patterned fens form perpendicular to the downslope direction of water movement. Over time, peat may build up and separate the fen from its groundwater supply. When this happens, the fen receives fewer nutrients and may become a bog. (See http://www.epa.gov/owow/wetlands/types/fen.html)

Fill material means any "pollutant" which replaces portions of the "waters of the United States" with dry land or which changes the bottom elevation of a water body for any purpose. (40 C.F.R. § 232.2)

Filling: Any intentional or inadvertent addition, including redeposit other than incidental fallback, of any excavated material into waters of the state by any means, including Waters of the U.S.

Freshwater marsh: Freshwater marshes are non-forested, non-tidal, and have non-peat soils (unlike bogs and fens). They can be either fresh water mineralized marshes, from groundwater, streams and surface runoff, or poorly mineralized fresh water marshes resulting from direct precipitation; pH is usually neutral. Although the shallow marshes do not support many fish, deeper marshes are home to many species. Some of the most common plants are cattails, water lilies, arrowheads, and rushes.

Functional capacity means the degree to which an area of aquatic resource performs a specific function. (33 CFR part 328)

Functions means the physical, chemical, and biological processes that occur in ecosystems. (33 CFR part 328)

Impact means adverse effect. (33 CFR part 328)

In-kind means a resource of a similar structural and functional type to the impacted resource. (33 CFR part 328)

In-lieu fee program means a program involving the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements for Corps permits. Similar to a mitigation bank, an in-lieu fee program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor. However, the rules governing the operation and use of in-lieu fee programs are somewhat different from the rules governing operation and use of mitigation banks. The operation and use of an in-lieu fee program are governed by an in-lieu fee program instrument. (33 CFR part 328)

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Isolated wetland: According to US EPA's June 2007 Guidance, an isolated wetland does not have a significant nexus to a navigable waterway (no readily identifiable surface connection to a larger body of water). Isolated wetlands, or wetlands which are "not connected by streams or other bodies of water" was reviewed by the Supreme Court case, Solid Waste Agency of Northern Cook County (SWAANC) versus The Army Corps of Engineers (COE) in 2001 (SWWANC v. U.S COE). This major reinterpretation of the Clean Water Act, redefined the definition of isolated wetlands and minimized the Corps jurisdiction over isolated wetlands or waters that are "not navigable." The Court ruled that the mere presence of migratory birds is not sufficient for asserting the CWA jurisdiction over isolated, non-navigable water bodies of water. Due to the removal of the COE's oversight of the regulation of isolated wetlands, it now falls to a motley collection of state and local laws in all 50 states, some with stringent rules on the use of wetlands and other states with looser regulations (Midwest and Western states). According to the Supreme Court, an isolated wetland is determined by finding a "significant nexus" with traditional navigable waters, which are required for the following waters:

> (i) non-navigable tributaries that do not typically flow year–round or have continuous flow at least seasonally (e.g., typically at least 3 months each year);
>
> (ii) wetlands that are adjacent to such tributaries; and
>
> (iii) wetlands that are adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

Significantly, the definition does not stray into directly defining an isolated wetland, it circumvents a straight definition in preference for a definition of navigable waters and how they are connected via surface water, and remains silent on the role of groundwater hydrology.
(http://www.wetlandresearch.com/wiki/index.php?title=Isolated_Wetlands)

The Corps considers isolated wetlands to be those of any size that are not adjacent* to or do not have a sufficient hydrologic connection to navigable waters. Corps policy regarding the definition and regulation of isolated wetlands is currently in flux, and future court or administrative decisions may further change how isolated wetlands are regulated by the federal government. (See 33 CFR 328.3[c] for definition.)

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Low Impact Development (LID): Unlike traditional storm water management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID uses site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall. (see http://www.waterboards.ca.gov/water_issues/programs/low_impact_development/index.shtml)

Mitigation bank means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for impacts authorized by Corps permits. In general, a mitigation bank sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor. The operation and use of a mitigation bank are governed by a mitigation banking instrument. (33 CFR part 328)

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line). (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Off-site means an area that is neither located on the same parcel of land as the impact site, nor on a parcel of land contiguous to the parcel containing the impact site. (33 CFR part 328)

On-site means an area located on the same parcel of land as the impact site, or on a parcel of land contiguous to the impact site. (33 CFR part 328)

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of ‘‘open waters’’ include rivers, streams, lakes, and ponds. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Out-of-kind means a resource of a different structural and functional type from the impacted resource. (33 CFR part 328)

***Ordinary High Water**:* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. (33 CFR part 328.3(e))

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Playa lakes are round hollows in the ground in the Southern High Plains of the United States. They are ephemeral, meaning that they are only present at certain times of the year. Most playas fill with water only after spring rainstorms when freshwater collects in the round depressions of the otherwise flat landscape. There are also a few saltwater-filled playas. These are fed by water from underlying aquifers, which brings salt with it as it percolates up through the soil. As the water evaporates, the salt is left behind in the increasingly salty playas. (See http://www.epa.gov/owow/wetlands/types/playa.html)

Post-Construction BMPs: Structural and non-structural controls which detain, retain, or filter the release of pollutant to receiving waters after final stabilization is attained. (SWRCB Order No. 2009-0009-DWQ, Construction General Permit)

Preservation means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions. (33 CFR part 328)

Re-establishment means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions. (33 CFR part 328)

Reference aquatic resources are a set of aquatic resources that represent the full range of variability exhibited by a regional class of aquatic resources as a result of natural processes and anthropogenic disturbances. (33 CFR part 328)

Rehabilitation means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area. (33 CFR part 328)

Restoration means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: reestablishment and rehabilitation. (33 CFR part 328)

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Riparian areas are lands adjacent to streams, rivers, lakes, and estuarine-marine shorelines. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (33 CFR part 328)

Seasonal Wetland: In California, wetlands are commonly classified according to the length of time that an area is inundated or saturated by water or the types of plants and animals an area supports. For example, if an area is only saturated or inundated for part of the year it can be classified as a seasonal or perennial wetlands. Likewise, areas that are inundated or saturated throughout the entire year may be referred to as permanent wetlands. (see http://ceres.ca.gov/wetlands/introduction/defining_wetlands.html)

Sediment Control BMPs: Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. They include those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (e.g., silt fence, sediment basin, fiber rolls, etc.). (SWRCB Order No. 2009-0009-DWQ, Construction General Permit)

Service area means the geographic area within which impacts can be mitigated at a specific mitigation bank or an in-lieu fee program, as designated in its instrument. (33 CFR part 328)

Services mean the benefits that human populations receive from functions that occur in ecosystems. (33 CFR part 328)

Spring Seep: Spring seeps are small wetlands typically found in sloping terrains. Groundwater reaches the surface through a distinct hole from which shallow, broad flows move outward and create a saturated zone. The groundwater typically flows year round and has a relatively constant temperature (usually between 50 and 60 degrees F). Spring seeps are essentially discharge wetlands, though they can provide recharge functions under some conditions. (See http://www.epa.gov/reg3esd1/wetlands/spring_seep.htm)

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Streambed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Stream Environment Zones (SEZs) are biological communities that owe their characteristics to the presence of surface water or a seasonal high ground water table. Specific criteria for defining SEZs have changed over time; the history of these criteria is summarized in Volume III of the Tahoe Regional Planning Agency's (TRPA) 208 Plan. Current criteria for identification of SEZs and SEZ setbacks are outlined below. The following criteria are used by both the Lahontan Water Board and TRPA. A SEZ is determined to be present if any one of the following key indicators is present, or in the absence of a key indicator, if any three of the following secondary indicators are present[10].

1. **Key Indicators:** Key indicators are: (a) Evidence of surface water flow, including perennial, ephemeral, and intermittent streams, but not including rills or man-made channels; or (b) Primary riparian vegetation; or (c) Near surface groundwater; or (d) Lakes or ponds; or (e) Beach (Be) soils; or (f) One of the following alluvial soils: (i) Elmira loamy coarse sand, wet variant (Ev) (ii) Marsh (Mh).
2. **Secondary Indicators:** Secondary indicators are: (a) Designated floodplain (b) Groundwater between 20-40 inches (c) Secondary riparian vegetation (d) One of the following alluvial soils: (i) Loamy alluvial land (Lo), or (ii) Celio gravelly loamy coarse sand (Co), or (iii) Gravelly alluvial land (Gr).

The boundary of a SEZ is the outermost limit of the key indicators; the outermost limit where three secondary indicators coincide; or if Lo, Co or Gr soils are present, the outermost limit where two secondary indicators coincide, whichever establishes the widest SEZ at any point. The outermost boundaries of a stream are the bank-full width of such stream which is defined as the level of frequent high flow, i.e., the level of flood with a recurrence interval of approximately 1.5 years. Other definitions of terms used in the criteria above are given in Table 5.7-1. Note that SEZs can include bodies of open water as well as wet meadows without defined stream channels. SEZs are generally identical with Bailey land capability Class 1b lands (see the section of this Chapter on land capability, above). One hundred year floodplains are sometimes, but not always, included within SEZs; see the separate section of this Chapter on 100-year floodplain protection for control measures associated with 100-year floodplains which are not also SEZs. The SEZ criteria can be compared to the federal definition of wetlands (40 CFR § 110.1[f]). Federal "jurisdictional" wetlands. (Lahontan Basin Plan)

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

---

[10] Soil types are discussed in Volume I of the Tahoe Regional Planning Agency's (TRPA) 208 Plan. Plant communities are identified in accordance with the definitions and procedures contained in the report entitled *Vegetation of the Lake Tahoe Region, A Guide for Planning* (TRPA 1971).

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Temporal loss is the time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site. Higher compensation ratios may be required to compensate for temporal loss. When the compensatory mitigation project is initiated prior to, or concurrent with, the permitted impacts, the district engineer may determine that compensation for temporal loss is not necessary, unless the resource has a long development time. (33 CFR part 328)

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Vernal Pool: Vernal pools are seasonal depressional wetlands that occur under the Mediterranean climate conditions of the West Coast. They are covered by shallow water for variable periods from winter to spring, but may be completely dry for most of the summer and fall. These wetlands range in size from small puddles to shallow lakes and are usually found in a gently sloping plain of grassland. Although generally isolated, they are sometimes connected to each other by small drainages known as vernal swales. Beneath vernal pools lies either bedrock or a hard clay layer in the soil that helps keep water in the pool. (See http://www.epa.gov/owow/wetlands/types/vernal.html)

Waterbody: A waterbody is a Waters of the State, which is defined, pursuant to Water Code section 13050, subdivision (e), as “any surface water or groundwater, including saline waters, within the boundaries of the state.” A waterbody is also defined as a jurisdictional water of the United States that, during a year with normal patterns of precipitation, has water flowing or standing above ground to the extent that an ordinary high water mark (OHWM) or other indicators of jurisdiction can be determined, as well as any wetland area (see 33 CFR 328.3(b)). If a jurisdictional wetland is adjacent—meaning bordering, contiguous, or neighboring— to a jurisdictional waterbody displaying an OHWM or other indicators of jurisdiction, that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

Examples of ‘‘waterbodies’’ include streams, rivers, lakes, ponds, and wetlands. (Federal Register /Vol. 72, No. 47 /Monday, March 12, 2007 /Notices 11197)

Waterbody Type**:** Those listed in the table in Section 3.c of the Application.

Water Quality Objectives (WQO)**:** Water quality objectives are defined in the California Water Code as limits or levels of water quality constituents or characteristics, which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

Watershed means a land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean. (33 CFR part 328)

Watershed approach means an analytical process for making compensatory mitigation decisions that support the sustainability or improvement of aquatic resources in a watershed. It involves consideration of watershed needs, and how locations and types of compensatory mitigation projects address those needs. A landscape perspective is used to identify the types and locations of compensatory mitigation projects that will benefit the watershed and offset losses of aquatic resource functions and services caused by activities authorized by Corps permits. The watershed approach may involve consideration of landscape scale, historic and potential aquatic resource conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections between aquatic resources when determining compensatory mitigation requirements for Corps permits. (33 CFR part 328)

Watershed plan means a plan developed by federal, tribal, state, and/ or local government agencies or appropriate non-governmental organizations, in consultation with relevant stakeholders, for the specific goal of aquatic resource restoration, establishment, enhancement, and preservation. A watershed plan addresses aquatic resource conditions in the watershed, multiple stakeholder interests, and land uses. Watershed plans may also identify priority sites for aquatic resource restoration and protection. Examples of watershed plans include special area management plans, advance identification programs, and wetland management plans. (33 CFR part 328)

Waters of the United States means (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) All interstate waters including interstate wetlands; (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa takes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purpose by industries in interstate commerce; (4) All impoundments of waters otherwise defined as waters of the United States under the definition; (5) Tributaries of waters identified in paragraphs (a)(1)-(4) of this section; (6) The territorial seas; (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(l)-(6) of this section. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States. (8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA. (33 CFR 328.3(a))

Wetland: generic term for all the different kinds of wet habitats--implying that it is land that is wet for some period of time, but not necessarily permanently wet. Wetlands have numerous definitions and classifications in the United States as a result of their diversity, the need for their inventory, and the regulation of their uses. (Ralph Tiner, U.S. Fish and Wildlife Service, http://water.usgs.gov/nwsum/WSP2425/definitions.html)

- Those "areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances support a prevalence of vegetation typically adopted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas." (33 CFR 328.3(b); 40 CFR 230.3(t))
- An area is wetland if, under normal circumstances, it (1) is saturated by ground water or inundated by shallow surface water for a duration sufficient to cause anaerobic conditions within the upper substrate; (2) exhibits hydric substrate conditions indicative of such hydrology; and (3) either lacks vegetation or the vegetation is dominated by hydrophytes. [State Water Resources Control Board Draft Definition]
- The USFWS definition includes, swamps; freshwater, brackish water, and saltwater marshes; bogs; vernal pools, periodically inundated saltflats; intertidal mudflats; wet meadows; wet pastures; springs and seeps; portions of lakes, ponds, rivers and streams; and all other areas which are periodically or permanently covered by shallow water, or dominated by hydrophytic vegetation, or in which the soils are predominantly hydric in nature. This definition is also used by the California Department of Fish and Game.

Wet Meadow / Pasture: A meadow is a field vegetated primarily by grass and other non-woody plants (grassland). It may be cut for hay or grazed by livestock. A wet meadow is a wetland which is saturated with water throughout much of the year. Wet meadows may occur because of poor drainage or the receipt of large amounts of water from rain or melted snow. They may also occur in riparian zones. Unlike a marsh or swamp, a wet meadow does not have standing water present except for brief to moderate periods during the growing season. Instead, the ground in a wet meadow is typically damp and squishy, like a well-soaked sponge. Wet meadows therefore do not usually support aquatic life such as fish. They are, however, a very fecund environment and typically attract large numbers of birds, small mammals and insects including butterflies. Vegetation in a wet meadow usually includes a wide variety of herbaceous species including sedges, rushes, forbs and grasses. Woody plants if present, account for a minority of the total area cover.

Timeline for Processing of Clean Water Act Section 401 Water Quality Certification (excerpted from State Water Resources Control Board guidance updated March 2002)

Within 30 Days of Receiving an Application for 401 Water Quality Certification –

Regional Board staff shall review the application for completeness. A complete application consists of the information described in Section 3856 of the [California Code of Regulations] (attached).

If the application is incomplete, Regional Board staff must provide written notification to the project proponent, informing them that the application is incomplete. This notification must be sent within 30 days of receiving the application. The notification should describe what additional information is required to complete the application. Please be aware that if the 30-day period passes without the Regional Board notifying the project proponent of an incomplete application, the application will be deemed complete, and the application will already be 30 days into the 401 Certification process.

Within 60 Days of Receiving a Complete Application for 401 Water Quality Certification –

Once a complete application has been received, the State Board and regional boards have a federal agency-dependent time period to issue or deny 401 Water Quality Certification, or to request that the federal agency provide additional time for review. For the Corps [U.S. Army Corps of Engineers], the regional boards and State Board have 60 days to issue or deny 401 Water Quality Certification, or to request from the Corps a time extension of up to one year.

If the State Board or regional boards fail to take any action within the specific time period, the federal agency can assume that 401 Water Quality Certification has been waived by the state, and the federal agency can proceed through the rest of its permitting process. The current regulations do not allow the State Board or regional boards to "waive" through inaction; and therefore, some action (deny, issue, request additional time) must be taken within the specified time period. Once again for the Corps, the time period is 60 days upon receipt of a complete 401 Water Quality Certification application.

401 WATER QUALITY CERTIFICATION
FREQUENTLY ASKED QUESTIONS

What is section 401 Water Quality Certification and how do I know if I need it?

Section 401 of the Clean Water Act requires that any person applying for a federal permit or license, which may result in a discharge of pollutants into waters of the United States, must obtain a state water quality certification that the activity complies with all applicable water quality standards, limitations, and restrictions. No license or permit may be issued by a federal agency until certification required by section 401 has been granted. Further, no license or permit may be issued if certification has been denied.

The following permits or licenses are subject to section 401 of the Clean Water Act:
- Clean Water Act section 404 permits and authorizations;
- Permits issued under sections 9 and 10 of the Rivers and Harbors act;
- Licenses for hydroelectric power plants issued by the Federal Energy Regulatory Commission under the Federal Power Act; and
- Licenses issued by the Nuclear Regulatory Commission.

Water quality standards, according to the Clean Water Act (40 CFR 131), include:
- Beneficial Uses - defined as the uses of water necessary for the survival or well being of man, plants, and wildlife. Beneficial uses are designated in the Basin Plan for water bodies within the region. Examples include agricultural supply, water contact recreation, wildlife habitat, and warm freshwater habitat.
- Water Quality Objectives - are the constituent concentrations, levels, or narrative statements (aka., water quality standards or criteria) representing a quality of water that supports a particular use. When water quality objectives are met, water quality will generally protect the designated beneficial use.
- Antidegradation Policy - consists of the following three principles to protect water bodies: the first principle requires all existing instream water uses shall be maintained and protected; the second principle protects waters whose water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water; and the third principle requires maintenance and protection of all high quality waters which constitute an outstanding national resource.

If you have a waters of the United States (e.g., creek, drainage with or without water flow, wetland) on your property, and you intend to dredge or fill waters of the United States (waters of the U.S.), then 401 water quality certification is necessary. If you are not sure if you have waters of the U.S. on your property, consult an expert; do not assume that you do not, as you may be subject to civil and criminal penalties if a waters of the U.S. is dredged or filled without authorization.

401 WATER QUALITY CERTIFICATION
FREQUENTLY ASKED QUESTIONS

I have been told that the surface water on my property is "isolated". What does this mean and do I need a 401 certification?

The *Solid Waste Association of Northern Cook Counties v. United States Corps of Engineers* (hereinafter "*SWANCC*"), U.S. Supreme Court decision was issued on January 9th, 2001 and addressed a section of the Clean Water Act known as the "Migratory Bird Rule". As a result of the court ruling, certain waters of the State are no longer considered waters of the U.S. Please contact the U.S. Army Corps of Engineers (ACOE) to determine if a surface water body is "isolated" in accordance with the *SWANCC* ruling. If the ACOE determines that the water body is isolated, and you are not subject to a federal permit, you do not need to apply for 401certification; however, this does not exempt you from complying with state regulations. **The *SWANCC* decision does not affect the State's authorities under the California Water Code to regulate discharges to isolated, non-navigable waters of the state.**

If anything definitive can be said about the *SWANCC* decision, it is that the Supreme Court believes regulating inland waters, including isolated wetlands, vernal pools, etc., are the primary (and probably now the exclusive) province of the state. California has numerous authorities that require these waters to be protected. None of those state authorities are affected by the U.S. Supreme Court's decision. Accordingly, the *SWANCC* decision has no impact upon the Regional Board's authority to act under state law.

The State protects and regulates isolated waters through the California Water Code. California Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the *waters of the state* to file a report of discharge (an application for waste discharge requirements)." [Water Code §13260(a)(1) (emphasis added).] The term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." [Water Code §13050(e).] The U.S. Supreme Court's ruling in *SWANCC* has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States are a subset of waters of the state. Thus, since Porter-Cologne was enacted, California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the ACOE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (WDRs)\ (or waivers thereof) does not preclude the regions from issuing WDRs (or waivers of WDRs) in the absence of a request for 401 certification.

Under state law, the duty to file a report of waste discharge is mandatory; if the project site has a surface water that is "isolated" you **must apply** for and obtain waste discharge requirements prior to impacting that water body.

401 WATER QUALITY CERTIFICATION
FREQUENTLY ASKED QUESTIONS

What was the Rapanos case about? How does it affect my application for water quality certification?

The *Rapanos v. the United States* (hereinafter "*Rapanos*") U.S. Supreme Court decision was issued on June 19, 2006. This decision addressed whether wetlands adjacent to, and have a hydrologic connection with, non-navigable tributaries of traditional navigable waters are waters of the U.S. The significance of this decision is that the ACOE may now establish jurisdiction of wetlands under one of two standards:

- If the water body is "relatively permanent" and its adjacent wetlands directly abut that water body.
- If a water body, in combination with all wetlands adjacent to that water body, has a "significant nexus" with traditional waters of the U.S. (The effect on the physical, chemical, and biological integrity of the traditional navigable water must be significant.)

Due to these new analytical standards, it may be more difficult to document and justify ACOE jurisdiction if an ephemeral tributary has few or no adjacent wetlands.

As with the *SWANCC* decision, the *Rapanos* decision has no impact upon the Regional Board's authority to protect waters of the state or to act under state law.

Where can I find the 401 application?

Applications can be picked up at the San Diego Regional Board office, downloaded from the San Diego Regional Board's web site, or be received via fax. To request an application by fax, please contact the Regional Board at 858-467-2952. Applications may be picked up at the Regional Board office at 9174 Sky Park Court, Suite 100; San Diego, CA 92123. Applications can be found online at:
http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/index.shtml .

Please be aware that each Regional Board and the State Water Resources Control Board (State Water Board) have different application forms for 401 certification. It is your responsibility to use the correct form. If an application is submitted using another region's form, we may ask you to complete this region's form as well; this may result in delays in processing your application. Also, failure to completely and accurately respond to all items on the application form may result in your application being determined incomplete and can result in delays in processing your application. Additionally, be aware that the application form is updated regularly; use of an outdated application form will result in processing delays.

401 WATER QUALITY CERTIFICATION
FREQUENTLY ASKED QUESTIONS

What are the timelines for processing a 401 application?

The Regional Board has 30 days following receipt of an application to notify the applicant if their application is complete or incomplete. If the application is incomplete, the Regional Board has another 30 days to review submitted material and determine if the application is complete. The applicant does not have a time line for submittal of materials, but delays in submitting the required material can result in delays in processing the 401 application. If the Regional Board fails to notify the applicant regarding the completeness of an application, the application is deemed complete 30 days following receipt by the Regional Board, per the Permit Streamlining Act.

Once an application has been deemed complete, the Regional Board can request materials to clarify impacts, mitigation, or other aspects of the application. The Regional Board has between 60 days and 1 year in which to make a decision. If processing and review of the 401 application will take more than 60 days, the Regional Board may request additional time from the ACOE or issue a Denial without Prejudice. This usually occurs when an applicant has not supplied requested information or the project is complex and issues have not been resolved. A denial without prejudice is not a reflection on the project, but a means to stop the clock until the required information has been provided.

The Regional Board also has a public comment period that lasts a minimum of 21 days. The period closes when the Regional Board decides to take an action on the 401 application. The public comment period does not close after a certain number of days because proposed projects tend to change through the 401 process and the public is allowed to review and comment on the changed project. The public comment period starts shortly after an application has been received and remains open until an action is taken by the Regional Board.

Pending 401 applications and recently completed 401 certification actions are posted at:
http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/index.shtml

What are the regulatory requirements for an application to be determined complete?

1. Completely filled out application form;
2. Full, technically-accurate description, including the purpose and final goal of the entire activity [23 CCR §3856(b)];
3. Complete project description [23 CCR §3856(h)(1-8)] including:
    - Jurisdictional Wetland Delineation,
    - Mitigation and Monitoring Plans,
    - Any other documents relating to water quality and beneficial uses, and
    - Grading Plans and/or final conceptual engineering drawings and detailed maps;
4. A detailed description of all measures to be taken to prevent the proposed project from adversely affecting the water quality and beneficial uses of the water body(ies) to be impacted;
5. Identification of the federal license/permit (i.e., agency, type, NWP number, file number) [23 CCR §3856(c)];

6. Copies of federal application, notification, agency-applicant correspondence, or signed statement that none is applicable [23 CCR §3856(d)];
7. Copies of any final or (if not final) draft federal, state, or local licenses, permits, or agreements concerning the project [i.e., California Department of Fish and Game (DFG) Streambed Alteration Agreement]. If none are available, a list of those being sought. [23 CCR §3856(e)];
8. A draft or final California Environmental Quality Act (CEQA) document. [23 CCR §3856(f)]. Note: Per the Permit Streamlining Act, final CEQA documentation cannot be required for a complete application; however, per CEQA, a final document must be reviewed before the Regional Board can take an action on your project; and
9. The correct fee deposit. [23 CCR §3856(g)].

Please note that this information is required for your application to be determined complete. Once the Regional Board has determined that an application is complete, it may request further information from the applicant. Such information must clarify, amplify, correct, or otherwise supplement the contents of a complete application in order for the certifying agency to determine whether a certification should be issued. Supplemental information may include evidence of compliance with appropriate requirements of a water quality control plan.

What other permits might be necessary for impacting waters of the U.S.?

The California Coastal Commission. The California Coastal Act of 1976 requires any person proposing to undertake development in the Coastal Zone to obtain a Coastal Development Permit. The Coastal Zone extends inland anywhere from approximately 500 yards in developed urban areas to five miles in undeveloped areas. If projects are proposed in or adjacent to existing or historic coastal wetland areas, they will require Coastal Development Permits issued by the Coastal Commission. To find out if your project is in the Coastal Zone you should contact the planning division of your local government.

California Department of Fish and Game. The Fish and Game Code section 1602 requires any person, state or local governmental agency, or public utility to notify the California Department of Fish and Game (DFG) before beginning any activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake; or
- substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

You should contact the Regional DFG office in the county where the activity is to take place for notification requirements of the DFG's Lake or Streambed Alteration Program. On-line information is at www.dfg.ca.gov/habcon/1600/

If DFG determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be required. The Lake or Streambed Alteration Agreement must comply with CEQA.

U.S. Army Corps of Engineers. The regulatory authority of the U.S. Army Corps of Engineers (ACOE) for stream projects is based on section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act. Section 404 of the Clean Water Act requires ACOE authorization for work involving placement of fill or discharge of dredged materials into any "waters of the United States". Section 10 of the Rivers and Harbors Act requires ACOE authorization for work or structures in or affecting "navigable waters". ACOE jurisdiction extends up to the ordinary high water line for non-tidal waters and up to the line of high tide (for dredge or fill), or mean high water line (for work or structures) for tidal waters.

U.S. Fish and Wildlife Service. The U. S. Fish and Wildlife Service (USFWS) reviews and comments on projects pursuant to the Fish and Wildlife Coordination Act, the Clean Water Act, and the National Environmental Policy Act. The USFWS's comments focus on the effects of projects on all fish and wildlife resources and the habitats that support those resources. Such projects may be, but not limited to, flood control, urban and industrial development, habitat restoration activities, etc. The USFWS also reviews projects for their affects pursuant to the Federal Endangered Species Act (Act). The Act, through section 9, prohibits the take of any species listed as threatened or endangered pursuant to the Act without a specific exemption. The term "take" is broadly defined and if "take" is going to occur, a permit from the USFWS is required. If there is another Federal Agency involved then exemption from the "take" provisions of the Act can be achieved through a section 7 process. If there is no Federal involvement than a permit pursuant to section 10, also known as a Habitat Conservation Plan, will be needed.

National Marine Fisheries Service. This is the federal agency responsible for the conservation and management of the nation's living marine resources. Projects or activities that may affect marine fish and related habitat within National Marine Fisheries Service (NMFS) jurisdiction are reviewed for any potentially harmful effects. These evaluations are conducted under the authorities of the Endangered Species Act (ESA), Magnuson-Stevens Fishery Conservation and Management Act, Fish and Wildlife Coordination Act, and the National Environmental Policy Act. The purpose of reviews conducted by NMFS is to ensure that sensitive populations of marine and anadromous fish (such as salmon and steelhead), as well as the aquatic and riparian habitats that supports these fish, can survive and recover in the presence of human activities. Through these reviews, the need to conserve and protect fish and habitat is balanced with the need to responsibly utilize natural resources for economic and other purposes. The types of projects and activities of interest to NMFS include streambank stabilization, streambed alteration, habitat restoration, flood control, urban and industrial development, and water resource utilization. When projects or activities require a federal permit, such as a Clean Water Act section 404 permit from the Army Corps of Engineers, then NMFS conducts a consultation with the federal agency under section 7 of the ESA. When there is no federal involvement, then for projects that incidentally "take" a listed species, a permit under section 10 of the ESA is required.

There may also be regulatory requirements associated with city and county ordinances. The applicant is responsible for knowing all the applicable rules and regulations, and for compliance with them.

401 WATER QUALITY CERTIFICATION
FREQUENTLY ASKED QUESTIONS

What are the fees for processing a 401 application?

A current fee schedule and fee calculator can be found at:
http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/dredgefillfeecalculator.xls

Where can I get a copy of section 401 Clean Water Act?

Copies of the current regulations can be found at:
http://www.epa.gov/owow/wetlands/regs/sec401.html .

Who should I contact with questions regarding 401 certification?

401 Certification Contacts by Watershed

Watershed	Contact information
San Juan Santa Margarita	Chad Loflen Northern Watershed Unit (858) 467-2727 cloflen@waterboards.ca.gov
San Luis Rey Carlsbad San Dieguito Peñasquitos	Mike Porter Central Watershed Unit (858) 467-2726 mporter@waterboards.ca.gov
San Diego Pueblo San Diego Sweetwater Otay Tijuana	Jody Ebsen Southern Watershed Unit (858) 636-3146 jebsen@waterboards.ca.gov

I am proposing a project that is within the jurisdiction of two or more Regional Boards. Who do I contact regarding the application?

The State Water Board reviews and takes action on multi-region 401 applications. For more information, you may contact the State Water Board at (916) 341-5506.

When should I submit my 401 application?

Applications are typically submitted concurrently with submittals to the ACOE and DFG. The Regional Board encourages you to submit a complete application as soon as possible. Due to the varying degree of complexity between 401 applications, the time necessary to review and process an application can vary greatly. It is to the applicant's advantage to submit 401 applications concurrently with 404 applications and to hold joint meetings with all resource agencies. This will help facilitate communication and coordination between the applicant and the agencies. Also, a 401 certification is required before a 404 permit or authorization can be issued; therefore, it is in the applicant's best interest to submit a complete application as soon as possible.

Do I need to submit a Storm Water Pollution Prevention Plan with my 401 application?

A Storm Water Pollution Prevention Plan (SWPPP) is not a requirement of a complete 401 application; however, information typically required for a SWPPP is also necessary for the processing of a 401 application. This is particularly true for post-construction best management practices (BMPs). Submitted BMP information should include, at a minimum, location and type of BMP, BMP effectiveness for given pollutants and pollutant loads, entity responsible for maintenance and expected pollutants and loads from the proposed project.

Where do I send my application?

Your application should be sent to:

California Regional Water Quality Control Board, San Diego Region
Attn: 401 Water Quality Certification
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

What is the public notification period and is it the same as the ACOE public notice period?

The California Code of Regulations, section 3858(a) states "The executive director or the executive officer with whom an application for certification is filed shall provide public notice of an application at least twenty-one (21) days before taking certification action on the application, unless the public notice requirement has been adequately satisfied by the applicant or federal agency. If the applicant or federal agency provides public notice, it shall be in a manner and to an extent fully equivalent to that normally provided by the certifying agency. If an emergency requires that certification be issued in less than 21 days, public notice shall be provided as much in advance of issuance as possible, but no later than simultaneously with issuance of certification."

Public notice of pending 401 Water Quality Certification applications within the San Diego Region can be found at:
http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/index.shtml .

The Regional Board's public notice period is separate and distinct from the ACOE public notice. Public comments will be accepted on a pending 401 application until an action is taken. An action will not occur within the 21-day comment period unless the project is an emergency and time is of the essence.

What is the Basin Plan and how can I get a copy?

Each of the nine Regional Boards within California are required to adopt a Water Quality Control Plan, or Basin Plan, which recognizes and reflects the regional differences in existing water quality, the beneficial uses of the Region's ground and surface waters, and local water quality conditions and problems. The San Diego Regional Board's Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy; (3) describes implementation programs to protect the beneficial uses of all waters in the region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan.

The Basin Plan is available in electronic format only. The San Diego Region Hydrologic Basin Planning Area Map (Basin Plan map) is available in paper copy. More information about ordering a copy of the Basin Plan or Basin Plan map may be obtained online at: http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml, or by contacting the Regional Board at (858) 467-2952.

What are the three possible 401 actions?

After review of the application, all relevant data, and any recommendations of a Regional Board, other state and federal agencies, and any interested person, the state board, the executive director, when acting as the state board's designee, or executive officer shall (1) issue certification with or (2) without technical conditions or (3) deny certification for any discharge resulting from a pertinent activity before the federal period for certification expires. Conditions shall be added to any certification, if necessary, to ensure that all activities will comply with applicable water quality standards and other appropriate requirements. If certification is denied, the applicant shall be notified in writing of the denial and the reasons for the denial.

An application for water quality certification may be denied when:

- the activity requiring a federal license or permit will result in a discharge which will not comply with applicable water quality standards and other appropriate requirements; or
- compliance with water quality standards and other appropriate requirements is not yet necessarily determined, but the application suffers from some procedural inadequacy (e.g., failure to provide a complete fee or to meet CEQA requirements). In this case denial shall be without prejudice.

What are the typical delays or problems you encounter when reviewing 401 applications?

Long delays in completing a 401 certification action typically occurs when an application is submitted before a certified CEQA document is available; or when an application fails to provide sufficient information on proposed mitigation, or fails to provide information on post-construction BMPs. The type of project can also result in an increase in processing time. For example, a project that proposes to fill all surface water bodies within the project footprint will take longer to process than a project that proposes conservation. Similarly, more environmentally friendly development practices, such as bridges or arch culverts in lieu of small metal culverts, and preservation of natural stream bed and bank in lieu of hardscape, typically result in less processing time.

401 WATER QUALITY CERTIFICATION
FREQUENTLY ASKED QUESTIONS

The ACOE said I don't need a permit, do I need 401 certification?

If your project is not subject to a federal permit, then you do not need 401 certification. Please be aware that projects that are eligible for coverage under post-construction notification nationwide permits, section 9 and 10 of the Rivers and Harbors Act, and Regional General Permits all need 401 certification prior to impacting the water body. There is also no minimum discharge size to trigger the need for 401 certification.

If your project qualifies for coverage under one of the nationwide permits the State Water Board has already issued 401 certification to, you still must comply with the notification requirements prior to impacting the water body. Notification requirements and information on certified nationwide permits can be found at:
http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/nwpcertv6_2007.pdf .
If your project does not need a federal permit because the water body has been determined to be isolated, then you need to apply for and obtain Waste Discharge Requirements from the Regional Board prior to impacting the water body.

If you are uncertain if you need a permit, contact the Regional Board.

What should go into the mitigation plan?

At a minimum, the mitigation plan should include:

1. A site map showing the location of the mitigation area in relationship to the impact area.
2. A map showing existing resources within and adjacent to the mitigation area.
3. A figure showing the proposed plant layout and plant palette.
4. A discussion of beneficial uses (as described in the Basin Plan) that will be lost or impacted through project implementation, and how the proposed mitigation will compensate for these losses/impacts.
5. A discussion of maintenance and monitoring activities and duration.
6. A conceptual mitigation plan prepared to the ACOE guidelines may be submitted in lieu of the above items for an application to be considered complete. However, for a certification action to be taken, all of the information in items 1-5 must be provided to the Regional Board.

The ACOE has published guidance on developing mitigation plans. This document can be found at: http://www.spl.usace.army.mil/regulatory/mmg_2004.pdf . Mitigation plans should provide as much of the information identified in the ACOE guidance as possible.

Can you recommend any useful references that will help in designing my project to avoid impacts to waters of the U.S. and State?

There are numerous references on impacts to waters of the U.S., hydrology, stream functions, mitigation, water quality, and other issues relevant to 401 certification. A few references are listed here to provide a starting point; an exhaustive listing of documents is beyond the scope of this FAQ.

Mount, Jeffrey F. 1995. *California Rivers and Streams*. University of California Press.

Riley, Ann L. 1998. *Restoring Streams in Cities. A Guide for Planners, Policymakers, and Citizens*. Island Press.

U.S. Department of Agriculture. *Stream Corridor Restoration. Principles, Processes, and Practices*. http://www.nrcs.usda.gov/technical/stream_restoration/

This Page Intentionally Left Blank

APPENDIX

I

FISH AND WILDLIFE CODE 1600 RELATED DOCUMENTS

FOR DEPARTMENT USE ONLY				
Date Received	*Amount Received*	*Amount Due*	*Date Complete*	*Notification No.*
	$	*$*		

STATE OF CALIFORNIA

DEPARTMENT OF FISH AND WILDLIFE

NOTIFICATION OF LAKE OR STREAMBED ALTERATION

Complete EACH field, unless otherwise indicated, following the enclosed instructions and submit ALL required enclosures. Attach additional pages, if necessary.

1. APPLICANT PROPOSING PROJECT

Name			
Business/Agency			
Street Address			
City, State, Zip			
Telephone		Fax	
Email			

2. CONTACT PERSON (*Complete only if different from applicant*)

Name			
Street Address			
City, State, Zip			
Telephone		Fax	
Email			

3. PROPERTY OWNER (*Complete only if different from applicant*)

Name			
Street Address			
City, State, Zip			
Telephone		Fax	
Email			

4. PROJECT NAME AND AGREEMENT TERM

A. Project Name	
B. Agreement Term Requested	☐ Regular (*5 years or less*) ☐ Long-term (*greater than 5 years*)

C. Project Term		D. Seasonal Work Period		E. Number of Work Days
Beginning (*year*)	Ending (*year*)	Start Date (*month/day*)	End Date (*month/day*)	

5. AGREEMENT TYPE

Check the applicable box. If box B, C, D, or E is checked, complete the specified attachment.	
A.	☐ Standard *(Most construction projects, excluding the categories listed below)*
B.	☐ Gravel/Sand/Rock Extraction (*Attachment A*) *Mine I.D. Number:* ______
C.	☐ Timber Harvesting (*Attachment B*) THP *Number:* ______
D.	☐ Water Diversion/Extraction/Impoundment (*Attachment C*) *SWRCB Number:* ______
E.	☐ Routine Maintenance (*Attachment D*)
F.	☐ CDFW Fisheries Restoration Grant Program (FRGP) *FRGP Contract Number*______
G.	☐ Master
H.	☐ Master Timber Harvesting

6. FEES

Please see the current fee schedule to determine the appropriate notification fee. Itemize each project's estimated cost and corresponding fee. ***Note: The Department may not process this notification until the correct fee has been received.***

	A. Project	B. Project Cost	C. Project Fee
1			
2			
3			
4			
5			
		D. Base Fee *(if applicable)*	
		E. TOTAL FEE ENCLOSED	

7. PRIOR NOTIFICATION OR ORDER

A. Has a notification previously been submitted to, or a Lake or Streambed Alteration Agreement previously been issued by, the Department for the project described in this notification?

☐ Yes (*Provide the information below*) ☐ No

Applicant: ______ Notification Number: ______ Date: ______

B. Is this notification being submitted in response to an order, notice, or other directive ("order") by a court or administrative agency (including the Department)?

☐ No ☐ Yes (*Enclose a copy of the order, notice, or other directive. If the directive is not in writing, identify the person who directed the applicant to submit this notification and the agency he or she represents, and describe the circumstances relating to the order.*)

☐ *Continued on additional page(s)*

8. PROJECT LOCATION

A. Address or description of project location. (*Include a map that marks the location of the project with a reference to the nearest city or town, and provide driving directions from a major road or highway*)	
	☐ *Continued on additional page(s)*
B. River, stream, or lake affected by the project.	
C. What water body is the river, stream, or lake tributary to?	
D. Is the river or stream segment affected by the project listed in the state or federal Wild and Scenic Rivers Acts?	☐ Yes ☐ No ☐ Unknown
E. County	

F. USGS 7.5 Minute Quad Map Name	G. Township	H. Range	I. Section	J. ¼ Section

☐ *Continued on additional page(s)*

K. Meridian (*check one*)	☐ Humboldt ☐ Mt. Diablo ☐ San Bernardino
L. Assessor's Parcel Number(s)	
	☐ *Continued on additional page(s)*

M. Coordinates (*If available, provide at least latitude/longitude or UTM coordinates and check appropriate boxes*)

Latitude/Longitude	*Latitude:*	*Longitude:*	
	☐ Degrees/Minutes/Seconds	☐ Decimal Degrees	☐ Decimal Minutes
UTM	*Easting:*	*Northing:*	☐ Zone 10 ☐ Zone 11
Datum used for Latitude/Longitude or UTM	☐ NAD 27	☐ NAD 83 or WGS 84	

9. PROJECT CATEGORY AND WORK TYPE *(Check each box that applies)*

PROJECT CATEGORY	NEW CONSTRUCTION	REPLACE EXISTING STRUCTURE	REPAIR/MAINTAIN EXISTING STRUCTURE
Bank stabilization – bioengineering/recontouring	☐	☐	☐
Bank stabilization – rip-rap/retaining wall/gabion	☐	☐	☐
Boat dock/pier	☐	☐	☐
Boat ramp	☐	☐	☐
Bridge	☐	☐	☐
Channel clearing/vegetation management	☐	☐	☐
Culvert	☐	☐	☐
Debris basin	☐	☐	☐
Dam	☐	☐	☐
Diversion structure – weir or pump intake	☐	☐	☐
Filling of wetland, river, stream, or lake	☐	☐	☐
Geotechnical survey	☐	☐	☐
Habitat enhancement – revegetation/mitigation	☐	☐	☐
Levee	☐	☐	☐
Low water crossing	☐	☐	☐
Road/trail	☐	☐	☐
Sediment removal – pond, stream, or marina	☐	☐	☐
Storm drain outfall structure	☐	☐	☐
Temporary stream crossing	☐	☐	☐
Utility crossing : Horizontal Directional Drilling	☐	☐	☐
Jack/bore	☐	☐	☐
Open trench	☐	☐	☐
Other *(specify)*:	☐	☐	☐

10. PROJECT DESCRIPTION

A. Describe the project in detail. Photographs of the project location and immediate surrounding area should be included.

- Include any structures (e.g., rip-rap, culverts, or channel clearing) that will be placed, built, or completed in or near the stream, river, or lake.
- Specify the type and volume of materials that will be used.
- If water will be diverted or drafted, specify the purpose or use.

Enclose diagrams, drawings, plans, and/or maps that provide all of the following: site specific construction details; the dimensions of each structure and/or extent of each activity in the bed, channel, bank or floodplain; an overview of the entire project area (i.e., “bird’s-eye view”) showing the location of each structure and/or activity, significant area features, and where the equipment/machinery will enter and exit the project area.

☐ *Continued on additional page(s)*

B. Specify the equipment and machinery that will be used to complete the project.

☐ *Continued on additional page(s)*

C. Will water be present during the proposed work period (specified in box 4.D) in the stream, river, or lake (specified in box 8.B).	☐ Yes ☐ No (*Skip to box 11*)
D. Will the proposed project require work in the wetted portion of the channel?	☐ Yes (*Enclose a plan to divert water around work site*) ☐ No

11. PROJECT IMPACTS

A. Describe impacts to the bed, channel, and bank of the river, stream, or lake, and the associated riparian habitat. Specify the dimensions of the modifications in length (linear feet) and area (square feet or acres) and the type and volume of material (cubic yards) that will be moved, displaced, or otherwise disturbed, if applicable.

☐ *Continued on additional page(s)*

B. Will the project affect any vegetation? ☐ Yes (*Complete the tables below*) ☐ No

Vegetation Type	Temporary Impact	Permanent Impact
	Linear feet: ________ Total area: ________	Linear feet: ________ Total area: ________
	Linear feet: ________ Total area: ________	Linear feet: ________ Total area: ________

Tree Species	Number of Trees to be Removed	Trunk Diameter (range)

☐ *Continued on additional page(s)*

C. Are any special status animal or plant species, or habitat that could support such species, known to be present on or near the project site?

☐ Yes *(List each species and/or describe the habitat below)* ☐ No ☐ Unknown

☐ *Continued on additional page(s)*

D. Identify the source(s) of information that supports a “yes” or “no” answer above in Box 11.C.

☐ *Continued on additional page(s)*

E. Has a biological study been completed for the project site?

☐ Yes (*Enclose the biological study*) ☐ No

Note: A biological assessment or study may be required to evaluate potential project impacts on biological resources.

F. Has a hydrological study been completed for the project or project site?

☐ Yes (*Enclose the hydrological study*) ☐ No

Note: A hydrological study or other information on site hydraulics (e.g., flows, channel characteristics, and/or flood recurrence intervals) may be required to evaluate potential project impacts on hydrology.

12. MEASURES TO PROTECT FISH, WILDIFE, AND PLANT RESOURCES

A. Describe the techniques that will be used to prevent sediment from entering watercourses during and after construction.

☐ *Continued on additional page(s)*

B. Describe project avoidance and/or minimization measures to protect fish, wildlife, and plant resources.

☐ *Continued on additional page(s)*

C. Describe any project mitigation and/or compensation measures to protect fish, wildlife, and plant resources.

☐ *Continued on additional page(s)*

13. PERMITS

List any local, state, and federal permits required for the project and check the corresponding box(es). Enclose a copy of each permit that has been issued.

A. ______________________________ ☐ Applied ☐ Issued

B. ______________________________ ☐ Applied ☐ Issued

C. ______________________________ ☐ Applied ☐ Issued

D. Unknown whether ☐ local, ☐ state, or ☐ federal permit is needed for the project. (*Check each box that applies*)

☐ *Continued on additional page(s)*

14. ENVIRONMENTAL REVIEW

A. Has a draft or final document been prepared for the project pursuant to the California Environmental Quality Act (CEQA), National Environmental Protection Act (NEPA), California Endangered Species Act (CESA) and/or federal Endangered Species Act (ESA)?

☐ Yes (*Check the box for each CEQA, NEPA, CESA, and ESA document that has been prepared and enclose a copy of each*)

☐ No (*Check the box for each CEQA, NEPA, CESA, and ESA document listed below that will be or is being prepared*)

☐ Notice of Exemption	☐ Mitigated Negative Declaration	☐ NEPA document (*type*): ________________
☐ Initial Study	☐ Environmental Impact Report	☐ CESA document (*type*): ________________
☐ Negative Declaration	☐ Notice of Determination *(Enclose)*	☐ ESA document (*type*): __________________
☐ THP/ NTMP	☐ Mitigation, Monitoring, Reporting Plan	

B. State Clearinghouse Number (*if applicable*)			
C. Has a CEQA lead agency been determined?	☐ Yes (*Complete boxes D, E, and F*)	☐ No (*Skip to box 14.G*)	
D. CEQA Lead Agency			
E. Contact Person		F. Telephone Number	

G. If the project described in this notification is part of a larger project or plan, briefly describe that larger project or plan.

☐ *Continued on additional page(s)*

H. Has an environmental filing fee (Fish and Game Code section 711.4) been paid?

☐ Yes (*Enclose proof of payment*) ☐ No (*Briefly explain below the reason a filing fee has not been paid)*

Note: If a filing fee is required, the Department may not finalize a Lake or Streambed Alteration Agreement until the filing fee is paid.

15. SITE INSPECTION

Check one box only.

☐ In the event the Department determines that a site inspection is necessary, I hereby authorize a Department representative to enter the property where the project described in this notification will take place at any reasonable time, and hereby certify that I am authorized to grant the Department such entry.

☐ I request the Department to first contact (*insert name*) ____ at (*insert telephone number*) ____ to schedule a date and time to enter the property where the project described in this notification will take place. I understand that this may delay the Department's determination as to whether a Lake or Streambed Alteration Agreement is required and/or the Department's issuance of a draft agreement pursuant to this notification.

16. DIGITAL FORMAT

Is any of the information included as part of the notification available in digital format (i.e., CD, DVD, etc.)?

☐ Yes (Please enclose the information via digital media with the completed notification form)

☐ No

17. SIGNATURE

I hereby certify that to the best of my knowledge the information in this notification is true and correct and that I am authorized to sign this notification as, or on behalf of, the applicant. I understand that if any information in this notification is found to be untrue or incorrect, the Department may suspend processing this notification or suspend or revoke any draft or final Lake or Streambed Alteration Agreement issued pursuant to this notification. I understand also that if any information in this notification is found to be untrue or incorrect and the project described in this notification has already begun, I and/or the applicant may be subject to civil or criminal prosecution. I understand that this notification applies only to the project(s) described herein and that I and/or the applicant may be subject to civil or criminal prosecution for undertaking any project not described herein unless the Department has been separately notified of that project in accordance with Fish and Game Code section 1602 or 1611.

____ _______________________________
Signature of Applicant or Applicant's Authorized Representative Date

____
Print Name

STATE OF CALIFORNIA

DEPARTMENT OF FISH AND WILDLIFE

NOTIFICATION OF LAKE OR STREAMBED ALTERATION

Notification Process and Instructions

CONTENTS

PART I: NOTIFICATION REQUIREMENT

Fish and Game Code (FGC) §1602 requires any entity (defined as any person, State or local governmental agency, or public utility) to notify the California Department of Fish and Wildlife (Department) before beginning any activity that will do one or more of the following:

1) substantially obstruct or divert the natural flow of any river, stream, or lake;

2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake;

3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

FGC §1602 applies to any river, lake, or stream, including those that are perennial, ephemeral, or intermittent. ***If you are not certain that a particular project activity requires notification, the Department recommends that you notify.***

Note: *Although a person other than the applicant may complete the notification, "you" or "your" as used in this document refers to the applicant proposing the project because the applicant will be responsible for submitting and signing the notification.*

NOTIFYING THE DEPARTMENT

To notify the Department of any of the activities described above, complete the following steps:

Step 1: Fill out the Notification of Lake or Streambed Alteration form (Form FG2023; Rev. 1/13) (notification form). See Part II for instructions to complete this form.

Note*: If the project is part of a Timber Harvest Plan (THP) you may notify the Department per FGC §1611during the timber harvest review process by submitting the THP and notification fee to the Department regional office that serves the county where the THP will take place. In that case, you are not required to submit Form FG2023, provided the THP includes, at a minimum, the information listed in FGC §1611. If a THP has already been approved, applicants must notify using Form FG2023.*

Step 2: Determine the notification fee that will be submitted with the completed notification form, or THP, by referring to the current fee schedule. Notification fees charged are established in an amount necessary to pay the costs incurred by the Department to administer the Lake and Streambed Alteration program.

Step 3: Submit the completed notification form, or THP, with all required enclosures and notification fees to the Department regional office that serves the area where the project will occur.

Note: *If the notification relates to timber harvesting activities in Humboldt, Del Norte or Mendocino County or the west portion of Trinity County, the notification must be submitted to the Department's Northern Region office in Eureka. If you are not sure whether the Eureka or Redding office will review your notification or THP, contact either office for guidance to avoid any delay in processing your notification.*

Northern Region - Inland **(Region 1)** **LSA Program** 601 Locust Street Redding, CA 96001 (530) 225-2367 (530) 225-2300 Serving Lassen, Modoc, Shasta, Siskiyou, Tehama and eastern Trinity county	**Northern Region - Coastal** **(Region 1)** **LSA Program** 619 Second Street Eureka, CA 95501 (707) 441-2075 (707) 445-6493 Serving Del Norte, Humboldt, Mendocino and western Trinity county
North Central Region **(Region 2)** **LSA Program** 1701 Nimbus Road Rancho Cordova, CA 95670 (916) 358-2900 Serving Alpine, Amador, Butte, Calaveras, Colusa, El Dorado, Glenn, Lake, Nevada, Placer, Plumas, **Sacramento***, **San Joaquin***, Sierra, Sutter, **Yolo*** and Yuba county ***Note:** Those portions of **Sacramento, San Joaquin and Yolo counties** that are south of I-80 **and** west of I-5 are in Region 3; the balance of those counties are in Region 2*	**Bay Delta Region** **(Region 3)** **LSA Program** 7329 Silverado Trail Napa, CA 94558 (707) 944-5500 Serving Alameda, Contra Costa, Marin, Napa, **Sacramento***, San Mateo, Santa Clara, Santa Cruz, San Francisco, **San Joaquin***, Solano, Sonoma, and **Yolo*** county ***Note:** Those portions of **Sacramento, San Joaquin and Yolo counties** that are south of I-80 **and** west of I-5 are in Region 3; the balance of those counties are in Region 2*
Central Region **(Region 4)** **LSA Program** 1234 East Shaw Avenue Fresno, CA 93710 (559) 243-4593 Serving Fresno, Kern, Kings, Madera, Mariposa, Merced, Monterey, San Benito, San Luis Obispo, Stanislaus, Tulare and Tuolumne county	**South Coast Region** **(Region 5)** **LSA Program** 3883 Ruffin Road San Diego, CA 92123 (858) 467-4201 Serving Los Angeles, Orange, San Diego, Santa Barbara and Ventura county
Eastern Sierra and Inland Deserts Region **(Region 6)** **LSA Program** 3602 Inland Empire Boulevard, Suite C-220 Ontario, CA 91764 (909) 484-0167 Serving Imperial, Inyo, Mono, Riverside and San Bernardino county	

PART II: INSTRUCTIONS FOR COMPLETING NOTIFICATION FORM (FG2023)

For the Department to determine the notification is complete, you must:

1) complete all applicable fields in the form;

2) provide as much detail as possible so the Department can properly evaluate the project activities to determine whether an Agreement is required;

3) submit all required enclosures with the notification;

4) provide information in the notification that is true and correct;

5) sign the notification; and

6) submit the correct notification fee

If during its review of the notification the Department determines that a biological or hydrological study (see the instructions below for boxes 11.E and 11.F) will also be required, the Department will advise you that a study must be provided to make the notification complete. If a biological or hydrological study has already been completed, please enclose a copy of the report.

The Department will not begin processing the notification until it determines that the notification is complete.

Instructions to complete the notification form are outlined below.

1. APPLICANT PROPOSING PROJECT ACTIVITIES

Provide the name, mailing address, telephone and fax numbers, and e-mail address of the applicant and the applicant's designated representative. For the purpose of the notification form, "applicant" is defined as the person or business, State or local governmental agency, or public utility proposing the project.

If the applicant is a business, agency, or utility, provide the name and contact information of the applicant's designated representative above the name of the applicant. For the purpose of the notification form, the applicant's representative *must* be an employee of said business, agency or utility.

The applicant or the applicant's designated representative will be responsible for signing the notification, any Agreement, and for complying with the terms and conditions of any Agreement.

2. CONTACT PERSON

Provide the name, mailing address, telephone and fax numbers, and e-mail address of the person the Department should contact regarding the project activities, if different from the applicant or applicant's representative.

3. PROPERTY OWNER

Provide the name, mailing address, telephone and fax numbers, and e-mail address of the owner of the property where the project activities will take place, if different from the applicant.

4. PROJECT NAME AND AGREEMENT TERM

A. Project Name

Provide the project name or title. If the project does not have a formal name or title, use a name that best describes the project. For example, if the project is the installation of a culvert on private property, you might name the project, "Culvert on Smith property." If the project has already been assigned a name for other permitting or environmental review purposes, use the same name.

B. Agreement Term Requested

An Agreement may be either a regular Agreement or long-term Agreement. A regular Agreement is one with a term of five years or less. A long-term Agreement is an Agreement pursuant to FGC §1605 with a term greater than five years.

If "Regular" is checked, the Department will provide a term of between one and five years in accordance with the time periods specified in FGC §1602 -1603. The Department will determine whether the notification is complete within 30 days of receiving the notification form and correct notification fee, and issue you a draft Agreement within 60 days of receiving a complete notification.

If "Long-term" is checked, the Department may decide to either grant your request for a term greater than five years, or issue a regular Agreement, When applying for a long-term Agreement, the 30 and 60 day time periods described above will not apply (see FGC §1605(g)(5)). If a long-term Agreement is requested and the Department decides not to grant your request, the Department will contact you and process the notification as one for a regular Agreement upon your written request.

C. Project Term

Specify both the year the project activities will begin and the year the project activities will end.

Note: *Please be aware that the Department may restrict work within a stream or lake to the dry season of the year. Consequently, you may want to include more than one season of possible operation in your project proposal.*

D. Seasonal Work Period

Specify the time period (months and days) you intend to work on the project (e.g., August 1 to October 15). If the work period will exceed one year, specify the time period for each year of the project (e.g., 2013: August 1 to October 15. 2014: June 1 to September 15. 2015: March 1 to July 15). The Department may restrict project work to certain periods depending on rainfall, fish migration, wildlife breeding or nesting season, or other resource concerns.

E. Number of Work Days

Specify the estimated number of days of actual work that will be needed to complete the project activities.

5. AGREEMENT TYPE

Identify the type of Agreement requested by checking the applicable box. Complete Attachments A, B, C, or D, if applicable.

A. Standard
Check this box for most construction projects, excluding: gravel, sand, or rock extraction; timber harvesting; water diversion, extraction, or impoundment; routine maintenance; restoration through Department's Fisheries Restoration Grant Program (FRGP); or a Master Agreement as defined below.

B. Gravel/Sand/ Rock Extraction
Check this box *and* complete Attachment A if the project is for the commercial or non-commercial mining or extraction of gravel, sand, rock, or other aggregate material. Provide the mine identification number if the mining or excavation is *not* exempt from the Surface Mining and Reclamation Act (refer to Public Resources Code (PRC) §2714) (http://www.leginfo.ca.gov/calaw.html).

C. Timber Harvesting
Check this box *and* complete Attachment B if the project is part of a THP and you are notifying the Department using Form FG2023 rather than using a modified or program THP, or a non-industrial timber management plan (NTMP). Provide the number assigned to the THP or NTMP by the California Department of Forestry and Fire Protection (CALFIRE).

D. Water Diversion/ Extraction/Impoundment
Check this box *and* complete Attachment C if the project is directly related to any diversion, obstruction, extraction, or impoundment of the natural flow of a river, stream, or lake. Provide the number assigned to the State Water Resources Control Board application, permit, license, registration, statement of diversion and use, or other authorization to divert, extract, or impound water, if applicable.

If the diversion, obstruction, extraction, or impoundment of water is only *incidental* to the project described in the notification (e.g., temporarily dewatering a stream segment to install a culvert or bridge or drafting water as part of a timber harvesting operation) do not check this box or complete attachment.

E. Routine Maintenance
Check this box *and* complete Attachment D if the *primary* objective of the project is to maintain on a routine basis a number of existing private or public facilities, such as canals, channels, culverts, and ditches.

If the project is a one-time maintenance project, do not check this box or complete the attachment.

F. Fisheries Restoration Grant Program
Check this box if the project is funded by the Department's FRGP *and* provide the FRGP contract number.

G. Master
Check this box for an Agreement with a term of greater than five years that:

1) covers multiple projects that are not exclusively projects to extract gravel, sand, or rock; not exclusively projects that are included in a THP approved by CALFIRE; or not exclusively routine maintenance projects; and

2) describes a procedure the entity must follow for construction, maintenance, or other projects the Agreement covers.

An example of a project for which the Department would issue a master Agreement is a large-scale development proposal comprised of multiple projects for which specific, detailed design plans have not been prepared at the time of the original notification.

H. Master Timber Harvesting
Check this box for an Agreement with a term of greater than five years that:

1) covers timber operations on timberland that are not exclusively projects to extract gravel, sand, or rock; not exclusively projects that are included in a THP approved by CALFIRE; or not exclusively routine maintenance projects that the entity will need to complete separately at different time periods during the term of the Agreement; and

2) describes a procedure the entity must follow for construction, maintenance, or other projects the Agreement covers.

6. NOTIFICATION FEES

A. Scope of Project
Specify the scope of the proposed project(s) for the purpose of calculating notification fees. “Project” means either of the following as determined by the Department:

1) <u>One activity</u>. An example of such a project is one that is limited to the removal of riparian vegetation at one location along the bank of a river, lake, or stream that will substantially change the bank.

2) <u>Two or more activities that are interrelated</u> and could or will affect similar fish and wildlife resources. An example of such a project is the construction of one bridge across a stream that requires the removal of riparian vegetation, the installation of abutments in or near the stream, and the temporary de-watering of the stream using a diversion structure. Each of those three activities together would constitute one project for the purpose of calculating the notification fee under this section because they are all related to the single purpose of constructing one bridge at one location.

   By contrast, the construction of three bridges and two culverts across a stream at five different locations would not constitute one project, but instead would constitute five projects, even if each structure were to provide access to a common development site and/or were physically connected to each other by a road. *The Department may require the entity to separately notify for one or more projects based on type, location, and fish and wildlife resource issues.*

B. Project Cost
For purposes of calculating the notification fee, "project" refers only to the activities that are subject to the notification requirement in FGC §1602 and not the overall project. For example, if the project described in the notification is the construction of a bridge across a stream, and the bridge construction is part of a housing development that except for the bridge construction would not require notification, only the cost associated with installation of the bridge would be used to calculate the notification fee.

If the project is not for gravel, sand, or rock extraction; timber harvesting; or routine maintenance, provide the estimated cost to complete the project over the proposed term of the Agreement. If the project is for gravel, sand, or rock extraction; timber harvesting; or routine maintenance, write "not applicable" in this box and refer to the enclosed notification fee schedule to determine the appropriate fee.

C. Project Fee
After determining the estimated cost for the project(s) subject to notification, refer to the fee schedule to determine the notification fee. The Department may require you to submit additional cost estimate information.

Note: If the notification includes more than one project, the fee shall be calculated by adding the separate fees for each project. For example, if a notification identifies three projects, one of which will cost less than $5,000, one which will cost $7,500, and one of which will cost $17,500, the fees for these projects would be $224, $280.25, and $560.25 respectively. The total fee would be $1,064.50.

D. Base Fee
If the notification is for a Standard Agreement or an Agreement for Gravel, Sand or Rock Extraction, with a term of less than five years, skip to box 6.E. If the notification is for any other type of Agreement, enter the corresponding "base fee" as identified in the fee schedule.

E. Total Fee Enclosed
Provide the amount of the total notification fee enclosed with the notification form.
Note: Checks must be made payable to the California Department of Fish and Wildlife. The Department may not process the notification until it receives the correct notification fee.

Example 1: *Standard Agreement – Regular Term (5 years or less)*

	A. Project	B. Project Cost	D. Project Fee
1	Boat Ramp	$4,500	$224
		E. Base Fee *(if applicable)*	N/A
		F. TOTAL FEE ENCLOSED	$224

Example 2: *Agreement for Gravel Extraction - Regular Term (5 years or less)*

	A. Project	B. Project Cost	D. Project Fee
1	Gravel Extraction (500 cubic yards)	N/A	$1,120.50
		E. Base Fee *(if applicable)*	N/A
		F. TOTAL FEE ENCLOSED	$1,120.50

Example 3: *Agreements for Timber Harvesting*

	A. Project	B. Project Cost	D. Project Fee
1	Culvert #1	N/A	$112
2	Culvert #2	N/A	$112
		E. Base Fee (*if applicable*)	$1,345.25
		F. TOTAL FEE ENCLOSED	$1,569.25

7. PRIOR NOTIFICATION AND ORDERS

A. Previous Notification and/or Agreement

Check the applicable box. If "yes" is checked, provide your name; the number assigned to the notification; and either the date the notification was submitted or the date the Department signed the final Agreement, if a final Agreement was issued.

B. Notification Related to Order by Court or Agency

If a court or administrative agency (e.g., the Department or a Regional Water Quality Control Board) has required you to perform work that is subject to the notification requirement in FGC §1602, check "yes" and provide a copy of the order, notice, or other directive issued by the court or agency. If this is not the case, check "no."

Note: *If the notification is being submitted in response to an order and the Department determines that an Agreement is required, the measures the Department includes in a draft Agreement will* ***not*** *be subject to arbitration (See FGC §1614).*

8. PROJECT LOCATION

A. Address

Provide the street address where the project will take place (describe the location if there is no street address) and driving directions from the nearest major road or highway, known landmarks, access roads, and any other information that would allow a person not familiar with the area to find the project site. Enclose a map that marks the location of the project and denotes a north arrow and map scale.

B. River, Stream, or Lake

Provide the name of the river, stream, or lake in which or near where the project will take place. If the watercourse or waterbody is not named, please write "unnamed tributary" in the box.

C. Tributary

Provide the name of the watercourse or water body to which the river, stream, or lake specified in box 8.B is tributary.

D. Wild and Scenic Rivers

Check the appropriate box to specify whether or not the river or stream segment where the project is located is listed as a State or federal Wild and Scenic River. Refer to PRC §5093.5 *et seq*. (http://www.leginfo.ca.gov/calaw.html) and United States Code section 1271 *et seq*. (http://www.gpoaccess.gov/uscode/index.html).

Note: If the project is located within a segment of a river or stream that is listed in the State or federal Wild and Scenic River Acts, the Department cannot approve the proposed project unless it is consistent with the act(s).

E. County

Provide the name of the county where the project will take place.

F. USGS 7.5 Minute Quad Map Name

Provide the name of the USGS 7.5 minute quadrangle map(s) that includes the property where the project will take place. The following Department website may provide you with a link to the name of the quadrangle map: https://map.dfg.ca.gov/bios/.

G - J. Township, Range, Section, ¼ Section

Provide the township, range, section, and ¼ section numbers of the property where the project will take place. Many county and city websites provide township, range, section, and ¼ section numbers.

K. Meridian

Provide the meridian of the property where the project will take place. The following website provides meridian lines: http://www.blm.gov/cadastral/meridians/Caleneva.htm.

L. Assessor's Parcel Number

Provide the Assessor's Parcel Number of the property where the project will take place. Among other documents, Assessor's Parcel Numbers are found on deeds and tax records.

M. Coordinates

If available, provide either the latitude and longitude or the UTM coordinates of the property where the project will take place *and* specify the datum used. Latitude and longitude information can be obtained using a Global Positioning System (GPS) or from the following website: http://bios.dfg.ca.gov.

9. PROJECT CATEGORY AND WORK TYPE

Identify the project category and work type described in the notification by checking the applicable box(es). If "Other" is checked, briefly describe the type of project.

10. PROJECT DESCRIPTION

A. Describe the Project

See the instructions on the notification form.

B. Equipment

List all equipment and machinery that will be used to complete the project. List any lubricants, solvents, chemicals, or other materials not normally found on construction sites will be present in the project area in addition to the equipment and machinery that will be used to complete the project.

C. Water Presence

Check the applicable box. If "yes" is checked, complete box 10.D. If "no" is checked, skip to box 11.

D. Work in Wetted Channel

Check the applicable box. If "yes" is checked, a plan to divert water around the project site and dewater the work site ***must*** be included with the notification, and should specify the method, volume, rate, and timing of the diversion of the water around the work site.

11. PROJECT IMPACTS

A. Modifications to River, Stream or Lake

Describe any foreseeable impacts to the flow, bed, channel and bank of the river, stream, or lake. Quantify the effects and impacts in the project vicinity by noting the type, volume, and dimensions of material displaced through grading, trenching or other forms of site alteration. Also include any foreseeable impacts to the riparian zone on or adjacent to the bank of the river, stream or lake. The riparian zone is the area that surrounds a channel or lake and supports (or can support) vegetation that is dependent on surface or subsurface water. Include the effects of your project activity to this zone at least to the outer (landward) edge of the drip line of any dependent vegetation.

B. Vegetation

Check the applicable box. If "yes" is checked, complete the following tables by specifying the type and amount of vegetation (i.e., trees such as oak, willow, or sycamore, and plant communities, such as salt marsh, freshwater marsh, wet meadow, willow thicket, riparian woodland, willow riparian woodland, desert wash woodland, riparian forest, oak riparian forest, redwood forest, riparian scrub, desert wash scrub, alkali sink scrub, oasis, vernal pool, bog, non-native, or ornamental) both in linear feet and total acres that will be affected temporarily and permanently.

If trees ***greater than 2 inches in diameter at breast height*** (dbh) will be removed as part of the project, specify the estimated number and species (if available) of trees to be removed, and the range of trunk diameters measured at breast height. Trees can be grouped into size classes (i.e. four oak trees approximately 10 to 20 inches dbh). Attach a tree survey, if available.

C. Special Status Species

Special status species are endangered, rare, or threatened animal or plant species as defined in California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations (CCR), title 14, §15380) available at http://opr.ca.gov/s_ceqastatutes.php.

Check the applicable box. If "yes" is checked, list each species and/or describe the habitat that you know will be affected.

If a species listed in this box is protected under the California or federal Endangered Species Act, you may be required to obtain a separate take authorization from the Department and/or the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS). Contact the Department, USFWS, or NMFS for information on take authorization.

D. Source of Information

Identify the source(s) of information used to conclude if special status animal/plant species or habitat that may support such species is or is not, present on or near the project site.

E. Biological Study

If “yes” is checked, the biological study or survey must be enclosed with the notification. *If “no” is checked or the biological study enclosed with the notification is inadequate, the Department may require you to complete a biological study to evaluate the project’s potential impact on biological resources before accepting the notification as complete.*

F. Hydrological Study
If “yes” is checked, the hydrological study or survey *must* be enclosed with the notification. *If “no” is checked or the hydrological study enclosed with the notification is inadequate, the Department may require you to complete a hydrological study or provide other information on site hydraulics (e.g., water availability analysis, flow regime, channel characteristics, and/or flood recurrence intervals) to evaluate the project’s potential impacts on hydrology before accepting the notification as complete.*

12. MEASURES TO PROTECT FISH, WILDLIFE, AND PLANT RESOURCES

A. Erosion Control
Describe the methods or techniques that will be used to prevent sediment from entering any watercourses during and after construction. If you are unsure of which methods or techniques to prevent erosion would best minimize impacts at the project site, please indicate “unknown”. Department staff can assist in providing the appropriate measures.

B. Protection of Fish, Wildlife and Plant Resources
Describe any measures that will be incorporated into the project to avoid or minimize impacts to fish, wildlife, and plant resources. If you are unsure of which measures would best minimize impacts at the project site, please indicate “unknown”. Department staff can assist in providing the appropriate measures.

C. Mitigation/Compensation Measures
Describe all measures that will be incorporated into the project provide mitigation or compensation for impacts to fish, wildlife, and plant resources. If you are unsure of which measures would best provide mitigation or compensation for potential impacts at the project site, please indicate “unknown”. Department staff can assist in providing the appropriate measures.

13. PERMITS

A - D. Local, State, and Federal Permits
List any local, State, and federal permits required for the project and mark whether applied or issued. ***Enclose a copy of each permit that has been issued***. You are responsible for obtaining all necessary permits and authorizations from the Department and other agencies before beginning any project described in the notification.

14. ENVIRONMENTAL REVIEW

A. CEQA, NEPA, CESA, and ESA Documents
For any available document, please check the appropriate box. If “yes” is checked, a copy of the CEQA, National Environmental Protection Act (NEPA), California Endangered Species Act (CESA), and/or federal Endangered Species Act (ESA) document *must* be enclosed with the notification. Please include the type of CEQA, NEPA, CESA, or ESA document if applicable. If “no” is checked, please list to the best of your knowledge, the type of environmental documentation that will be or is being prepared.

B. State Clearinghouse Number
If copies of the CEQA document have been be submitted to the State Clearinghouse for distribution to State agencies, provide the number assigned to the document by the State Clearinghouse.

C - F. CEQA Lead Agency
If "yes" is checked, complete boxes D, E, and F. If "no" is checked, skip to box G.

G. Overall Project
If the project described in the notification is part of a larger project, briefly describe the entire project. For example, if the project described in the notification is the construction of a bridge across a stream, and the bridge construction is part of a proposed housing development which does not require notification, the housing development should be described in this box.

If the project described in the notification is not part of a larger project, write "not applicable" in this box.

H. CEQA Filing Fee
Pursuant to FGC §711.4, you must pay a filing fee if the project is subject to CEQA. The Department's CEQA filing fee will be collected to by the CEQA Lead Agency, and later allocated to the Department. The CEQA filing fee is in addition to the notification fee. Current CEQA fees are available at https://www.wildlife.ca.gov/Conservation/CEQA/Fees.

If "yes" is checked, proof that the CEQA filing fee has been paid *must* be enclosed with the notification. If "no" is checked, explain the reason the CEQA filing fee has not been paid. A CEQA filing fee may not have been paid, for example, because the lead agency has not completed or approved or certified the CEQA document at the time the notification is submitted or one of the exceptions to payment of the filing fee applies.

Note: If a CEQA filing fee has not been paid, but the Department determines that the fee is required, the Department may not issue a final Agreement until it receives proof that the CEQA filing fee has been paid. For more information on CEQA filing fees, refer to Part IV.

15. SITE INSPECTION

In order to determine whether the notification is complete, an Agreement is required, and/or to identify the measures that must be incorporated into the project to protect fish, wildlife, and plant resources, the Department may need to conduct an inspection of the project site.

Box 1. Generally, non-enforcement Department personnel may only enter private property with the consent of the property owner. Checking the first box will enable Department personnel to enter the property at a reasonable time in the future without having to contact the property owner in advance. Receiving such consent in advance will help reduce the amount of time for the Department to determine whether the notification is complete, an Agreement is needed and/or to prepare a draft Agreement. If the first box is checked, provide the Department with any access instructions.

Box 2. Check the second box and provide the name and telephone number of the person the Department needs to contact before entering the property if you cannot or do not want to give the Department consent to enter the property in advance. The box should also be checked if the property owner or the owner's representative needs to be present when Department personnel visit the property.

16. DIGITAL FORMAT

If any of the information included as part of the notification is available in digital format, submit the information via digital media (e.g., CD, DVD, etc.) with the notification.
Note: *The notification form must be completed and submitted in paper format, even if the information is available in digital format.*

17. SIGNATURE

If the applicant is a private citizen, he/she must sign the notification in order for it to be valid. If the applicant is a business, State or local governmental agency, or public utility, only an authorized person who is an employee of the business, agency, or utility may sign the notification, in order for it to be valid. *Under no circumstances should a consultant or other contact person or property owner who is not the applicant or, if the applicant is a business, agency, or utility, not an authorized employee of the applicant, sign the notification.* If that occurs, the Department may return the notification to the applicant as invalid.

PART III: PROCESSING YOUR NOTIFICATION

If you notify the Department through the submittal of a notification form, the Department will determine the notification is complete if all of the following apply:

1) all applicable fields on the notification form are completed;
2) all required enclosures are submitted (including a biological and/or hydrological study, if applicable);
3) the notification was properly signed;
4) the information in the notification is true and correct; and
5) the correct notification fee is provided with the notification.

If the Department determines the notification is incomplete, the Department will specify the information or materials that are lacking and will need to be provided to determine the notification complete.

The 30-day time period to determine whether a notification is complete does not apply to notifications for long-term Agreements (see FGC §1605(g)(5)), or when one of the following occurs:

1) the Department and applicant mutually agree to extend the 30-day time period.

2) the Department determines that an onsite inspection is required before it can make its determination, but you are unable to schedule a date for the inspection that will reasonably allow the Department to make the determination within the 30-day time period.

3) the Department determines that an onsite inspection is required before it can make its determination and you or the owner of the property where the project will take place (if different from the applicant) refuses to allow Department personnel to enter the property. In that case, the Department may refuse to process the notification, in which case the 30-day time period will no longer apply.

After the Department determines that the notification is complete, the notification will be assigned to staff that will evaluate the project and determine whether you will need an Agreement.

An Agreement will be required if the project may substantially adversely affect an existing fish, wildlife, or plant resource. If the Department determines that an Agreement is required, it will submit a draft Agreement to you for review within 60 days of determining the notification complete. The 60-day time period does not apply to notifications for long-term Agreements (see FGC §1605(g)(5)), or when one of the following occurs:

1) the Department and applicant mutually agree to extend the 60-day time period.

2) the Department determines that an onsite inspection is required before it can determine whether an Agreement will be required or issue a draft Agreement, but you are unable to

schedule a date for the inspection that will reasonably allow the Department to make its Agreement determination or issue a draft Agreement within the 60-day time period.

3) the Department determines that an onsite inspection is required before it can determine whether an Agreement will be required or issue a draft Agreement, and you or the owner of the property where the project will take place (if different from the applicant) refuses to allow Department personnel to enter the property. In that case, the Department may refuse to process the notification, in which case the 60-day time period will no longer apply.

Note: *In the case that the Department decides not to grant a request for a long-term Agreement, the Department will contact you, and thereafter process the notification as one for a regular Agreement upon your written request. If you are granted a long-term Agreement, you will be required to comply with the requirements specified in FGC §1605(g), which includes filing a status report with the Department every four years.*

The draft Agreement will include measures the Department determines are necessary to protect fish, wildlife, and plant resources while conducting the project activities. After receiving the draft Agreement, you will have 30 days to notify the Department whether the measures in the draft Agreement are acceptable. If you agree with the measures included in the draft Agreement, you or your authorized representative will need to sign the Agreement and submit it to the Department. If you disagree with any measures in the draft Agreement, within 30 days, you must notify the Department in writing and specify the measures that are not acceptable. Upon written request, the Department will meet with you within 14 days of receiving the request to resolve the disagreement. If you fail to respond, in writing, within 90 days of receiving the draft Agreement, the Department may withdraw the Agreement.

If you disagree with any measures in the draft Agreement and you and the Department cannot resolve the disagreement informally, you may request an arbitration panel to resolve the disagreement. If you request arbitration, a panel of arbitrators will be established within 14 days of receiving the request. The panel will include three persons: your representative, a Department representative, and a third person mutually agreed upon by you and the Department who will serve as the panel's chair. If you and the Department cannot agree upon the third person within the 14-day period, a court will appoint the third person. The third person must have scientific expertise relevant to the fish, wildlife, and plant resources the project could affect, and the disputed measures in the draft Agreement. ***Each party will be required to pay the expenses of their selected representative and pay one-half the expenses of the third person.***

The panel will issue a decision within 14 days after it is established. The decision must be based on the best scientific information reasonably available at the time of the arbitration, and will be issued in the form of a final Agreement. The decision will be binding on you and the Department unless you or the Department successfully petitions a court to correct or vacate the decision.

The time periods described above may be extended at any time by mutual agreement.

Note: *The measures included in a draft Agreement are not subject to arbitration if the notification is being submitted in response to an order by the court or an administrative agency that requires you to perform work subject to the notification requirement in FGC §1602.*

After the Department receives the signed draft Agreement, it will make it final by signing it. However, the Department will not sign the Agreement until it:

1) has received the correct notification fee,

2) has complied with CEQA, and

3) has received written proof that the CEQA filing fee (specified in FGC §711.4) has been paid, if a CEQA filing fee is required.

After you receive the final Agreement, the project described in the notification and covered by the Agreement may begin, provided you have obtained all necessary local, State, and federal permits or other authorizations.

Notification through the submittal of a THP

If you notify the Department through the submittal of a THP instead of using Form FG2023, the Department will determine the notification is complete if all of the following apply:

1) the THP includes, at a minimum, the information listed in FGC §1611;

2) the information in the THP is true and correct;

3) the THP was properly signed;

4) the THP is accepted for filing by CALFIRE; and

5) the correct notification fee is provided with the notification or has been paid.

Once the notification has been deemed complete, the process for reviewing the notification and issuing an Agreement is the same as for a notification via Form FG2023, as described above.

Part IV: California Environmental Quality Act

The Department must comply with the California Environmental Quality Act (CEQA) before it may issue a ***final*** Agreement. Issuance of a final Agreement occurs when the Department receives the signed ***draft*** Agreement from you ***and*** the Department signs it. In many instances, the Department will receive the signed draft Agreement from an applicant before the lead agency has fully complied with CEQA. In those instances, the Department must wait for the lead agency to fully comply with CEQA before it may sign the draft Agreement, thereby making it final.

Under CEQA, the "lead agency" is the local or State governmental agency that has the principal responsibility for carrying out or approving the project. All other local or State agencies with discretionary approval authority are "responsible agencies." The lead agency must determine first whether the project is exempt from CEQA. If the project is not exempt, the lead agency must prepare an environmental document, which will be a negative declaration, a mitigated negative declaration, or an environmental impact report. A lead agency is entitled to recover all of its CEQA-related costs from you. If the Department acts as the lead agency for the project your draft Agreement covers, it will instruct you to submit an initial deposit to cover its initial CEQA-related costs. The deposit and any further CEQA-related costs will be in addition to the notification fee.

If the Department is a responsible agency, you must submit with the notification form a copy of any document prepared by the lead agency pursuant to CEQA, if one already has been prepared. You must also identify the lead agency on the notification form (box 14.D). A final Agreement cannot be signed by the Department until a copy of the Notice of Determination has been submitted to and reviewed by the Department.

Pursuant to FGC §711.4, you must pay a filing fee to the lead agency if the project is subject to CEQA, unless one of the exceptions specified in FGC §711.4(c)(2) or (3) or (d)(1) or (2) applies. Current CEQA fees are found in FGC §711.4, available at www.leginfo.ca.gov/calaw.html. The filing fee is in addition to the notification fee.

For a detailed explanation of CEQA, please consult the statute itself (PRC §21000, *et seq.*), the CEQA Guidelines (CCR, title 14, §15000 *et seq.*) that implement CEQA, and CEQA handbooks and guides. CEQA and the CEQA Guidelines are available at http://www.opr.ca.gov/m_ceqa.php.

Part V: Other Permits

Depending on the project activities being proposed, in addition to an Agreement, you might need to obtain a permit, agreement, or other authorization from one or more governmental agencies. You should first contact the planning departments of the city or county where the project will take place to determine whether any local permits are required for the project. The State and federal agencies listed below might also have permitting authority over the project. You should contact these agencies if you are not familiar with their permitting requirements.

STATE AGENCIES

Coastal Commission
Department of Conservation
Department of Forestry and Fire Protection
Department of Water Resources
Reclamation Board/District
Regional Water Quality Control Boards
State Lands Commission
State Water Resources Control Board

FEDERAL AGENCIES

National Marine Fisheries Service
U.S. Army Corp of Engineers
U.S. Fish and Wildlife Service
U.S. Forest Service

Questions and Answers

1. When must I notify the Department?

Fish and Game Code section 1602 requires any person, state or local governmental agency, or public utility to notify the Department before beginning any activity that will do one or more of the following: 1) Substantially divert or obstruct the natural flow of any river, stream or lake; 2) substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. Fish and Game Code section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. If you are not certain that your proposed activity requires notification, the Department recommends that you notify.

2. How do I notify the Department?

In order to notify the Department, a person, state or local governmental agency, or public utility must submit a complete notification package and fee to the Department regional office that serves the county where the activity will take place. The notification package is available from any Department regional office and the Department's website www.dfg.ca.gov/1600/notification_pkg.html. The fee schedule-section 699.5 in title 14 of the California Code of Regulations- is included in the notification package. The Department's regional offices and the counties they serve are listed in the notification package and on the Department's website at www.dfg.ca.gov/regions/regions.html.

3. What happens after I notify the Department?

After you notify the Department, the Department will determine whether your notification package is complete. The Department will make this determination within 30 calendar days of receiving the notification package if you are applying for a regular agreement (i.e., an agreement for a term of five years or less). If the notification package is incomplete, the Department will contact you and specify the information you need to provide to make it complete. The Department will not process your notification package until it receives the additional information. If your notification package is complete, the Department will process it as described below. The 30-day time period does not apply to notifications for long-term agreements (i.e., agreements for a term greater than five years).

After the Department receives a complete notification package, it will determine whether you will need a Lake or Streambed Alteration Agreement for your activity. An agreement will be required if the activity could substantially adversely affect an existing fish and wildlife resource. If an agreement is required, the Department will conduct an onsite inspection, if necessary, and submit a draft agreement to you. The draft agreement will include measures to protect fish and wildlife resources while conducting the project. If you are applying for a regular agreement, the Department will submit a draft agreement to you within 60 calendar days after your notification is complete. The 60-day time period will not begin until your notification is complete. The 60-day time period does not apply to notifications for long-term agreements.

After you receive the draft agreement, you will have 30 calendar days to notify the Department whether the measures in the draft agreement are acceptable. If you agree with the measures included in the draft agreement, you will need to sign the agreement and submit it to the Department. If you disagree with any measures in the draft agreement, you must notify the Department in writing and specify the measures that are not acceptable. Upon written request, the Department will meet with you within 14 calendar days of receiving the request to resolve the disagreement. If you fail to respond, in writing, within 90 calendar days of receiving the draft agreement, the Department may withdraw that agreement.

After the Department receives the signed draft agreement, it will make it final by signing it. However, the Department will not sign the agreement until it receives your notification fee and complies with the California Environmental Quality Act (Pub. Resources Code, § 21000, et seq.) (see "4" below). After you receive the final agreement, you may begin the project the agreement covers, provided you have obtained any other necessary local, state, and federal authorizations. If you disagree with any measures in the draft agreement and you and the Department cannot resolve the disagreement informally, you may request an arbitration panel to resolve the disagreement. If you request arbitration, a panel of arbitrators will be established within 14 calendar days of receiving the request. The panel will comprise three persons: your representative, a Department representative, and a third person mutually agreed upon by you and the Department who will serve as the panel's chair. If you and the Department cannot agree upon the third person within the 14-day period, a court will appoint the third person. The third person must have scientific expertise relevant to the fish and wildlife resources your project could affect and to the measures in the draft agreement that are in dispute. Each party will be required to pay the expenses of their selected representative and pay one-half the expenses of the third person. The panel will issue a decision within 14 days after it is established. The decision must be based on the best scientific information reasonably available at the time of the arbitration, and will be issued in the form of a final agreement. The decision will be binding on you and the Department unless you or the Department successfully petition a court to correct or vacate the decision.

The time periods described above may be extended at any time by mutual agreement.
The notification package explains how to complete the notification package and the agreement process.

4. Does the Department need to comply with other state laws or regulations before issuing a Lake or Streambed Alteration Agreement?

Yes. The Department must comply with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000, et seq.) before it may issue a final Lake or Streambed Alteration Agreement. Issuance of a final Lake or Streambed Alteration Agreement occurs after the Department receives a draft Lake or Streambed Alteration Agreement from the applicant and the Department signs it. In many instances, the Department will receive a signed draft Lake or Streambed Alteration Agreement from an applicant before the lead agency has fully complied with CEQA. In those instances, the Department must wait for the lead agency to fully comply with CEQA before it may sign the draft Lake or Streambed Alteration Agreement, thereby making it final.

Under CEQA, the "lead agency" is the local or state governmental agency that has the principal responsibility for carrying out or approving the activity. All other local or state agencies with discretionary approval authority are "responsible agencies."

The lead agency must determine first whether the activity is exempt from CEQA. If the activity is not exempt, the lead agency must prepare an environmental document, which will be a negative declaration, a mitigated negative declaration, or an environmental impact report. A lead agency is entitled to recover all of its CEQA-related costs from the applicant. If the Department acts as the lead agency for the activity your draft agreement covers, it will instruct you to submit an initial deposit to cover its initial CEQA-related costs. The deposit and any further CEQA-related costs will be in addition to your notification fee.

If the Department is a responsible agency, you must submit with your notification package a copy of any document prepared by the lead agency pursuant to CEQA, if one already has been prepared. You must also identify in your notification package the lead agency. Also, Fish and Game Code section 711.4 requires the lead agency to collect a fee on behalf of the Department whenever the lead agency prepares an environmental document, unless the activity is exempt from the fee. Current CEQA fees are found in Fish and Game Code Section 711.4, available at www.leginfo.ca.gov/calaw.html.

For a detailed explanation of CEQA, you should consult the statute itself, the CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.) that implement CEQA, and CEQA handbooks and guides. CEQA and the CEQA Guidelines are available at www.ceres.ca.gov/planning.

5. Should I contact other governmental agencies regarding my proposed activity?

Depending on the activity you are proposing, in addition to a Lake or Streambed Alteration Agreement, you might need to obtain a permit, agreement, or other authorization from one or more governmental agencies. You should first contact your city and county planning departments to determine whether you need to obtain any local permits. The State and federal agencies listed below might also have permitting authority over your activity. You should contact these agencies if you are not familiar with their permitting requirements.

State agencies

- Coastal Commission
- Department of Conservation
- Department of Forestry
- Department of Water Resources
- Regional Water Quality Control Boards
- State Lands Commission
- State Water Resources Control Board

Federal agencies

- NOAA Fisheries
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- U.S. Forest Service

6. Do I need to notify the Department or obtain a Lake or Streambed Alteration Agreement for emergency work?

You do not need to notify the Department or obtain a Lake or Streambed Alteration Agreement before beginning the following emergency work: 1) immediate emergency work necessary to protect life or property; 2) immediate emergency repairs to public service facilities necessary to maintain service as a result of a disaster in an area in which the Governor has proclaimed a state of emergency; and 3) emergency projects undertaken, carried out, or approved by a state or local governmental agency to maintain, repair, or restore an existing highway, within the existing right of-way of the highway, that has been damaged as a result of fire, flood, storm, earthquake, land subsidence, gradual earth movement, or landslide, within one year of the damage. Although notification is not required before beginning the emergency work, you must notify the Department in writing within 14 days after beginning the work.

flow to the Eagle Rock Drain. This value was applied to the ranges of potential dry weather capture discussed in **Pollutant Loading** Attributed to Dry-Weather Flows, to calculate the expected pollutant loads to be captured by dry-weather flows. Results are presented in **Table 4-4** and **Table 4-5**.

APPENDIX

J

DRY WEATHER WATER QUALITY AND FLOW MONITORING REPORT NOVEMBER-DECEMBER 2019

Table of Contents

Table of Figures

1 Introduction

1.1 Background and Purpose

The Taylor Yard G2 Water Quality Improvements Project is being proposed as a potential City of Los Angeles Clean Water Bond Proposition O (Prop O) project on the 42-acre river-adjacent Taylor Yard G2 Parcel (G2 Parcel). The G2 Parcel is a former industrial site previously used as a railroad maintenance yard. The property was purchased in 2017 by the City of Los Angeles and is adjacent to the Los Angeles River, on the western edge of the Glassell Park neighborhood. The Bureau of Engineering has drafted a Concept Design Report for a phased Taylor Yard G2 River Park Project, which includes the proposed Prop O Water Quality Improvement project.

Figure 1: Taylor Yard G2 Parcel and Nearby Storm Drains including Eagle Rock Drain.

During 2019, at the request of the Bureau of Engineering (BOE), LA Sanitation (LASAN) reviewed and transmitted comments on multiple versions of the draft Taylor Yard G2 Prop O Concept Report prepared by BOE consultants. One of the primary needs LASAN identified as necessary to support the Concept Report is to conduct water quality sampling and collect flow measurement data. Water quality improvements are the primary objective that a proposed project needs to demonstrate in order to secure Prop O funding. Monitoring of dry weather flows and water quality constituents will provide actual baseline data in the project site's watershed. This data is necessary to ensure that the stormwater best management practices (BMPs) proposed in the Concept Report are properly designed, and to make sure the project will address pollutants of concern in the Los Angeles River to help the City achieve water quality benefits.

On January 8, 2019 LASAN Watershed Protection Division (WPD) provided comments to the draft Prop O Concept Report to BOE, which were incorporated into the report. Among the comments, WPD requested that data and analysis of dry weather flows and pollutants affecting water quality upstream of the G2 Project Site be performed and incorporated into the Concept Report. The preferred concept design of the water quality improvements concept involves diverting dry- and a portion of wet-weather flows from the Eagle Rock storm drain, a 10' x 10' Reinforced Concrete Box (RCB) channel. This RCB conveys runoff under the G2 site draining an approximately 1,900 acre watershed of the Glassell Park and Eagle Rock neighborhoods, discharging to the LA River at an outlet structure along the trapezoidal concrete channel of River (see Figure 2, Figure 3).

Figure 2: View from West Bank of LA River, Looking Across to Eagle Rock Drain RCB and Outfall Showing Dry Weather Flow. Taylor Yard G2 Parcel is Above and Behind Outfall.

Figure 3: Eagle Rock Storm Drain Outfall at LA River with Dry Weather Flow, Adjacent to G2 Site.

1.2 Scope of Work

On August 28, 2019 BOE requested that LASAN provide a cost estimate for water quality sampling and dry-weather flow monitoring for the proposed project. On October 10, 2019, LASAN provided to BOE the cost estimate for the requested monitoring services. These services included installation of low-flow monitoring equipment in the Eagle Rock Drain, prior to discharge into the LA River, to obtain one week of dry-weather flow data, and two water quality grab samples. These samples included one grab sample taken at the time of installation of the low flow monitoring equipment, and one grab sample taken a week later. The samples would be field-analyzed for pH, dissolved oxygen, temperature, conductivity and turbidity; and laboratory-analyzed for metals, nutrients, bacteria, and suspended solids.

2 Monitoring Methods

2.1 Sample Types and Holding Requirements

Sample handling requirements are summarized in **Table 1**. All sample bottles are identified with the project title, appropriate identification number, analyses to be performed, date and time of sample collection, and sampler's initials.

Samples are stored on ice in a cooler during transport to the laboratory. Chain-of-custody (COC) forms are completed by the sampler for all samples, placed in a plastic envelope and kept inside the cooler with the samples. The laboratory staff is responsible for inspecting the condition of the samples, signing the COC, and reconciling the label information to the COC form. At this point, the laboratory becomes responsible for sample custody. Samples may be disposed of when the analysis is completed and all analytical quality assurance/quality control procedures are reviewed and accepted.

Table 1. Sample Types, Required Volume, and Handling Requirements

Constituents	Sample Volume	Containers (#, size and type)	Preservation	Holding Time
Total Suspended Solids Total Dissolved Solids	1000 mL	(1) 1000 mL Plastic Bottle	Store Cool at 4°C	7 days
Total Ammonia (NH3-N) Total Nitrogen Total Phosphorus Kjeldahl Nitrogen	500 mL	(1) 500 mL Plastic Bottle	Store Cool at 4°C Add sulfuric acid, pH < 2	28 days
Nitrate (NO3-N) Nitrite (NO2-N) Ortho-Phosphorus (PO4)	500 mL	(1) 500 mL Plastic Bottle	Store Cool at 4°C	48 hours
Metals	1000 mL	(1) 1L Plastic Acid washed	Store Cool at 6°C	6 months
Bacteria	125mL	(1) 125mL Plastic (sterile)	Store Cool at 6°C	6 hours

2.2 Monitoring Overview

PAS installed flow monitoring equipment (ISCO Model 2150 Area Velocity Module), to measure the flow in the Eagle Rock Drain, prior to discharge into the LA River. In addition, PAS collected two (2) dry-weather water quality grab samples on 11/14/2019 and 11/19/2019, respectively.

The information obtained from this baseline monitoring will be used to characterize dry-weather flow rates as well as pollutants affecting the water quality of the Eagle Rock Drain prior to discharge into the LA River in Reach 3.

The LA River Metals Total Maximum Daily Load (TMDL) addresses dry-weather discharges of copper, lead, and selenium. Although the TMDL limit for selenium applies only to the upper segments of the LA River Reach 6, it is included here for the purpose of comparison. Selenium is naturally present in the background environment and can be detected in groundwater sources. The TMDL numeric targets are based on the criteria established by the California Toxics Rule (CTR). The dry-weather targets for copper and lead are based on the chronic (criterion continuous concentration) CTR criteria. The metals TMDL does not include dry weather targets for zinc. However, since zinc is considered a "critical pollutant" for wet weather conditions it is included in this study for reference purposes.

LA River Bacteria and Nutrients TMDLs have the following in-stream numeric targets for this portion of the river:

- Single sample of *E. coli* is 235 MPN/100mL.
- 30-day average for Ammonia is 2.4 mg/L (below LA-Glendale WRP).
- Nitrite Nitrogen is 1.0 mg/L.
- Nitrate Nitrogen is 8.0 mg/L.

TMDL Numeric targets do not currently exist for Total Phosphorus (TP), Total Nitrogen (TN), Chlorophyll-a, and Dissolved Oxygen for this segment of the LA River. For comparison, water quality standards from the Los Angeles Area Lakes TMDL will be used as a reference for this Project since there is potential for numeric targets to be developed for these parameters in the future.

2.3 Monitoring Location

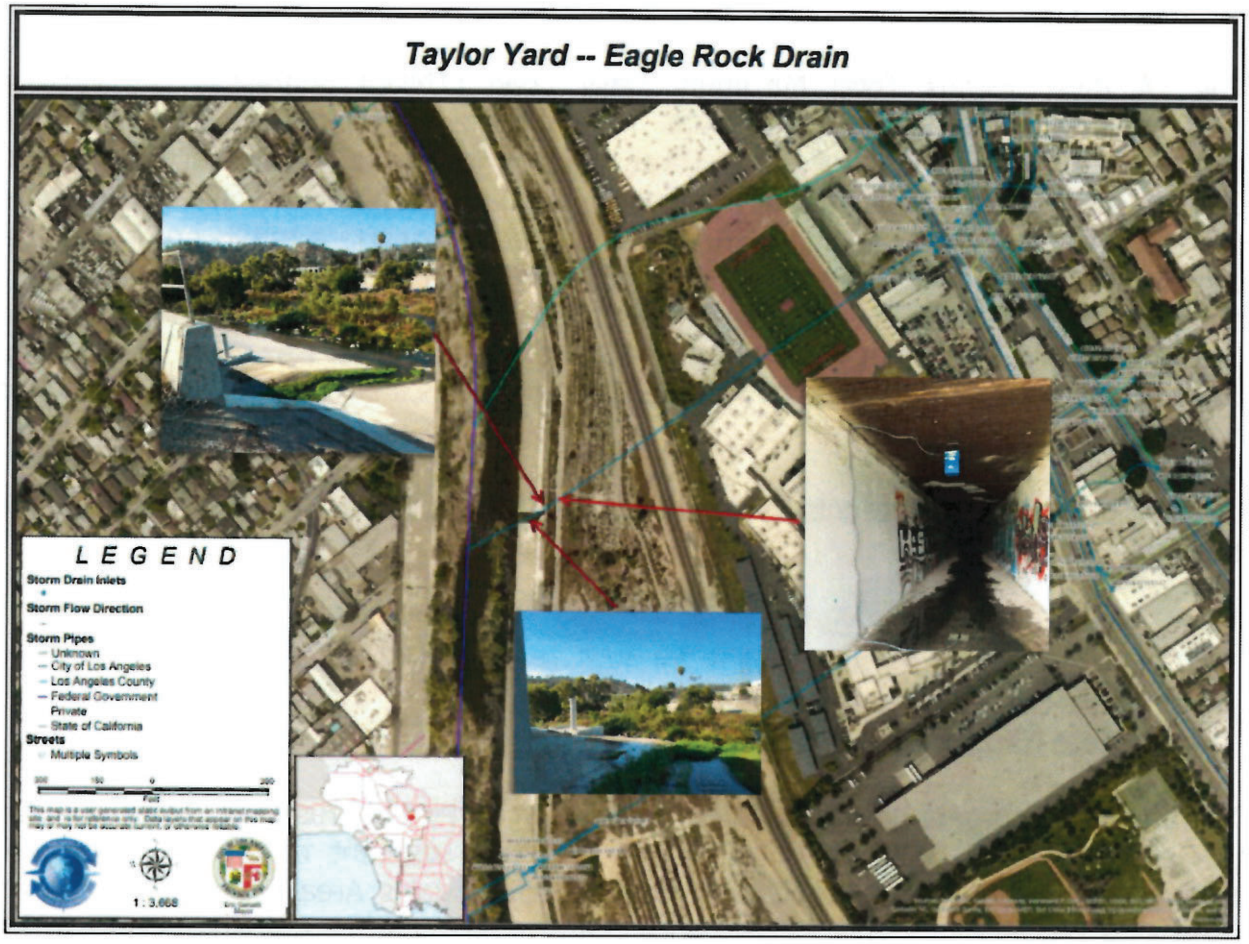


Figure 4: Eagle Rock Drain is a Reinforced Concrete Box (RCB), Approximately 10' x 10', Running Along Eagle Rock Blvd. and Under the G2 Site, Discharging Into Reach 3 of the LA River at an Outfall Along the Eastern Trapezoidal Channel.

2.4 Flow Monitoring Method

Flow monitoring equipment was installed by PAS staff on November 14, 2019 within the Eagle Rock Storm Drain at the outfall to the Los Angeles River (geo-coordinates 34.102753, -118.241771). A battery powered ISCO 2150 AV Module[1], cabling and Sensor were installed within the RCB. The AV Sensor was secured at the base of the RCB and in the middle of the flow stream, in order to measure dry-weather flow inside the drain before it daylights and discharges into the LA River. The data-storage Module was mounted on the ceiling of the RCB and connected to the Sensor with cabling.

The ISCO 2150 Module measures the liquid level, average stream velocity, and calculates the flow rate and total flow. The liquid level and velocity measurements are read from the attached AV Sensor placed in the flow stream. The AV Sensor uses a pair of ultrasonic transducers with continuous wave Doppler technology to measure mean velocity. One transducer transmits a continuous ultrasonic wave upstream into the flow and the second receives the sound waves reflected by air bubbles or particles in the flow. The ISCO 2150 Module circuitry compares the frequencies of the sound waves and extracts the difference. An increase or decrease in the frequency of the reflected wave indicates forward or reverse flow. The degree of change is proportional to the velocity of the flow stream.

The AV Sensor's internal differential pressure transducer also measures the liquid level. The transducer is a small piezo-resistive chip that detects the difference of the pressures felt on the inner and outer face. To obtain the flow rate in Gallons per Minute (GPM) and total flow, calculations are performed internally in the ISCO 2150 Module using the measured parameters from the AV Sensor. The flow rate is calculated using the Area Velocity flow rate conversion method:

$$Q = AV$$

Where:
Q = the volume flow rate,
A = the cross-sectional area occupied by the flowing material, and
V = the average velocity of flow. (V is considered an average because not every part of a flowing fluid moves at the same rate.)

The ISCO 2150 Module was set to record data at 5 minute intervals. At the end of the monitoring period, the flow data stored in the module was collected by PAS staff. The module, cabling and sensor were removed from the RCB.

[1] https://www.teledyneisco.com/en-us/waterandwastewater/Flow%20Meter%20Documents/Manuals/2150%20Flow%20Module%20User%20Manual.pdf

Figures 5a & b: PAS Mounted the ISCO 2150 AV Modules on the Ceiling of RCB and Ran a Flexible Conduit, Along with AV Sensor, Down to the Middle of the Low Flow to Measure the Dry-weather Discharge from Eagle Rock Drain.

Figure 6a. Flow Meter Installation Site

Figure 6b. Flow Measurement

Figures 6a & b: Flow Meter Installation and Manual Flow Measurement.

3 Water Quality and Flow Monitoring Results

This report summarizes the dry weather water quality and flow monitoring performed by LASAN. Dry weather flow monitoring was conducted over a 1-month period from November 14 to December 17, 2019. This period included both dry and wet weather conditions. Wet weather flow data has been extracted from this report, but is available upon request.

Dry weather water quality samples were taken at Eagle Rock Drain on November 14, 2019 and November 19, 2019. Samples were collected as grab samples and adhered to field sampling guidelines found in the Surface Water Ambient Monitoring Program (SWAMP) sampling SOP, "Field Collection of Water Samples."[2]

Table 2 summarizes dry-weather water quality results from the two sampling events on 11/14/19 and 11/19/19. Results were below the water quality standards with the exception of *E. coli*, Selenium, Total Phosphorus and Total Nitrogen. *E. coli* (1,100 MPN/100mL) exceeded REC-1 single sample limit of 235 MPN/100mL. As for Selenium, the concentrations detected for both sampling events (18.0 ug/L and 12.1 ug/L,

[2] https://www.waterboards.ca.gov/water_issues/programs/swamp/

respectively) exceeded the TMDL dry-weather limit of 5 µg/L. Although numeric targets for Total Phosphorus and Total Nitrogen are not directly applicable to the LA River, the concentrations detected for these parameters exceeded the numeric targets for Los Angeles Area Lakes TMDL (specifically, Echo Park Lake Nutrients TMDL), and could be expected to have biostimulatory effects (i.e., excessive algae growth) in LA River and downstream water bodies.

The original intent of this study was to characterize water quality and flow over 1-week period from November 14 to Nov 20. However, due to the occurrence of the first significant rain event of the season on 11/20/2019, the second dry-weather sampling event was conducted on 11/19/2019 to avoid the potential impacts from the storm. During this period prior to the storm, the average flow rate was 69.3 gpm (refer to hydrograph in Figure 7).

Additional dry-weather flow data is presented in **Table 3** covering the entire duration of the flow meter deployment from 11/14/2019 to 12/17/2019—excluding all days in which rainfall occurred. For this extended period, the average flow rate (for dry weather days) ranged from 40 gpm to 79 gpm (mean = 57.6 gpm). It is uncertain why the dry weather flow rates tended to decrease over the course of the study (relative to the first week of dry weather flow monitoring). It is possible that storm water runoff deposited sediment and debris which may have affected the readings. It is also feasible, that with the successive rain events in November and December, there was less demand for irrigation in the surrounding area, thus resulting in lower dry weather flows.

3.1 Water Quality Data Summary

Table 2: Results Summary for Eagle Rock Drain.

Constituents	Date	Method	MDL	RL	Units	Eagle Rock Drain	Water Quality Standard
General							
TSS	11/14/2019	SM 2540D	1.4	2	mg/L	12.8	N/A
	11/19/2019					5	
TDS	11/14/2019	SM 2540C	28	28	mg/L	836	N/A
	11/19/2019					728	
pH	11/14/2019	YSI Sonde	--	--	--	7.83	6.5 - 8.5[e]
	11/19/2019					8.05	
Temperature	11/14/2019	YSI Sonde	--	--	Celcius	19.76	N/A
	11/19/2019					18.63	
Specific Conductivit	11/14/2019	YSI Sonde	--	--	uS/cm	1497	N/A
	11/19/2019					1406	
Hardness	11/14/2019	SM 2340B	--	--	mg/L	512	N/A
	11/19/2019					373	
Nutrients							
Nitrite	11/14/2019	EPA 300.0	0.05	0.5	mg/L	<0.05	1[a]
	11/19/2019		0.03	0.3		<0.03	
Nitrate	11/14/2019	EPA 300.0	0.05	0.5	mg/L	2.79	8[a]
	11/19/2019		0.03	0.3		2.82	
Total Phosphorus	11/14/2019	SM 4500-P E	0.1	0.3	mg/L	**1.47**	0.12[b]
	11/19/2019					**0.46**	
Total Nitrogen	11/14/2019	Calculated	--	--	mg/L	**3.17**	1.2[b]
	11/19/2019					**3.99**	
Dissolved Oxygen	11/14/2019	YSI Sonde	--	--	mg/L	7.85	5.0[e]
	11/19/2019					8.64	
Chlorophyll-a	11/14/2019	SM 10200H	9	14	ug/L	<9	20[b]
	11/19/2019		8			<8	
Metals (Total)							
Copper	11/14/2019	EPA 200.8	0.1	0.5	ug/L	12.6	26[c]
	11/19/2019					7.46	
Lead	11/14/2019	EPA 200.8	0.06	0.5	ug/L	2.06	12[c]
	11/19/2019					0.85	
Selenium	11/14/2019	EPA 200.8	0.14	1	ug/L	**18**	5[c]
	11/19/2019					**12.1**	
Zinc	11/14/2019	EPA 200.8	0.58	1	ug/L	40.7	N/A
	11/19/2019					17.2	
Metals (Dissolved)							
Copper	11/14/2019	EPA 200.8	0.1	0.5	ug/L	6.63	21[c]
	11/19/2019					4.53	
Lead	11/14/2019	EPA 200.8	0.06	0.5	ug/L	0.71	7.5[c]
	11/19/2019					0.22DNQ	
Zinc	11/14/2019	EPA 200.8	0.58	1	ug/L	33	N/A
	11/19/2019					10.2	
Bacteria							
E. coli	11/14/2019	SM 9223B	--	1	MPN/100mL	**1100**	235[d]
	11/19/2019					<100	

BOLD type indicates the value is above the water quality standard; MDL=Method Detection Limit; RL=Reporting Limit; N/A = Not Applicable; DNQ = Detected but Not Quantifiable; MPN = Most Probable Number.

[a]LA River Nitrogen TMDL

[b]Los Angeles Area Lakes TMDL

[c]LA River Metals TMDL

[d]LA River Bacteria TMDL REC-1 Limit

[e]Water Quality Control Plan Los Angeles Region (Basin Plan)

3.2 Flow Data Summary

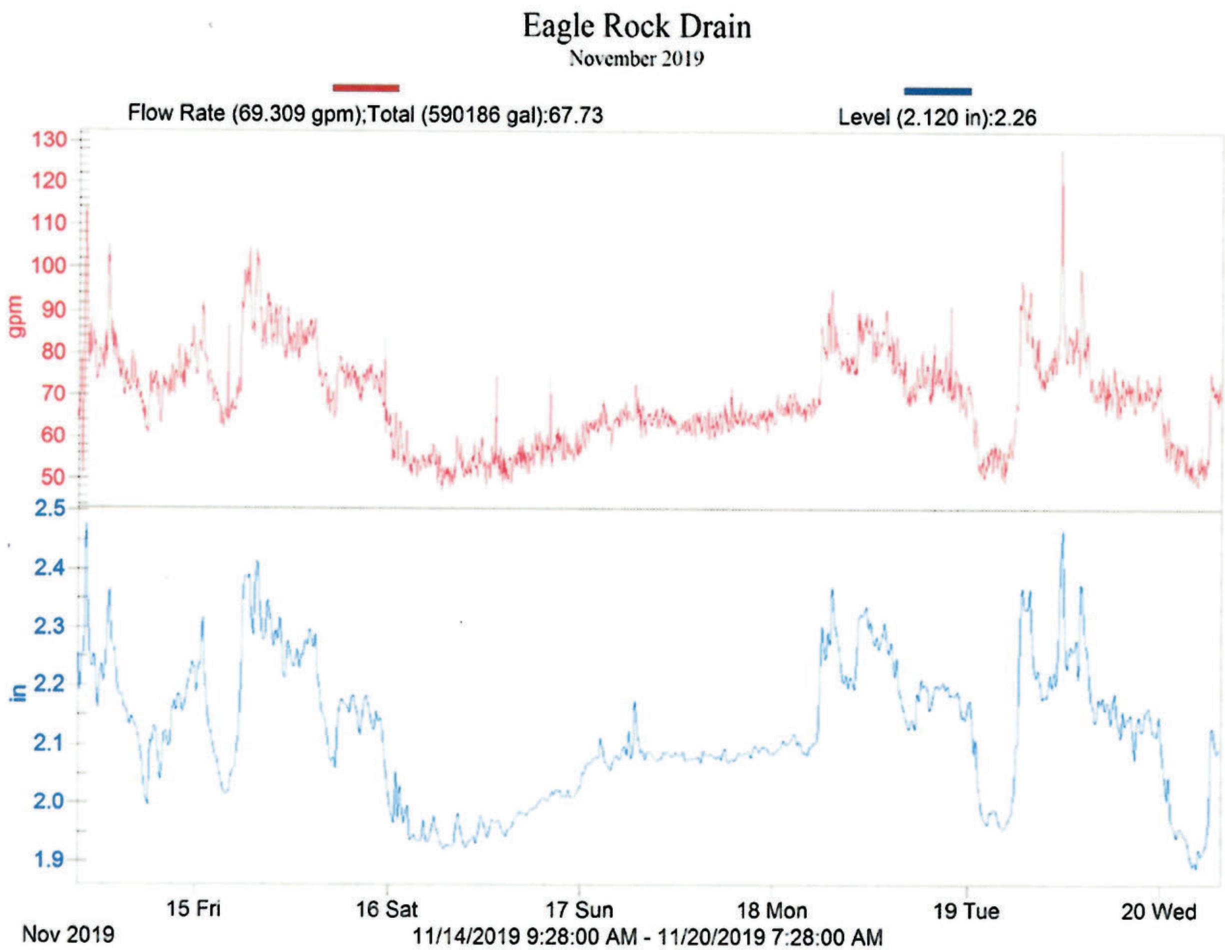


Figure 7: Dry-weather flow from 11/14/2019 to 11/20/2019 (prior to first storm event of the season).

Table 3: Dry-weather flow summary at Each Rock Drain.

Date	Daily Avg (GPM)	Daily Min (GPM)	Daily Max (GPM)
11/14/2019	76	61	105
11/15/2019	79	61	105
11/16/2019	55	47	75
11/17/2019	64	56	73
11/18/2019	76	63	96
11/19/2019	72	49	129
11/23/2019	51	36	75
11/24/2019	50	38	76
11/25/2019	60	41	96
11/26/2019	61	38	116
11/30/2019	68	51	116
12/1/2019	58	50	68
12/2/2019	65	49	142
12/3/2019	54	36	97
12/5/2019	62	49	94
12/9/2019	62	45	113
12/10/2019	50	34	68
12/11/2019	48	32	72
12/12/2019	48	32	64
12/13/2019	46	30	81
12/14/2019	42	31	50
12/15/2019	45	30	82
12/16/2019	51	34	83
12/17/2019	40	31	52

4 Appendices

4.1 Water Quality monitoring - Chain of Custody forms

WATERSHED

Chain of Custody

51867

COC ID: COC-4593

Program:	Taylor Yard G2 Water Quality and Flow Monitoring	**Laboratory:**	Environmental Monitoring Division
Sampling Agency:	Watershed Protection Division	**Report Time Frame:**	30 Days Max
Contact Person:	Bryan Truong		
Address:		**Sampler Name:**	Carlos Aldape
Email:	Bryan.Truong@lacity.org	**Sampler Signature:**	[signature]
Phone:	3233421502		
Fax:			

Transfer	Relinquished By: (Name/Organization)	Received By: (Name/Organization)	Date/Time
1	Carlos Aldape WPD/PAS	Michelle Chan/EMD	11/14/19 12:10
2			
3			
4			

Print Date: November 13, 2019 *City of Los Angeles – Department of Public Works – Bureau of Sanitation* Page 1 of 2

WATERSHED PROTECTION DIVISION

COC ID: COC-4593

51867

WPD SAMPLE ID	STATION	START DATE	END DATE	MATRIX	TYPE	VOLUME (mL)	CONTAINER	PRESERVATIVES	# OF BOTTLES	ANALYTES	LAB SAMPLE ID
WPD-27655 -01	Eagle Rock Drain	11/14/2019 10:40		Sample Water	Grab	4625.00	Plastic	$Na_2S_2O_3$, None	7.00	Zinc; Cadmium (Dissolved), Beryllium, Total Phosphorus, Chromium, E. coli; Nitrate + Nitrite as N, Lead, Nitrate as N; Copper (Dissolved), Selenium; Nickel (Dissolved); Chromium (Dissolved); Arsenic, ANTIMONY, Lead (Dissolved); Zinc (Dissolved); Nitrogen, Total; Thallium (Dissolved), Beryllium (Dissolved), Nitrogen, Kjeldahl, Nickel, Hardness, Arsenic (Dissolved); Total Suspended Solids; Silver (Dissolved), Phosphate, Ortho, Selenium (Dissolved), Nitrite as N, MERCURY; SILVER, Nitrogen, Organic; Antimony (Dissolved), Aluminum (Dissolved), Aluminum; Cadmium, Iron (Dissolved), Copper, Chlorophyll a; Total Dissolved Solids; Ammonia as N, THALLIUM; Iron	

Remarks: 3.2°C pH<2 (metals, NH_3) (M) 11/14/19

Print Date: November 13, 2019 — City of Los Angeles – Department of Public Works – Bureau of Sanitation — Page 2 of 2

WATERSHED PROTECTION DIVISION

51867

Chain of Custody

COC ID: COC 4599

Program: Taylor Yard G2 Water Quality and Flow Monitoring

Sampling Agency: Watershed Protection Division

Contact Person: Bryan Truong

Address:

Email: Bryan.Truong@lacity.org

Phone: 3233421502

Fax:

Laboratory: Environmental Monitoring Division

Report Time Frame: 30 Days Max

Sampler Name: Johnathan Truong

Sampler Signature: [signature]

Transfer	Relinquished By: [Name/Organization]	Received By: [Name/Organization]	Date/Time
1	Johnathan Truong / WPD	Michelle Chan / EMD	11/19/19 / 10:00
2			
3			
4			

COC ID: COC-4599

51867

WPO SAMPLE ID	STATION	START DATE	END DATE	MATRIX	TYPE	VOLUME (mL)	CONTAINER	PRESERVATIVES	# OF BOTTLES	ANALYTES	LAB SAMPLE ID
WPD-27688	Eagle Rock Drain	11/19/2019 8:26		Sample Water	Grab	4625.00	Plastic	None; Na2S2O3	7.00	Phosphate, Ortho; THALLIUM; Copper (Dissolved); Nitrate as N; Nickel; Chromium; Aluminum; Total Dissolved Solids; Chlorophyll a, Chromium (Dissolved); Nitrogen, Kjeldahl; E. coli; ANTIMONY, Iron (Dissolved); Selenium (Dissolved), Beryllium; Nickel (Dissolved); Nitrogen, Organic; Arsenic; Thallium (Dissolved); Copper; Cadmium; SILVER, Hardness, Zinc (Dissolved); Cadmium (Dissolved); Nitrite as N; Zinc; Lead, Aluminum (Dissolved); Ammonia as N; Silver (Dissolved); Beryllium (Dissolved); Lead (Dissolved), Total Suspended Solids; Arsenic (Dissolved); Iron, Selenium; Nitrate + Nitrite as N, MERCURY; Antimony (Dissolved), Nitrogen, Total; Total Phosphorus	

Remarks. 4.9°C pH <2 (metals, NH3) @ 11/19/19

Print Date: November 19, 2019 — *City of Los Angeles – Department of Public Works – Bureau of Sanitation* — Page 2 of 2

WATERSHED PROTECTION DIVISION

4.2 Water Quality monitoring - Laboratory Results

Location	Customer Sample ID	Reported Comp Name	Reportable Result Formatted	Reportable Result Units	MDL	RL	ML	Collect Date	Collect Time	Matrix	Method	Analysis Date
Eagle Rock Drain	WPD-27655	Aluminum	208	ug/L	3.4	5	5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Aluminum (Dissolved)	16.8	ug/L	3.4	5	5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Ammonia as N	<0.05	mg/L	0.05	0.1	0.1	11/14/2019	10:40:00	Water	EPA 350.1	12/6/2019 8:29
Eagle Rock Drain	WPD-27655	Antimony	0.76	ug/L	0.2	0.5	0.5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Antimony (Dissolved)	0.57	ug/L	0.2	0.5	0.5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Arsenic	1.56	ug/L	0.05	1	1	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Arsenic (Dissolved)	1.38	ug/L	0.05	1	1	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Beryllium	0.08DNQ	ug/L	0.05	0.5	0.5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Beryllium (Dissolved)	<0.05	ug/L	0.05	0.5	0.5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Cadmium	0.18DNQ	ug/L	0.07	0.2	0.2	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Cadmium (Dissolved)	0.12DNQ	ug/L	0.07	0.2	0.2	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Chlorophyll a	<9	ug/L	9	14	14	11/14/2019	10:40:00	Water	SM 10200H	11/22/2019 13:00
Eagle Rock Drain	WPD-27655	Chromium	3.98	ug/L	0.4	0.5	0.5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Chromium (Dissolved)	0.97	ug/L	0.4	0.5	0.5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Copper	12.6	ug/L	0.1	0.5	0.5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Copper (Dissolved)	6.63	ug/L	0.1	0.5	0.5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	E. Coli	1100	MPN/100 mL		1	1	11/14/2019	10:40:00	Water	SM9223B	11/14/2019 10:39
Eagle Rock Drain	WPD-27655	Hardness	512	mg/L				11/14/2019	10:40:00	Water	SM 2340B	12/30/2019 9:58
Eagle Rock Drain	WPD-27655	Iron	0.451	mg/L	0.019	0.05	0.05	11/14/2019	10:40:00	Water	EPA 200.7	12/6/2019 11:08
Eagle Rock Drain	WPD-27655	Iron (Dissolved)	0.088	mg/L	0.019	0.05	0.05	11/14/2019	10:40:00	Water	EPA 200.7	12/6/2019 11:12
Eagle Rock Drain	WPD-27655	Lead	2.06	ug/L	0.06	0.5	0.5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Lead (Dissolved)	0.71	ug/L	0.06	0.5	0.5	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Mercury	<0.007	ug/L	0.007	0.2	0.2	11/14/2019	10:40:00	Water	EPA 7470A	11/26/2019 11:43
Eagle Rock Drain	WPD-27655	Nickel	4.64	ug/L	0.18	1	1	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Nickel (Dissolved)	3.16	ug/L	0.18	1	1	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Nitrate as N	2.79	mg/L	0.05	0.5	0.5	11/14/2019	10:40:00	Water	EPA 300.0	11/15/2019 8:53
Eagle Rock Drain	WPD-27655	Nitrite as N	<0.05	mg/L	0.05	0.5	0.5	11/14/2019	10:40:00	Water	EPA 300.0	11/15/2019 8:53
Eagle Rock Drain	WPD-27655	Nitrogen, Kjeldahl	1.2	mg/L	0.1	0.1	0.1	11/14/2019	10:40:00	Water	EPA 351.2	11/15/2019 13:16
Eagle Rock Drain	WPD-27655	Nitrogen, Organic	1.2	mg/L	0.08	0.1	0.1	11/14/2019	10:40:00	Water	EPA 351.2	11/15/2019 13:16
Eagle Rock Drain	WPD-27655	Phosphate, Ortho	0.78	mg/L	0.2	0.5	0.5	11/14/2019	10:40:00	Water	SM 4500-P E	11/14/2019 1:02
Eagle Rock Drain	WPD-27655	Phosphate, Total	1.47	mg/L	0.1	0.3	0.3	11/14/2019	10:40:00	Water	SM 4500-P E	11/26/2019 11:35
Eagle Rock Drain	WPD-27655	Selenium	18	ug/L	0.14	1	1	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Selenium (Dissolved)	17.4	ug/L	0.14	1	1	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Silver	0.243	ug/L	0.1	0.2	0.2	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Silver (Dissolved)	<0.1	ug/L	0.1	0.2	0.2	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Thallium	0.41DNQ	ug/L	0.07	1	1	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Thallium (Dissolved)	0.08DNQ	ug/L	0.07	1	1	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16
Eagle Rock Drain	WPD-27655	Total Dissolved Solids	836	mg/L	28	28	28	11/14/2019	10:40:00	Water	SM 2540C	11/19/2019 8:58
Eagle Rock Drain	WPD-27655	Total Suspended Solids	12.8	mg/L	1.4	2	2	11/14/2019	10:40:00	Water	SM 2540D	11/20/2019 9:47
Eagle Rock Drain	WPD-27655	Zinc	40.7	ug/L	0.58	1	1	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:12
Eagle Rock Drain	WPD-27655	Zinc (Dissolved)	33	ug/L	0.58	1	1	11/14/2019	10:40:00	Water	EPA 200.8	12/18/2019 12:16

Location	Customer Sample ID	Reported Comp Name	Reportable Result Formatted	Reportable Result Units	MDL	RL	ML	Collect Date	Collect Time	Matrix	Method	Analysis Date
Eagle Rock Drain	WPD-27688	Aluminum	130	ug/L	3.4	5	5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Aluminum (Dissolved)	77.5	ug/L	3.4	5	5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Ammonia as N	0.13	mg/L	0.05	0.1	0.1	11/19/2019	08:20:00	Water	EPA 350.1	11/25/2019 9:12
Eagle Rock Drain	WPD-27688	Antimony	0.54	ug/L	0.2	0.5	0.5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Antimony (Dissolved)	0.51	ug/L	0.2	0.5	0.5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Arsenic	1.23	ug/L	0.05	1	1	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Arsenic (Dissolved)	1.19	ug/L	0.05	1	1	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Beryllium	0.05DNQ	ug/L	0.05	0.5	0.5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Beryllium (Dissolved)	<0.05	ug/L	0.05	0.5	0.5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Cadmium	<0.07	ug/L	0.07	0.2	0.2	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Cadmium (Dissolved)	<0.07	ug/L	0.07	0.2	0.2	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Chlorophyll a	<8	ug/L	8	14	14	11/19/2019	08:20:00	Water	SM 10200H	11/22/2019 13:00
Eagle Rock Drain	WPD-27688	Chromium	3.93	ug/L	0.4	0.5	0.5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Chromium (Dissolved)	1.24	ug/L	0.4	0.5	0.5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Copper	7.46	ug/L	0.1	0.5	0.5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Copper (Dissolved)	4.53	ug/L	0.1	0.5	0.5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	E. Coli	<100	MPN/100 mL		1	1	11/19/2019	08:20:00	Water	SM9223B	11/19/2019 8:43
Eagle Rock Drain	WPD-27688	Hardness	373	mg/L				11/19/2019	08:20:00	Water	SM 2340B	12/30/2019 9:54
Eagle Rock Drain	WPD-27688	Iron	0.259	mg/L	0.019	0.05	0.05	11/19/2019	08:20:00	Water	EPA 200.7	12/6/2019 13:49
Eagle Rock Drain	WPD-27688	Iron (Dissolved)	0.052	mg/L	0.019	0.05	0.05	11/19/2019	08:20:00	Water	EPA 200.7	12/6/2019 13:53
Eagle Rock Drain	WPD-27688	Lead	0.85	ug/L	0.06	0.5	0.5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Lead (Dissolved)	0.22DNQ	ug/L	0.06	0.5	0.5	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Mercury	<0.007	ug/L	0.007	0.2	0.2	11/19/2019	08:20:00	Water	EPA 7470A	11/26/2019 11:45
Eagle Rock Drain	WPD-27688	Nickel	3.15	ug/L	0.18	1	1	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Nickel (Dissolved)	2.12	ug/L	0.18	1	1	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Nitrate as N	2.82	mg/L	0.03	0.3	0.3	11/19/2019	08:20:00	Water	EPA 300.0	11/19/2019 12:45
Eagle Rock Drain	WPD-27688	Nitrite as N	<0.03	mg/L	0.03	0.3	0.3	11/19/2019	08:20:00	Water	EPA 300.0	11/19/2019 12:45
Eagle Rock Drain	WPD-27688	Nitrogen, Kjeldahl	0.1	mg/L				11/19/2019	08:20:00	Water	EPA 351.2	12/11/2019 8:11
Eagle Rock Drain	WPD-27688	Nitrogen, Kjeldahl	0.6	mg/L	0.1	0.1	0.1	11/19/2019	08:20:00	Water	EPA 351.2	11/27/2019 9:54
Eagle Rock Drain	WPD-27688	Nitrogen, Organic	<0.08	mg/L	0.08	0.1	0.1	11/19/2019	08:20:00	Water	EPA 351.2	12/11/2019 8:11
Eagle Rock Drain	WPD-27688	Nitrogen, Organic	0.5	mg/L	0.08	0.1	0.1	11/19/2019	08:20:00	Water	EPA 351.2	11/27/2019 9:54
Eagle Rock Drain	WPD-27688	Phosphate, Ortho	0.28	mg/L	0.04	0.1	0.1	11/19/2019	08:20:00	Water	SM 4500-P	11/20/2019 10:31
Eagle Rock Drain	WPD-27688	Phosphate, Total	0.46	mg/L				11/19/2019	08:20:00	Water	SM 4500-P	11/20/2010 12:15
Eagle Rock Drain	WPD-27688	Selenium	12.1	ug/L	0.14	1	1	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Selenium (Dissolved)	11.8	ug/L	0.14	1	1	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Silver	<0.1	ug/L	0.1	0.2	0.2	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Silver (Dissolved)	<0.1	ug/L	0.1	0.2	0.2	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Thallium	<0.07	ug/L	0.07	1	1	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Thallium (Dissolved)	<0.07	ug/L	0.07	1	1	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26
Eagle Rock Drain	WPD-27688	Total Dissolved Solids	728	mg/L	28	28	28	11/19/2019	08:20:00	Water	SM 2540C	11/25/2019 8:36
Eagle Rock Drain	WPD-27688	Total Suspended Solids	5	mg/L	1.4	2	2	11/19/2019	08:20:00	Water	SM 2540D	11/20/2019 9:47
Eagle Rock Drain	WPD-27688	Zinc	17.2	ug/L	0.58	1	1	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:21
Eagle Rock Drain	WPD-27688	Zinc (Dissolved)	10.2	ug/L	0.58	1	1	11/19/2019	08:20:00	Water	EPA 200.8	12/18/2019 13:26

Appendix E Planning, Land Use, and Zoning

G2 TAYLOR YARD RIVER PARK PROJECT

TAYLOR YARD G2 RIVER PARK PROJECT PLANNING, LAND USE, AND ZONING REPORT

Prepared for:
The Bureau of Engineering
City of Los Angeles

Prepared by:

WSP
SUITE 800
444 SOUTH FLOWER STREET
LOS ANGELES, CA 90071
TEL: +1 213 362-9470
FAX: +1 213 362-9480
WSP.COM

July 2019

ENGINEERING
CITY OF LOS ANGELES

TABLE OF CONTENTS

1 INTRODUCTION AND PROJECT BACKGROUND

1.1 INTRODUCTION

The Los Angeles River is 51 miles long and was once the backbone of a vast system of riparian foothill, riverine, and freshwater marsh habitat that carried seasonal rains and subterranean flows to the coastal plain and the Pacific Ocean. Over time, increased urban development, flooding, and channelization have degraded the Los Angeles River ecosystem as segments have been encased in concrete banks and covered with a mostly concrete bed. As a result, plant and wildlife diversity and quality have diminished, and the river has become disconnected from its floodplain and significant ecological zones.

Restoration of the Los Angeles River has been a long-standing priority of the City of Los Angeles (City), and this is reflected in the Los Angeles River Revitalization Master Plan (Master Plan), adopted by the City Council in 2007. The Master Plan proposes a network of trails, parks, natural open spaces, wildlife habitat areas, recreational facilities, and more than 240 projects connecting five key opportunity areas, including the Taylor Yard G1 and G2 parcels. The Taylor Yard G1 and G2 parcels are also identified as a key opportunity in the U.S. Army Corps of Engineers' (USACE) Los Angeles River Ecosystem Restoration Feasibility Study, also known as the Area with Restoration Benefits and Opportunities for Revitalization (ARBOR) Study (USACE 2016).

Taylor Yard is a 244-acre site in the City, surrounded by the neighborhoods of Cypress Park, Elysian Valley, Glassell Park, Atwater Village, and Lincoln Heights. Taylor Yard was historically owned by Union Pacific Railroad (UPRR) and its predecessors for rail maintenance and fueling, servicing nearly all freight rail transport in and out of downtown Los Angeles until 1973, when most of the operations were moved elsewhere.

Taylor Yard was divided into 10 designated parcels: Parcels A, B, C, D, E, F, G, H, I, and J. Since the early 1990s, these various parcels have been developed for transportation facilities, industrial buildings, and commercial uses. Parcel G, formerly known as the Active Yard, was further divided into two parcels (G1 and G2), which were closed for operations in 2006. In 2009, all aboveground structures remaining on the G2 parcel—except for certain existing concrete slabs, footings, and foundations—were demolished. The G2 parcel (the Project site) is an approximately 42-acre site bounded by the Los Angeles River to the west, the Rio de Los Angeles State Park to the east, the State-owned Taylor Yard G1 parcel to the north, and the active Metrolink Central Maintenance Facility to the south.

1.2 PROJECT BACKGROUND

In 2017, the City purchased the Taylor Yard G2 parcel and initiated planning the Taylor Yard G2 River Park Project (the Project), which is considered the crown jewel of the City's Los Angeles River revitalization. Ultimately, the Project seeks to remediate contaminated soils on the site and restore habitat so that native flora and fauna return. The Project will bring nature into the City; respond sensitively to the unique local community and climate; create new linkages to upland areas; restore the environment; create natural habitat; protect and enhance water resources; provide significant new open space and recreation opportunities for a full range of users; and provide social, cultural, and environmental value to the region.

Three preliminary design concepts for the Project have been developed:

- **Island:** creates an island to separate river flows, mimic split flow channels, and provide multiple layers of riparian and upland habitat, consistent with ARBOR objectives.
- **Soft Edge:** creates a soft-edged river on the east bank with a significant amount of new riparian and upland habitat consistent with ARBOR objectives. The existing river channel would be modified to create a series of terraces.
- **The Yards:** maintains the river bank in its current configuration with the park developed east of the existing Los Angeles Department of Water and Power (LADWP) power lines along the river bank, providing riparian and upland habitat.

The purpose of this report is to describe the existing land use and zoning conditions on-site and to evaluate the potential opportunities and challenges for site development. The information in this document was prepared as a reference to support the internal design workshops and charrettes, grant applications, and environmental documentation.

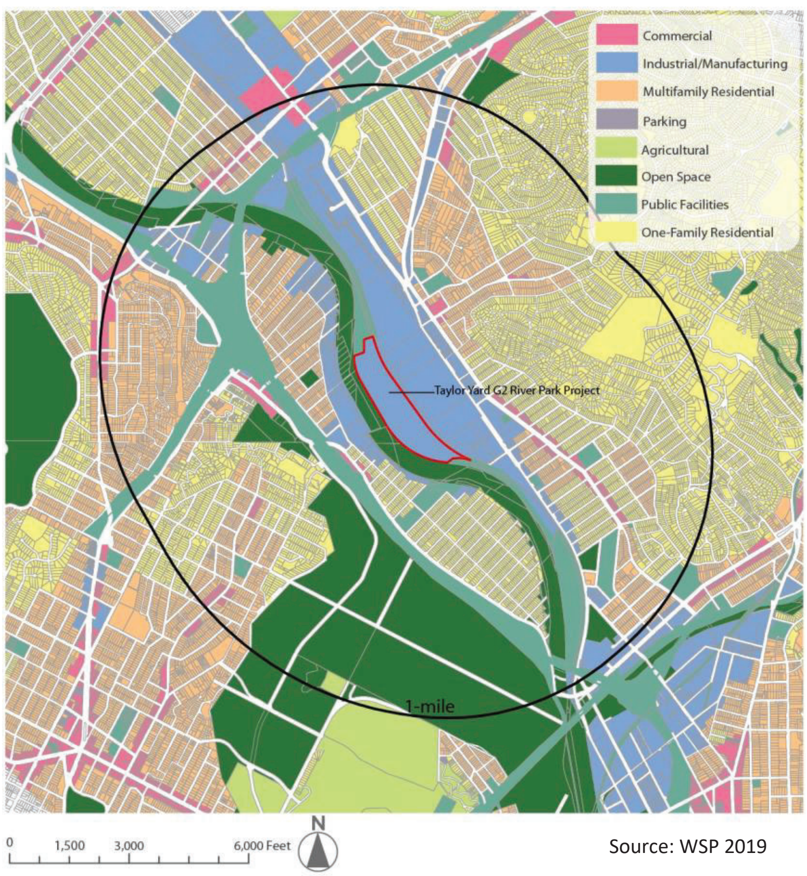
2 LAND USES AND DEVELOPMENT CHARACTERISTICS

The information provided herein is solely based on desktop analysis and does not include any field verifications or studies.

2.1 TAYLOR YARD EXISTING ZONING, LAND USES, AND CHARACTERISTICS

The Project site is currently zoned for two uses within the City's Planning and Zoning Code –Light Industrial (M2), and Heavy Industrial (M3), as shown in Figure 1. The City's Zimas online tool identifies a third zoning designation, Public Facilities (PF); however, the split between the G1 (Bowtie Parcel) and G2 (Project site) parcels, which is not reflected on the online tool, creates a dividing line that wholly eliminates the Public Facilities zone from the Project site. In addition, multiple special district regulations are applicable to the site, including the East Los Angeles State Enterprise Zone, River Improvement Overlay District, Cypress Park and Glassell Park Community Design Overlay District, and the Metro ROW Project Area. The current General Plan Land Use designations include Heavy Manufacturing and Public Facilities; however, the Northeast Los Angeles Community Plan designates the site solely as Public Facilities.

Figure 1. Area Zoning Map

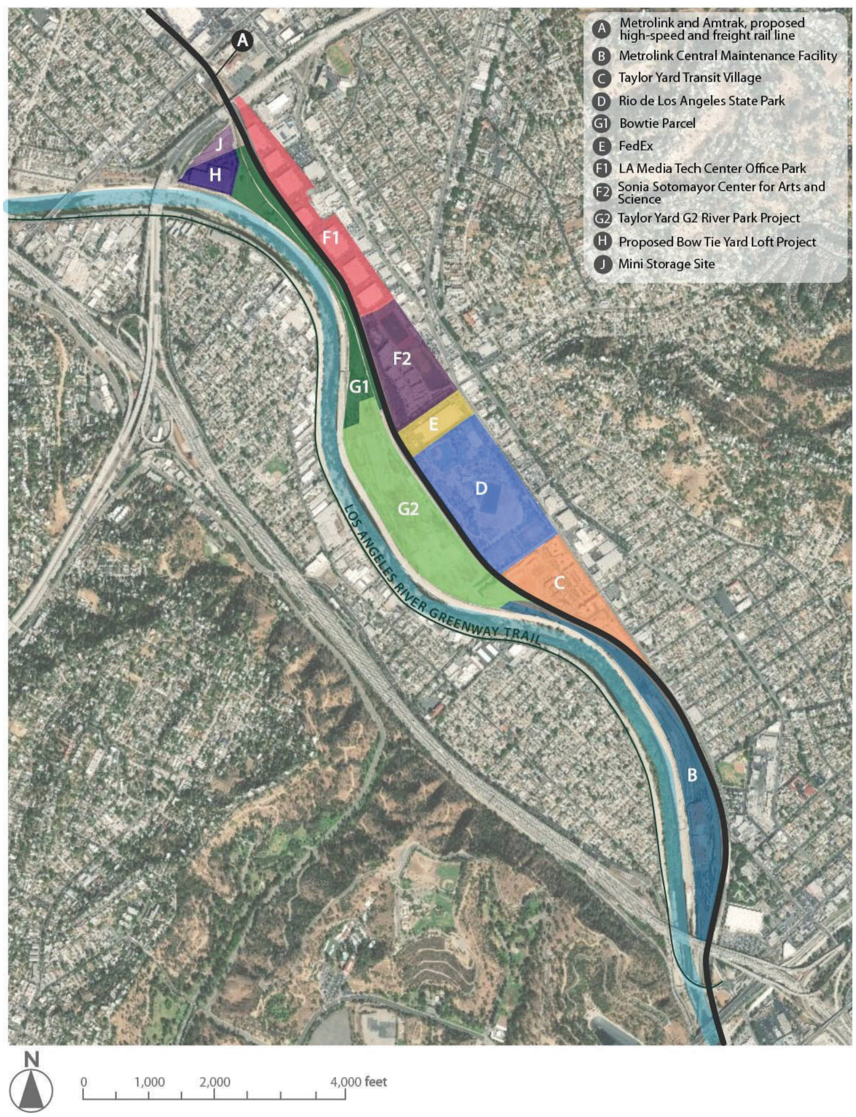


Source: WSP 2019

While historically the Project site has been associated with industrial and manufacturing uses, activities have expanded as revitalization efforts are implemented, including the following (Figure 2):

- Rio de Los Angeles State Park (Parcel D), which opened in 2007, and includes 40-acres of open space and recreational facilities like playing fields, tennis and basketball courts, playgrounds, and trails.
- Sonia Sotomayor Center for Arts and Sciences (Parcel F2), established in 2010, consisting of independent charter schools and Los Angeles Unified School District pilot schools.
- LA Media Tech Center (Parcel F1), built in 2001, comprised of a total of 397,000 square feet (Phase I) of research and development/industrial/office space.
- Taylor Yard Village to the south (Parcel C), a joint transit-oriented development with Metro, that includes a mix of single- and multi-family residential (including affordable units) and commercial retail uses. The development's master plan includes space to accommodate a future rail station.
- Proposed Bow Tie Lofts Project at the north end of the site (Parcel H), which would replace the existing manufacturing, warehousing, and film production uses with a mixed-use development that includes residential and commercial uses.

Figure 2. Taylor Yard Developments

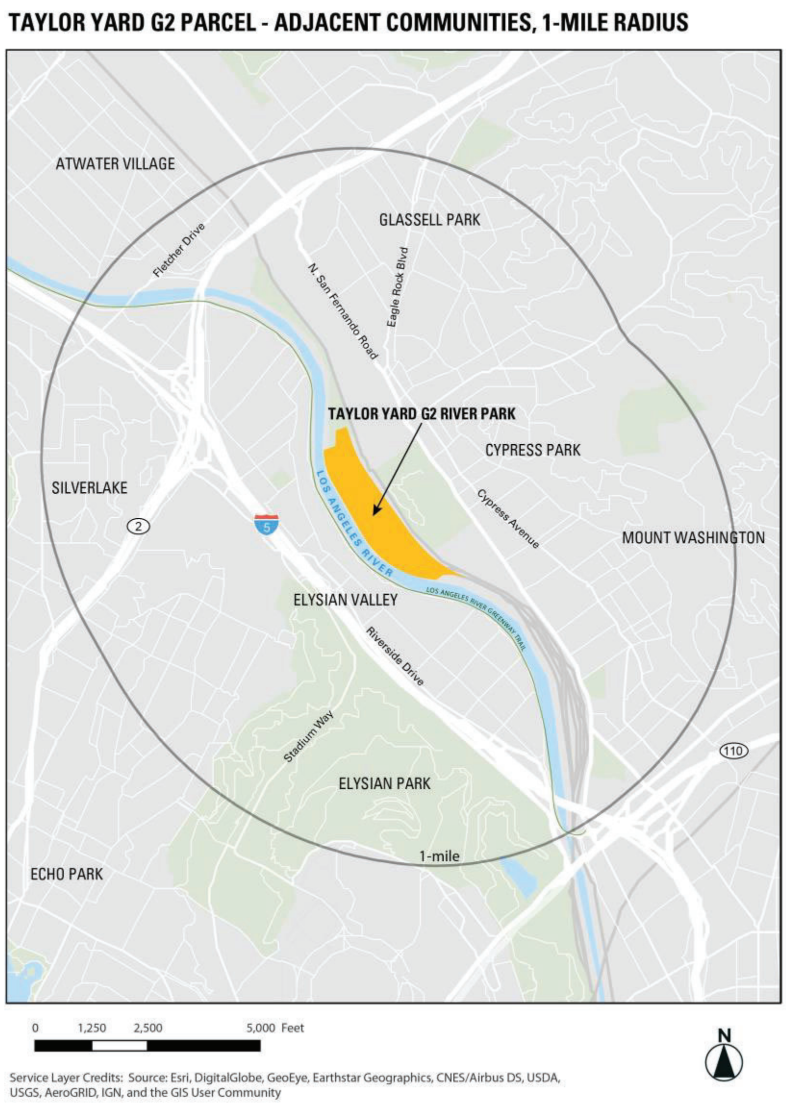


Source: WSP 2019

2.2 SURROUNDING COMMUNITY ZONING, LAND USES, AND CHARACTERISTICS

Surrounding the Project site are seven primary communities – Glassell Park, Cypress Park, and Mount Washington directly to the east; Atwater Village to the north, opposite SR 2; and Elysian Valley, Echo Park, and Silver Lake to the west across the Los Angeles River and Interstate (I) 5. The overall area is primarily bounded by major highways that include State Route (SR) 2 (north), I-5 (west), and SR 110 (south). Major arterial roadways near the site include North San Fernando Road, Eagle Rock Boulevard, and Cypress Avenue, and more indirectly, North Figueroa Street, Fletcher Drive, and Riverside Drive, Park, and Silver Lake to the west across the Los Angeles River and I-5. Figure 3 illustrates the general Project area site.

Figure 3. Project Area Neighborhood Map



Source: WSP 2019

The eastern neighborhoods (Glassell Park, Cypress Park, and Mount Washington) and northern neighborhood of Atwater Village are dominated by single-family residential uses under the R1 One-Family Zone, with additional uses flanking the major roadways such as:

— Multi-family residential (RD Restricted Density, R2 Two-Family Zone, and R3 Multiple Dwelling Zone)

— Industrial (M1 Limited Industrial, CM Commercial Manufacturing, MR Restricted Industrial, and M2 Light Industrial)
— Commercial (C1 Limited Commercial and C2/C4 Commercial)
— Agricultural and suburban designations (RA Suburban Zone and A1 Agriculture Zone)
— Public uses and facilities (PF Public Facilities)
— Parks and open space (OS Open Space)

The communities to the west of the site and river, including Elysian Valley, Echo Park, and Silver Lake, follow the same land use patterns and zoning designations; however, multi-family uses have a greater presence. The major outdoor recreation site Elysian Park is located within Elysian Valley/Echo Park, and is home to Dodger Stadium, park land, and hiking trails. While I-5 and the Los Angeles River present major physical barriers, the new Riverside Drive Bridge provides a new connection between Elysian Valley and the south end of the greater Project site. Additionally, the planned Taylor Yard Bikeway/Pedestrian Bridge will provide more direct connections from this neighborhood to the Project site.

3 GUIDING PLANS AND REGULATIONS

3.1 LOS ANGELES CITY ZONING CODE

3.1.1 ZONING DESIGNATIONS

Public Facilities (PF): The PF zone applies to land that is publicly owned and facilitates the development and implementation of the General Plan and, specific to this site, the Northeast Los Angeles Community Plan. Generally, development is not permitted unless it is "public" in nature – emergency response resources like fire and police stations, libraries, post offices, public health facilities, public schools, and government buildings are all permitted. The City Council may grant conditional use permits for other uses, including convention centers, water treatment facilities, flood control facilities and landfills, among others. Additionally, joint development as part of a public-private partnership may be permitted and granted by the Planning Director, provided the project proposes a use that is permitted within the most restrictive zones that are adjoining or adjacent to the property site. In the case of the Project site, the most restrictive zone on adjoining parcels is the CM Commercial Manufacturing zone, which would expand the types of commercial uses that are permitted.

Light and Heavy Manufacturing (M2 and M3): These zones are areas where industrial uses are permitted, and historically were located in industrial districts along freight lines or near the downtown. The M2 Light Industrial zone permits both light industrial uses, such as logistics, distribution, storage and warehousing, as well as commercial uses like offices and certain types of retail shops. In the M3 Heavy Industrial zone, permitted uses include manufacture or processing activities that involve chemicals or other potential environmental nuisances. In both zoning designations, any uses permitted in the "R" Residential districts are explicitly restricted. Per the zoning regulations, because the Project parcel is designated as Public Facilities on the applicable Northeast Los Angeles Community Plan land use map, any uses that are considered permitted within the zone must receive prior land use determination approval by the City Planning Commission (Section 12.24.1). This provision helps to ensure that the conflicts between zoning and general land use designations are addressed and that any development beyond the open space/public use is consistent with adjacent land uses and overall development of the community.

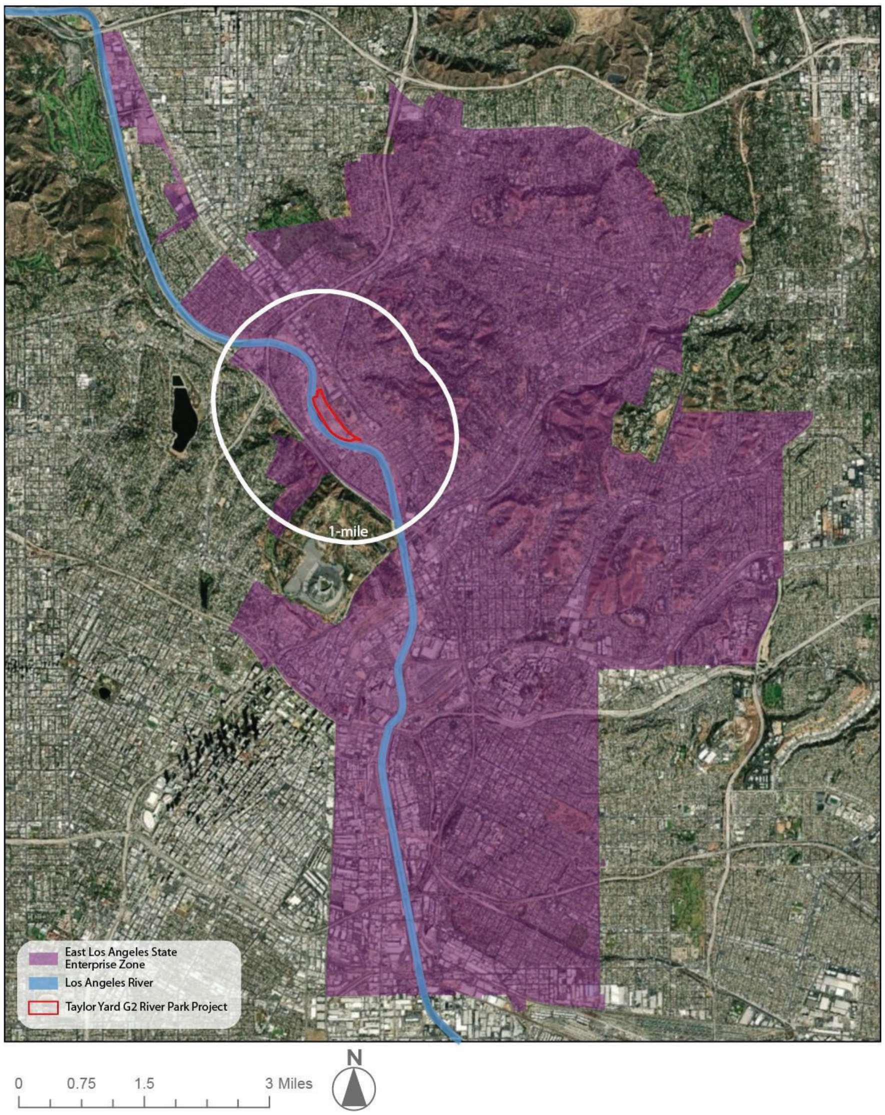
3.1.2 OVERLAY DISTRICTS AND SUPPLEMENTAL ZONING

In addition to the specific zoning regulations, four separate overlay districts and/or enterprise zones apply to the Project site that further define uses and development standards that will influence the Project.

East Los Angeles State Enterprise Zone: Designated state enterprise zones are areas that receive economic incentives from federal, state, and local government agencies, with a goal of stimulating the local economy through investment and employment opportunities. Incentives typically take the form of tax relief and exemption from certain regulations, as well as improvement of public services. The East Los Angeles State Enterprise Zone relaxes parking standards and height standards for developments.

Lower parking ratios are applied for specific uses (including commercial office, retail, restaurant, and bars, among others) to increase the amount of buildable space on the site. Increases in height restrictions further increase the amount of floor area permitted on the lot to three times the buildable area. Figure 4 illustrates the boundary of the East Los Angeles State Enterprise Zone.

Figure 4. Enterprise Zone Boundary



Source: WSP 2019

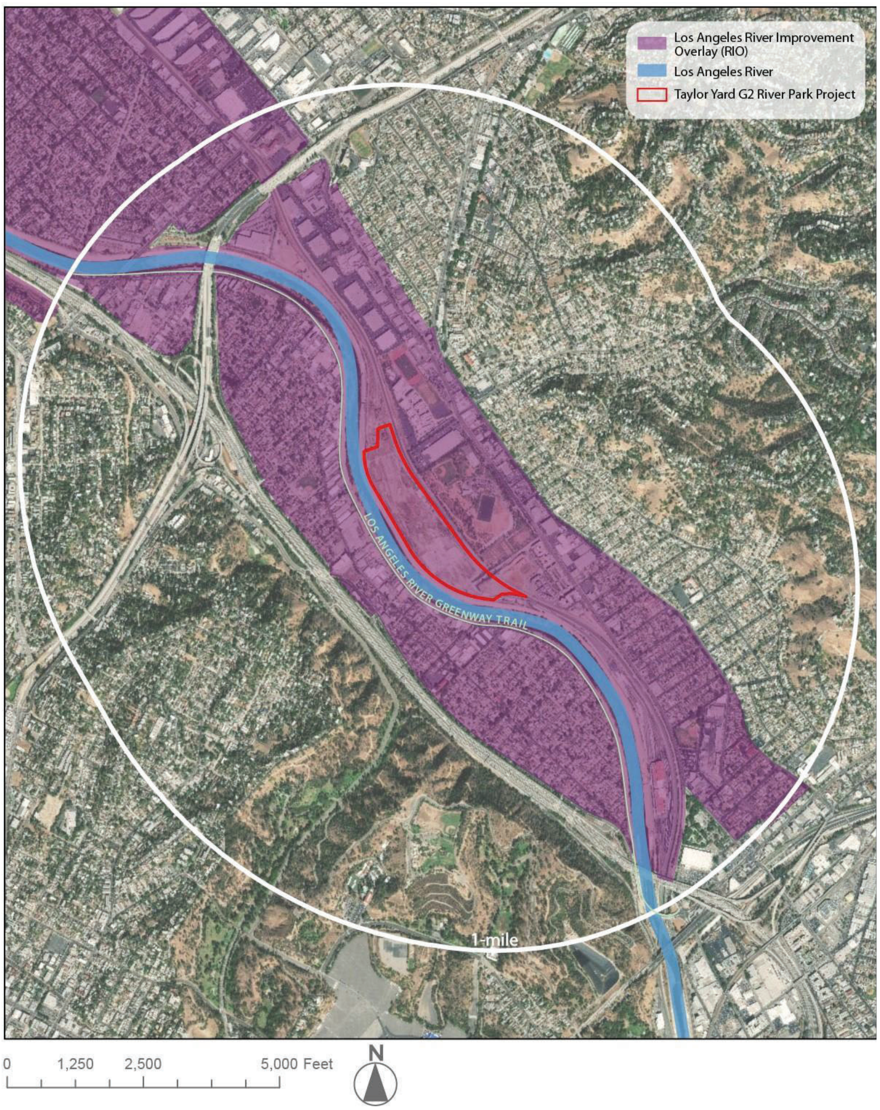
River Improvement Overlay District: The River Improvement Overlay (RIO) District (Figure 5) applies to parcels that are adjacent to rivers or tributaries throughout the City. The RIO District was adopted to support nine key elements, by which any projects within the RIO District must maintain consistency:

— Support the goals of the Master Plan;
— Contribute to the environmental and ecological health of the City's watersheds;
— Establish a positive interface between river adjacent properties and river parks and/or greenways;
— Promote pedestrian, bicycle, and other multi-modal connections between the river and its surrounding neighborhoods;
— Provide native habitat and support local species;

— Support an aesthetically pleasing environment for pedestrians and bicyclists accessing the river area;
— Provide safe, convenient access to and along the river;
— Promote the river identity of river adjacent communities; and
— Support the Low Impact Development Ordinance, the City's Irrigation Guidelines, and the Standard Urban Stormwater Maintenance Program.

Although specific uses are not allowed or restricted within the RIO District, development regulations as they relate to landscaping, screening/fencing, and exterior site lighting are included. In general, the regulations are intended to ensure that a project restores and reflects the natural indigenous landscape and environment along the Los Angeles River.

Figure 5. River Improvement Overlay District Boundary



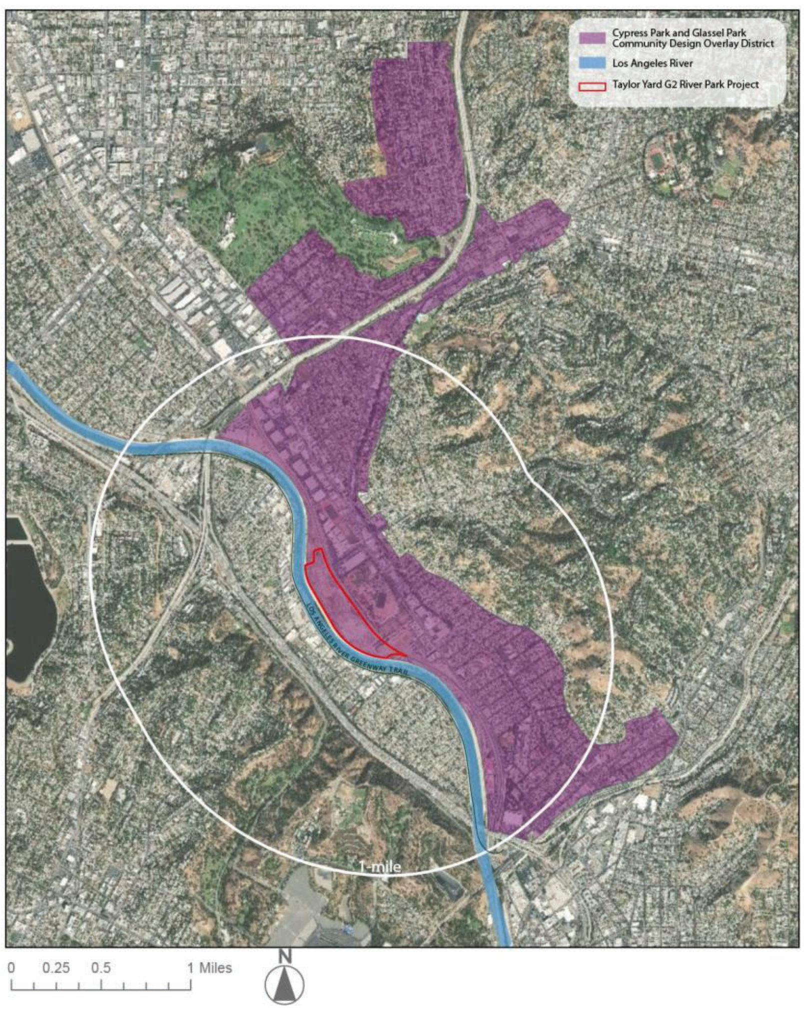
Source: WSP 2019

Cypress Park and Glassell Park Community Design Overlay District: This Community Design Overlay (CDO) District (Figure 6) was created to provide development guidelines for private and public projects within the CDO District's boundaries. The intent is to ensure that the neighborhood character, including historical resources, are preserved and restored, and that development creates a vibrant business district and pedestrian-oriented residential neighborhoods. Per the CDO Design Guidelines and Development Standards, CDO District goals include:

- Promote design for commercial projects which invite pedestrian interest and activity and communicate a sense of permanence to the area;
- Provide direction for site planning standards that facilitates ease of pedestrian movement and minimizes automobile and pedestrian conflicts;
- Reemphasize the underlying pedestrian scale that can exist within the existing Cypress Park and Glassell Park street network;
- Provide direction for storefront rehabilitation and guide new infill development that is consistent with successful commercial districts; and
- Preserve the historically and architecturally significant buildings in the CDO District including the residential neighborhoods and encourage new development that is appropriate for the surrounding neighborhood context.

To achieve these goals, guidelines and standards follow six principles – activity, pedestrian scale, transparency, individuality, contribution, and simplicity – that apply to site planning, architecture, and design (including buildings, landscaping, signage, and placement of mechanical equipment). Although there are a few categories of standards, only the Industrial Guidelines and Standards apply to the Project site, because there are no proposed residential uses and the site is not located on roadways specified (or on a "commercial street") within the Commercial Guidelines and Standards section.

Figure 6. Cypress Park and Glassell Park Community Design Overlay District Boundary



Source: WSP 2019

Metro Right-of-Way Project Area: For projects located within 100 feet of Metro-owned rail or bus rapid transit right-of-way, additional clearance from Metro may apply, depending on the proposed Project. Clearance is required for significant development activities that have the potential to impact operations or the stability of the transit infrastructure, such as demolition, excavation, new structures or large additions, tunneling/boring, seismic retrofitting, construction that requires the use of cranes, and truck delivery of concrete or other materials. Simple use of land without associated construction, minor improvements contained to the building, minor additions (under 500 square feet), and changes of use are exempt from Metro clearance.

3.2 LONG-RANGE PLANNING DOCUMENTS

3.2.1 GENERAL PLAN / COMMUNITY PLAN LAND USE

The City of Los Angeles' General Plan (General Plan, 2001) has nine separate elements, each outlining key goals, objectives, and policies for specific focus areas. Together, the General Plan guides development and other decision-making related to management of the City's resources, economic vitality, and future growth. The City is currently undergoing an update to the General Plan, called OurLA2040. The new 20-year vision and plan is slated to be completed and adopted in 2020; as such, the most recent complete version has been reviewed during this study, of which two elements (Mobility 2035 and Health and Wellness) have been incorporated within the last 4 years. Although many policies that may influence the development at the Project site are presented within each of the various elements, the most relevant are summarized below.

3.2.1.1 FRAMEWORK ELEMENT

One of the most influential elements in the General Plan is the Framework element, which makes up the Land Use Element along with the different Community Plans. The Framework Element provides long-range policies and guidance on how the City responds to anticipated growth from a land use perspective. The policies guide all land use decision making and inform the updates to each of the Community Plans, which provide neighborhood-level and localized land use strategies to carry-out the greater General Plan objectives. Specific goals and objectives relative to the Project site are presented below, in addition to the regulations and policies under the guiding Northeast Los Angeles Community Plan.

Land Use: The general land use designations under the current General Plan are Heavy Manufacturing and Public Facilities. As discussed later in the section, however, the designation of the Community Plan provides the underlying land use, which is classified as Public Facilities. There are no specific goals in the Land Use section related to Public Facilities uses. The Land Use Chapter of the Framework Element identifies two key issues – Distribution of Land Use and Uses, Density and Characteristics – and related goals, objectives, and policies.

— Goal 3A: A physically balanced distribution of land uses that contributes towards and facilitates the City's long-term fiscal and economic viability, revitalization of economically depressed areas, conservation of existing residential neighborhoods, equitable distributions of public resources, conservation of natural resources, provision of adequate infrastructure and public services, reduction of traffic congestion and improvement of air quality, enhancement of recreation and open space opportunities, assurance of environmental justice and a healthful living environment, and achievement of the vision for a more livable city.
  — Objective 3.1: Accommodate a diversity of uses that support the needs of the City's existing and future residents, businesses, and visitors.
  — Objective 3.2: Provide for the spatial distribution of development that promotes an improved quality of life by facilitating a reduction of vehicular trips, vehicle miles traveled, and air pollution.

Open Space and Conservation: This section of the Framework Element guides the preservation and management of the City's open space resources and outdoor recreation needs.

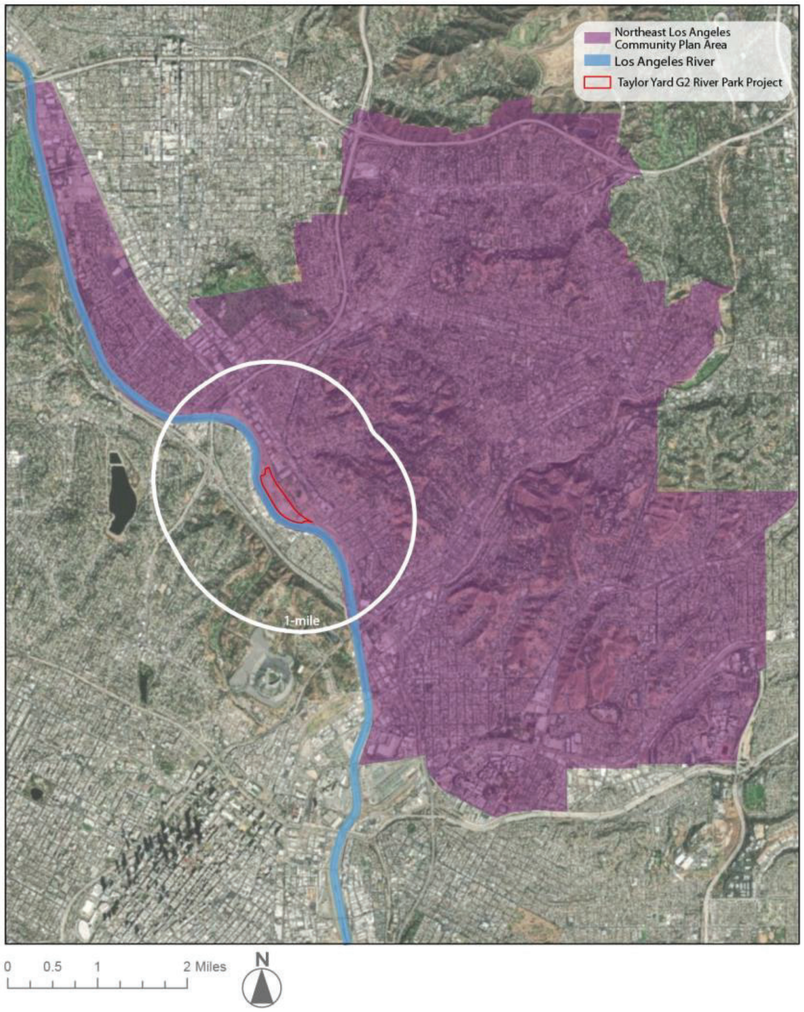
- Goal 6A: An integrated citywide/regional public and private open space system that serves and is accessible by the City's population and is unthreatened by encroachment from other land uses.
  - Objective 6.1: Protect the City's natural settings from the encroachment of urban development, allowing for the development, use, management, and maintenance of each component of the City's natural resources to contribute to the sustainability of the region.
  - Objective 6.2: Maximize the use of the City's existing open space network and recreation facilities by enhancing those facilities and providing connections, particularly from targeted growth areas, to the existing regional and community open space system.
  - Objective 6.3: Ensure that open space is managed to minimize environmental risks to the public.
  - Objective 6.4: Ensure that the City's open spaces contribute positively to the stability and identity of the communities and neighborhoods in which they are located or through which they pass.
  - Objective 6.5: Provide adequate funding for open space resource management and development.

Infrastructure and Public Services: To support growth and maintain a high quality of life for area residents, the City must provide adequate public infrastructure and services. The City has identified 13 systems that are addressed in this chapter of the Framework Element; however, three (stormwater, recreation and parks, and urban forest) are directly related to the Project:

- Goal 9B: A stormwater management program that minimizes flood hazards and protects water quality by employing watershed-based approaches that balance environmental, economic, and engineering considerations.
  - Objective 9.6: Pursue effective and efficient approaches to reducing stormwater runoff and protecting water quality.
  - Objective 9.7: Continue to develop and implement a management practices-based stormwater program which maintains and improves water quality.
- Goal 9L: Sufficient and accessible parkland and recreation opportunities in every neighborhood of the city, which gives all residents the opportunity to enjoy green places, athletic activities, social activities, and passive recreation.
  - Objective 9.22: Monitor and forecast demand for existing and projected recreation and park facilities and programs.
  - Objective 9.23: Complete all currently programmed parks and recreation capital improvements by the year 2010, contingent on available funding.
  - Objective 9.24: Phase recreational programming and park development with growth.
- Goal 9Q: A sustainable urban forest that contributes to overall quality of life.
  - Objective 9.41: Ensure that the elements of urban forestry are included in planning and programming of infrastructure projects which involves the modification of dedicated parkway, sidewalk, and/or raised median islands.

Northeast Los Angeles Community Plan: The Northeast Los Angeles Community Plan (Figure 7) provides neighborhood-level land use strategies and present land use designations that effectively serve as the underlying framework for all future development-related decisions. As mentioned previously, the Northeast Los Angeles Community Plan has categorized the Project parcel as Public Facilities, while adjacent properties primarily have Industrial designations.

Figure 7. Northeast Community Plan Boundary



Source: WSP 2019

- Goal 3 (Industrial Land Uses): Sufficient land for the range of industrial uses necessary to provide maximum employment opportunities, especially for local residents; that are safe for the environment and work force; and have minimal adverse impact on adjacent uses and infrastructure resources.
  - Objective 3-1: To resolve conflicts between industrial uses and other adjacent uses.
  - Objective 3-2: To provide for existing and future industrial uses that contribute job opportunities for residents and minimize adverse environmental and visual impacts on the community.
- Goal 4 (Open Space): Sufficient open space, in balance with development, to serve the recreational, environmental, and health needs of the community and to protect environmental and aesthetic resources.
  - Objective 4-2: To preserve existing open space resources and, where possible, encourage acquisition of new open space.
- Goal 5 (Recreation and Park Facilities): Adequate recreation and park facilities to meet the needs of the residents in the Plan Area.
  - Objective 5-1: To conserve, expand, maintain, and better utilize existing recreation and park facilities to address the recreational needs of the community.
- Goal 10 (Circulation): To the extent feasible and consistent with the Mobility Plan 2035's and Community Plans' policies promoting multi-modal transportation and safety, a system of freeways and streets that provides a circulation system which supports existing, approved, and planned land uses while maintaining a desired level of service at intersections.

- Goal 12 (Public Transportation): A coordinated, integration of development around transit stations to improve services, access, and economic vitality of the community.
  - Objective 12-1: To reflect the objectives and guiding principles of the City Council adopted Land Use Transportation Policy.
- Goal 13 (Non-Motorized Transportation): A system of safe, efficient, and attractive pedestrian, bicycle, and equestrian facilities.
  - Objective 13-1: To promote an adequate system of safe bikeways for commuter, school and recreational use.
  - Objective 13-2: To promote pedestrian-oriented areas, greenways, and pedestrian routes for commuter, school, recreational use, economic revitalization, and access to transit facilities.
- Goal 15 (Economic Development): The revitalization of a physical environment conducive to increasing and improving economic activity.
  - Objective 15-1: To improve the visual environment of existing commercial and industrial areas.
- Goal 16 (Economic Development): The coordination of resources generating economic activity in order to maximize their impact.
  - Objective 16-1: To identify public and private resources generating economic activity within the community.

3.2.1.2 MOBILITY ELEMENT

In 2016, the Los Angeles City Council adopted Mobility Plan 2035 (Plan), serving as the Transportation/Circulation Element of the General Plan. This updated element reflects the evolving transportation landscape and how it can respond to the recent and forecast growth and development. More specifically, the purpose of the Plan "is to present a guide to the further development of a citywide transportation system which provides for the efficient movement of people and goods."

The Mobility Plan 2035 outlines objectives and policies for five key topic areas – Safety First; World Class Infrastructure; Access for All Angelenos; Collaboration, Communication and Informed Choices; and Clean Environments and Healthy Communities. The Plan differs from other elements in that it provides clear metrics to achieve; as such, for clarity purposes, this section outlines applicable policies for each of the topic areas below.

Safety First

- Policy 1.5 Railroad Crossings: Reduce conflicts and improve safety at railroad crossings through design, planning, and operation.
- Policy 1.9 Recreational Trail Safety: Balance user needs on the City's public recreational trails.

World Class Infrastructure

- Policy 2.3 Pedestrian Infrastructure: Recognize walking as a component of every trip, and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.
- Policy 2.6 Bicycle Networks: Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities.
- Policy 2.12 Walkway and Bicycle Accommodations: Design for pedestrian and bicycle travel when rehabilitating or installing a new bridge, tunnel, or exclusive transit right-of-way.
- Policy 2.15 Allocation of Transportation Funds: Expand funding to improve the built environment for people who walk, bike, take transit, and for other vulnerable roadway users.

Access for All Angelenos

- Policy 3.1 Access for All: Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes – including goods movement – as integral components of the City's transportation system.
- Policy 3.2 People with Disabilities: Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.
- Policy 3.3 Land Use Access and Mix: Promote equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services.
- Policy 3.5 Multi-modal Features: Support "first-mile, last-mile" solutions such as multi-modal transportation services, organizations, and activities in the areas around transit stations and major bus stops to maximize multi-modal connectivity and access for transit riders.
- Policy 3.8 Bicycle Parking: Provide bicyclists with convenient, secure and well-maintained bicycle parking facilities.

Collaboration, Communication, and Informed Choices

- Policy 4.3 Fair and Equitable Treatment: Ensure the fair and equitable treatment of people of all races, cultures, incomes and education levels with respect to the development and implementation of citywide transportation policies and programs.
- Policy 4.4 Community Collaboration: Continue to support the role of community engagement in the design outcomes and implementation of mobility projects.
- Policy 4.10 Public-Private Partnerships: Encourage partnerships with community groups (residents and business/property owners) to initiate and maintain enhanced public rights-of-way projects.
- Policy 4.14 Wayfinding: Provide widespread, user-friendly information about mobility options and local destinations, delivered through a variety of channels including traditional signage and digital platforms.

Clean Environments and Healthy Communities

- Policy 5.1 Sustainable Transportation: Encourage the development of a sustainable transportation system that promotes environmental and public health.
- Policy 5.2 Vehicle Miles Traveled: Support ways to reduce vehicle miles traveled per capita.

3.2.1.3 HEALTH AND WELLNESS ELEMENT

The City adopted a new element of the General Plan in 2015, Plan for a Healthy Los Angeles, the Health and Wellness Element. As part of the City's vision for a healthy city, the Plan for a Healthy Los Angeles' policies address the need for access to parks and open space, active transportation resources to increase physical activity, and balancing a multi-modal transportation system. Specific policies relevant to the Project are summarized below.

Bountiful Parks and Open Space

- Policy 3.1 Park Funding and Allocation: Strive for the equitable distribution of park space in every Los Angeles neighborhood by focusing public funds and other resources on the most underserved areas.
- Policy 3.2 Expand Parks: Improve Angelenos' mental and physical health by striving to equitably increase their access to parks, increasing both their number and type throughout the city; prioritize implementation in most park-poor areas of the city.
- Policy 3.3 Los Angeles River: Continue to support the implementation of the Master Plan to create a continuous greenway of interconnected parks and amenities to extend open space and recreational opportunities.
- Policy 3.6 Local Partnerships: Engage communities and public, private, and nonprofit partners in park stewardship by working collectively to develop, program, and maintain parks and open spaces: target communities with the lowest combination of park access and park standard criteria.
- Policy 3.7 Water Recreation: Encourage greater community access to pools, beaches and rivers for swimming, boating, fishing and other recreational uses.
- Policy 3.8: Active Spaces: Support public, private, and nonprofit partners in the ongoing development of new and innovative active spaces and strategies to increase the number of Angelenos who engage in physical activity across ages and level of abilities.

An Environment Where Life Thrives

- Policy 5.1 Air Pollution and Respiratory Health: Reduce air pollution from stationary and mobile sources; protect human health and welfare and promote improved respiratory health.
- Policy 5.2 People: Reduce negative health impacts for people who live and work in close proximity to industrial uses and freeways through health promoting land uses and design solutions.
- Policy 5.5 Brownfield Remediation: In collaboration with residents and public, private, and nonprofits partners, explore opportunities to continue to remediate and redevelop brownfield sites to spur economic development, expand natural open spaces and parks, community gardens, and other similar health-promoting community revitalization activities particularly in the city's most underserved neighborhoods.
- Policy 5.7 Land Use Planning for Public Health and GHG Emission Reduction: Promote land use policies that reduce per capital greenhouse gas emissions, result in improved air quality and decreased air pollution, especially for children, seniors and others susceptible to respiratory diseases.

3.2.2 LOS ANGELES RIVER REVITALIZATION MASTER PLAN

The Master Plan (City of Los Angeles 2007) sets forth a 25- to 50-year vision for transforming the 32-mile-long stretch of the Los Angeles River within the City into a living, green spine connecting nature and communities. The vision includes planning for both the near-term improvements and improvements over generations, acknowledging that the revitalization of the Los Angeles River will serve as a catalyst that can drive related revitalization initiatives. Long-term goals to achieve the Master Plan's vision include:

- Revitalize the river
- Enhance flood storage
- Enhance water quality
- Enable safe public access
- Restore a functional ecosystem
- Green the neighborhoods
- Create a continuous river greenway
- Connect neighborhoods to the river
- Extend open space, recreation, and water quality features into neighborhoods
- Enhance river identity
- Incorporate public art along the river
- Capture community opportunities
- Make the river the focus of activity
- Foster civic pride
- Engage residents in the community planning process and consensus building
- Provide opportunities for educational and public facilities
- Celebrate the cultural heritage of the river
- Create value
- Improve the quality of life
- Increase employment, housing, and retail space opportunities
- Create environmentally-sensitive urban design and land use opportunities and guidelines
- Focus attention on underused areas and disadvantaged communities

The Master Plan also includes five opportunity areas, which are designed as early examples of how the Master Plan can be implemented. The Project site is one of these five areas for more detailed development of revitalization concepts. Specific to the Project site, the Master Plan identified natural and open space considerations – restoration of riparian habitat, naturalization of the river channel, and creation of a large water quality treatment wetland.

Revitalization within the Master Plan is not defined only as physical and environmental revitalization, but also economic revitalization. Environmental remediation increases land values and strengthens the overall community; this can lead to increased investment within the surrounding neighborhoods in businesses as well as infrastructure improvements.

3.3 ENVIRONMENTAL DOCUMENTS

Given the complex nature of the Project and the site's industrial history, a significant amount of environmental study work has been completed to better understand the implications previous uses have on the land as well as opportunities for restoration and reuse. Studies range from feasibility studies to standard Initial Studies/Mitigated Negative Declarations to water quality assessments. The most applicable studies related to actual development plans and reuse are summarized below, but this discussion does not represent all studies that have been completed for the Project site.

3.3.1 ARBOR STUDY

The Los Angeles River Ecosystem Restoration Feasibility Study (USACE 2016), often referred to as the ARBOR or "Area with Restoration Benefits and Opportunities for Revitalization" Study, evaluated the restoration of 11 miles of the Los Angeles River from approximately Griffith Park to downtown Los Angeles, known as the Glendale Narrows. Restoration efforts would reestablish riparian strand, freshwater marsh, and aquatic habitat communities, reconnecting the Los Angeles River to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo Mountains while maintaining existing levels of flood risk management. Additionally, a secondary purpose of the restoration is to provide recreational opportunities consistent with the restored ecosystem within this 11-mile reach of the river. The three ARBOR objectives that the Project focuses on are:

- Restore valley foothill riparian strand and freshwater marsh habitat
- Restore valley foothill riparian wildlife habitat types
- Restore aquatic freshwater marsh communities
- Restore native fish habitat
- Restore supporting ecological processes and biodiversity
- Restore a more natural hydrologic and hydraulic regime to reconnect the Los Angeles River to historic floodplains/tributaries
- Reduce velocities
- Increase filtration
- Improve natural sediment processes
- Increase Habitat Connectivity
- Increase connectivity between the Los Angeles River and historic floodplain
- Increase nodal connectivity for wildlife between restored habitat patches and nearby significant ecological zones (Santa Monica Mountains, Verdugo Hills, Elysian Hills, and San Gabriel Mountains.)
- Increase Passive Recreation
- Include recreation that is compatible with restored environment

3.3.2 TAYLOR YARD MULTIPLE OBJECTIVE FEASIBILITY STUDY

In 2002, the California State Coastal Conservancy commissioned a study to determine the feasibility of implementing various projects at the Project site. The Taylor Yard Multiple Objective Feasibility Study (Everest International Consultants, Inc. 2002) was a result of the 1996 passing of Proposition 204, which allocated bond funds for improving water quality and increasing parks through restoration of riparian habitat and other methods. The study assessed the feasibility of projects that include habitat restoration, flood storage improvement, and recreation enhancement, understanding that historical land uses both on- and off-site have contributed to significant contamination of the soil and groundwater that can impact the site's rehabilitation. Four alternatives were developed to address the study's overall goal:

- The first alternative was developed to optimize flood storage improvement;
- The second focused on habitat diversity, which features connection to the Los Angeles River and a diverse palette of native plant species;
- The third optimized upland habitat areas to reduce impacts to extensive soil excavation providing riparian and emergent wetlands habitat, and included walking trails and nature centers; and
- The fourth alternative was the closest attempt to restore the natural floodplain using a variety of habitat types and involved removing or relocating the levee to provide direct access to the river's edge as well as nature trails and nature centers.

Ultimately the study showed that implementation of a multiple-objective project is feasible and that impacts and costs would increase with a larger scaled project, although these impacts and costs would decrease with the implementation time.

3.4 OTHER GUIDING PLANNING DOCUMENTS, PLANS, AND STUDIES

3.4.1 COMMON GROUND PLAN

The Watershed and Open Space Plan for the San Gabriel and Los Angeles Rivers, or Common Ground Plan (Santa Monica Mountains Conservancy 2016), was completed as a joint effort between the California Resources Agency, Rivers and Mountains Conservancy, and Santa Monica Mountains Conservancy, with the intention to support local, state, and federal planning efforts related to open space and site restoration within the Los Angeles River watershed. The Common Ground Plan did not establish specific recommendations; rather, guiding principles were established as framework and supported with discussion of potential projects that could achieve the vision. The vision developed during the study was "Restore balance between natural and human systems in the watershed." The following section provides a summary of the guiding principles, as well as potential strategies and opportunities for success.

3.4.1.1 GUIDING PRINCIPLES

- Grow a Greener Southern California
- Create, Expand, and Improve Public Open Space Throughout the Region

- Improve Access to Open Space and Recreation for All Communities
- Improve Habitat Quality, Quantity, and Connectivity
- Connect Open Space with a Network of Trails
- Promote Stewardship of the Landscape
- Encourage Sustainable Growth to Balance Environmental, Social, and Economic Benefits
- Enhance Waters and Waterways
- Maintain and Improve Flood Protection
- Establish Riverfront Greenways to Cleanse Water, Hold Floodwaters, and Extend Open Space
- Improve Quality of Surface Water and Groundwater
- Improve Flood Safety Through Restoration of River and Creek Ecosystems
- Optimize Water Resources to Reduce Dependence on Imported Water
- Plan Together to Make It Happen
- Coordinate Watershed Planning Across Jurisdictions and Boundaries
- Encourage Multi-Objective Planning and Projects
- Use Science as a Basis for Planning
- Involve the Public Through Education and Outreach Programs
- Utilize the Plan in an On-Going Management Process

3.4.1.2 STRATEGIES

To realize the guiding principles, six strategy topics were presented: education, partnerships, funding, multi-objective planning, management, and monitoring and assessment. These strategies will help to guide more Project-specific studies, plans, and work programs for various state, local, and federal agencies.

3.4.1.3 OPPORTUNITIES

In addition to general strategies, the Common Ground Plan also outlines four specific opportunity areas for agencies, cities, and other groups:

Land Acquisition, Connectivity, and Open Space

- River Parkways: Focuses on the development of continuous open space, trails, active and passive recreation areas, and wildlife habitat along area rivers, including the Los Angeles River.
- Urban Lands: Focuses on the acquisition of parcels in urban areas that can support open space, recreation, and habitat restoration uses/efforts, such as brownfields.
- Mountains, Foothills, and Hills: Focuses on the acquisition of mountain and hillside land for habitat restoration and open space preservation.
- Tributaries: Focuses on provision of open space and trails in urbanized areas to extend river parkways for pedestrian and bicycle paths, as well as environmental and habitat restoration.
- Trails and Bike Paths: Focuses on the creation of a robust pedestrian, bike, and equestrian trail network along existing corridors, such as the Los Angeles River.
- Community Gardens: Focuses on the creation of a network of community gardens that showcase native vegetation within the urbanized areas along watersheds/waterways, with a goal of providing gardening opportunities to all communities.

Public Access

- Existing Facilities: Focuses on the enhancement of existing open space, through coordination efforts between the State Conservancies and local jurisdictions/agencies.
- New Facilities: Focuses on identification of new open space opportunities, including new facilities, land donations, and securing conservation easements.

Water Resources

- Flood Protection: Focuses on the enhancement and maintenance of flood protection through a variety of infrastructure and natural methods.
- Surface Water: Focuses on the improvement of water quality through treatment of urban runoff.
- Groundwater: Focuses on the expansion and enhancement of groundwater infiltration and recharge.

Native Plants and Wildlife

- Habitat/Corridors: Focuses on preservation and protection of important natural habitats found in watershed areas. This includes habitat linkages and/or corridors in the Los Angeles River area.

- Wetlands: Focuses on the restoration and expansion of wetlands and suggests incorporation of wetland areas as elements of the natural environment and for restoration activities.

The Plan includes next steps for moving forward with implementation of the vision, and discusses incorporating the guiding principles, strategies, and project opportunities into major plans like the Master Plan.

3.4.2 RIM OF THE VALLEY CORRIDOR SPECIAL RESOURCE STUDY

The Rim of the Valley Corridor is defined as the area that generally includes the mountains encircling the San Fernando, La Crescenta, Santa Clarita, Simi, and Conejo Valleys. The Rim of the Valley Corridor Special Resource Study (National Park Service 2016) was designed to determine the suitability and feasibility of designating all or a portion of the corridor as a unit of the Santa Monica Mountains National Recreation Area, and methods and means for protection and interpretation of the corridor by the National Park Service, as well as other federal, state, and local government and non-profit entities.

Recreation and park land access was included in the Study and determined that there is an opportunity to transform underutilized urban land along the Los Angeles River into pocket parks and other corridor or greenway systems. These types of projects, such as the River Park Project, would help to address the clear need for parks and open space in the urban areas of Los Angeles, especially those within or adjacent to disadvantaged and/or low-income communities.

4 DEVELOPMENT CHALLENGES AND OPPORTUNITIES

4.1 DEVELOPMENT CHALLENGES

In addition to the general environmental remediation challenges associated with reuse of a brownfield site, land use and development challenges would primarily involve the site's ability to integrate with the surrounding communities, site access, and continuity and compatibility with adjacent land uses.

The Project site is landlocked with no direct frontage along North San Fernando Road, the major arterial roadway, and the existing active rail right-of-way further separating access between the Project site and parcels directly adjacent to the east. There is a single roadway, Kerr Road, located at the south end of the Rio De Los Angeles State Park off North San Fernando Road that provides access to the Project site, and includes a rail crossing, which will connect the Project site with the new Taylor Yard Bikeway/Pedestrian Bridge slated for construction in 2019. These conditions not only create potential restrictions with site access and visibility for those entering from the roadway, but the lack of direct connectivity poses a challenge to uniting with Glassell Park and Cypress Park and remaining in keeping with the governing Community Design Overlay Districts.

Industrial-zoned land dominates the Project area. Although these uses are slowly being replaced with less intensive uses, such as office parks and mixed-use developments, there is still somewhat of a lack of identity surrounding the Project site that has resulted from these shifting patterns. Existing uses like the Metrolink rail maintenance facility or the FedEx shipping facility that abut or are close to the Project site may continue to present some conflicts with redevelopment and environmental restoration of the site. Given the direct adjacency to the Los Angeles River and the Rio De Los Angeles State Park, the connection with the Los Angeles River Greenway Trail, this type of potential incompatibility may be minimized.

4.2 DEVELOPMENT OPPORTUNITIES

Although none of the site's current zoning or land use designations explicitly cite open space or parks as a permitted or planned use, nothing precludes such a use either. To provide a level of permanence with the Project site and ensure that the development of a park facility is in keeping with the broader goals set forth within the Master Plan, General Plan, and Community Plan, and zoning overlay districts, the City may wish to rezone the parcel from Public Facilities/Industrial to Open Space. Doing so would provide continuity with the Open Space designation directly adjacent along the Los Angeles River and would preserve the restoration of the site by prohibiting future uses that may be incompatible or reverse the effects of the remediation work.

Based on the applicable zoning and land use plans that have been developed for Los Angeles, increasing open space and recreation opportunities for residents is a priority of the City and conservation groups. Distinct and attractive parks can contribute to the public health, increase surrounding land values, and enhance economic development. To ensure consistency with these visions and the intent of the guiding documents for the City, such as the General Plan and the more localized Northeast Los Angeles Community Plan, development at the Project site is likely to garner the most support by focusing activities on beautification and habitat restoration, as well as expansion of bicycle and pedestrian trails, including connections to the Los Angeles River Greenway Trail. The Project site is a critical piece of the Master Plan and associated greenway system and will serve as an important asset to the surrounding communities.

Emphasis within the development of the site should also include ways to connect to the adjacent communities, not just physically but culturally as well. The River Improvement Overlay District, for example, cites the promotion of the River identity of adjacent communities as a priority; similarly, the applicable Cypress Park and Glassell Park Community Design Overlay emphasizes the need for projects to focus on the connectivity between Project sites and the adjacent neighborhood. These visions and those of all guiding documents suggest that weaving in other uses that could benefit the adjacent neighborhoods would be powerful additions to a project. Uses such as pop-up art installations or galleries that feature local community artists or an onsite café or a food court that invites local restaurants on a revolving basis could not only strengthen community identity, but could also offer employment opportunities that help to support economic development goals.

The Project could help to illustrate the land use evolution from the historical industrial uses towards an emphasis on preservation of Los Angeles' natural and indigenous resources. Elements within the site's design, such as art work, benches, and wayfinding, can help to implement the visions outlined in many of the area's plans by reflecting the rich history of the site and educating users on the importance of restoration and preservation. Natural site components could also include projects such as a community garden, which would generate numerous benefits related to education, community building, and habitat restoration, among others.

REFERENCES

City of Los Angeles. 2001. Department of City Planning General Plan, Framework Element

City of Los Angeles. 2007. Los Angeles River Revitalization Master Plan

City of Los Angeles. n.d. Planning and Zoning Code, Zone Information & Map Access System (ZIMAS). Available: http://zimas.lacity.org/

City of Los Angeles. 2009. Cypress Park and Glassell Park Community Design Overlay District Ordinance No. 180541

City of Los Angeles. 2015a. Los Angeles River Improvement Overlay District (LA-RIO) Ordinance Nos. 183144 and 183145

City of Los Angeles. 2015b. Department of City Planning General Plan, Health and Wellness Element

City of Los Angeles. East Los Angeles State Enterprise Zone. Available: http://zimas.lacity.org/documents/zoneinfo/ZI2129.pdf

City of Los Angeles. 2016a. Department of City Planning General Plan, Mobility Element

City of Los Angeles. 2016b. Department of City Planning, Northeast Los Angeles Community Plan

City of Los Angeles. 2018. Metro ROW Project Area, http://zimas.lacity.org/documents/zoneinfo/ZI1117.pdf

CWE. 2018. Taylor Yard Water Quality Supplemental Analysis

Everest International Consultants, Inc. 2002. Taylor Yard Multiple Objective Feasibility Study, Prepared for the California State Coastal Conservancy. June.

Los Angeles County. 2007. Los Angeles River Master Plan. Available at: http://larivermasterplan.org/.

National Park Service. 2016. Rim of the Valley Corridor Special Resource Study.

Santa Monica Mountains Conservancy. 2001. Common Ground Plan

USACE (U.S. Army Corps of Engineers). 2016. “Los Angeles River Ecosystem Restoration Feasibility Study.”

Appendix F Draft Final Comment Log

G2 TAYLOR YARD RIVER PARK PROJECT

Date	Name	Email	Organization	Chapter, Section, or Topic	Comment	Response
2/11/2021 16:29	Anonymous 1			General Comments	Ive been enjoying Taylor yard for many years and have long held the vision of it being a natural Playground. So glad to see it happening! Im hoping that the 3 proposals are modifiable as there are elements of each that should be combined as one, regardless of which is chosen. ie Riverside Ampitheatre. Tall running/viewing hills. Perhaps built up from the torn out channel concrete like the one in Piggyback yd, and covered w dirt. With trails, stairs & viewing platform. North river bridge should be far to the north, not midway. Walk/bike bridge to Rio de LA park. The G2 pit should be restored and allowed for continually overlapping grafitti, w perhaps additional graffiti walls nearby (like Venice Beach). The park name should be a Tongvan word. Largescale Burningman style climbable Art (for us big kids), along with simple 'Parkour' features that would show up along the running/biking path as a creative crosstraining experience. 2000+ Trees! Lets hava forest section. incl The Sycamore grove. NO game fields!! There are too damn many already and it completely changes the vibe of "Natural" with the noise & obnoxious lights. Beautifully landscaped open field that could host small Art/food festivals. Im just deaming here, but if the Towers are relocated, one could be left up, with stairs inside for the most epic running/viewing platform ever! (Ill admit to having climbed them many times and the perspective from there def challenges your preconceived notions of our city). Perhaps (still dreaming) another Tower could be used for a Zipline over to a park accross the river :} And of couse Art throughout! Thank you all for such carefull considerations in restoring & creating this crown jewel.	Thank you for submitting your design ideas, they will be included in future design discussions. All three proposed site planning options are modifiable and modular.
3/23/2021 0:00	Carrie Sutkin	carrieasutkin@gmail.com	Elysian Valley Riverside Neighborhood Council	General	Why isn't city parks and city planning involved?	Both the City of Los Angeles Departments of Recreation and Parks and Planning have been and will continue to be involved throughout the process.
4/15/2021 0:00	Louise Steiner	oodfay48@gmail.com		General	Hello, all the plans sound reasonable. I am hesitant to be totally on board as I do not like the idea of the Army Corps ofEngineers having anything to do with it. They have created may ecological disasters and are known for spending enormous amounts of unaudited money. Also aplus to line politicians and contractors pockets will no accountability. Other than their involvement the ideas sound good.	Noted
4/19/2021 17:38	Anonymous 2			Chapter 9	The Elysian Heights / Silverlake neighborhoods along the valley split by the 2 could really benefit from access to the park, but crossing the 5 is very difficult / unpleasant. It would be wonderful to have improved pedestrian / bike routes along Newell and Gilroy that go under the 5. Doing so could even revitalize the old commercial corridor along Riverside Dr. Thanks!	Your perspective has been noted and will be included in future design discussions.
4/21/2021	Andrew Birch	andyrbirch@yahoo.com		General	Hi, my name is Andy Birch and a local birder (LA Audubon consultant/member and LA Birdersboard member). I and others have been doing bird surveys along this stretch of the LA River forseveral decades. The adjacent, small section of riparian habitat at Rio de Los Angeles that iscurrently managed by California State Parks should be held as a model for how to re-wild an urbanarea. Bell's Vireos, Yellow-breasted Chats, Blue Grosbeak and other uncommon riparian breedershave quickly returned and are thriving at Rio de Los Angeles. Hopefully, the same care to creating and managing the riparian habitat at Rio de Los Angeles canbe extended to Taylor Yard to connect the two habitats (of course a railway line running throughthe middle) to create one large, critically important area of relatively undisturbed riparian habitat. In response to the results of the questionnaire that showed the vast majority of respondentswanted nature and to connect to nature for the new Taylor Yard, it would be good to see themaximum amount of square footage given to riparian habitat instead of yet more buildings egmuseums, amphitheaters for concerts, research buildings etc, especially as the buildings accountfor $250m of the budget. Also, contrary to what is stated in the IRF page 8.163, breeding has been confirmed for both LeastBell's Vireo and Yellow-breasted Chat at adjacent Rio de Los Angeles State Park as recently as2020.	Thank you for this information and the further information provided via email conversation. Specifically provided were the following links: https://ebird.org/checklist/S70813715, https://ebird.org/checklist/S70313826, https://ebird.org/checklist/S70827107, https://ebird.org/checklist/S29909019. The IFR refers to published studies available during the preparation of this report. Further biological surveys will be conducted during the environmental review process for future projects. We look forward to working with you and other local birders throughout the process.
4/21/2021 21:55	Anonymous 3			Chapter 8	Contrary to what is stated in the IRF page 8.163, breeding has been confirmed for both Least Bell's Vireo and Yellow-breasted Chat at adjacent Rio de Los Angeles State Park as recently as 2020.	The IFR refers to published studies available during the preparation of this report. Further biological surveys will be conducted during the environmental review process for future projects.
4/21/2021 21:58	Anonymous 4			Chapter 9	In response to the results of the questionnaire that showed the vast majority of respondents wanted nature and to connect to nature for the new Taylor Yard, it would be good to see the maximum amount of square footage given to riparian habitat instead of yet more buildings eg museums, amphitheaters for concerts, research buildings etc, especially as the buildings account for $250m of the budget.	Noted
4/26/2021 11:48	Anonymous 5			General Comments	It really seems like you are internally sold on the island concept. As a community member, I think it's more important that you give people access to all areas of the park. I also think that you need to clarify that parking will not be charged for local residents.	Thank you for you input. Priorities for the parcel include habitat and therefore not all areas will be accessible to the public. Regarding the cost of parking, financing and revenue-generation plans will be developed as the Project moves forward and your concerns will be discussed.
				General Comments	You need to talk more about bike connectivity. Right now the bridge is going to drop people onto San Fernando, which is a death trap. How will they get up to Cypress Ave?	We hear and appreciate your concerns. Opportunties for improving connectivity to surrounding communities will be studied on a project-by-project basis. Please see the LADOT's Mobility Plan 2035 and 2010 Bike Plan, both available at the following link: https://ladotlivablestreets.org/content-detail/AT-Documents-Resources.
				General Comments	How are you going to ensure that the people you displace who are currently living on site will not be negatively impacted by the development of the site?	The City coordinates placement of unhoused individuals and we will work with City resources to reach out to people on-site.

Date	Name	Email	Organization	Chapter, Section, or Topic	Comment	Response
				Impacts to the Los Angeles River through Diversions or Reduced Flows	As currently proposed, all design options for the Project are likely to impact streams either through temporary or permanent modifications. The Project may modify the LA River by modifying the channel, creating platforms and bridges that would hang over the channel, and installing diversion structures. **Recommendation:** CDFW recommends the City include an analysis whereby each design proposal is considered to include potential impacts on biological resources resulting from proposed water diversion. At a minimum, an analysis and should include: ***Study Reach*** 1) A study reach that includes an additional length of channel downstream from a project site. The additional study reach should extend a minimum of 1 mile downstream, or to the extent of the LA River downstream that could be expected to be affected similarly by a proposed project (hydraulic and ecological zones), or an appropriate distance determined by both a qualified biologist and hydrologist, whichever is greater. ***Changes to Hydrology and Hydraulics*** 1) Under pre-project (i.e., baseline) conditions, the volume of water flow from both the project area and study reach during a) the wet (November through March); b) the dry season (April through October); and c) above-average and below-average water year (i.e., wet season/above-average water year, wet season/below-average water year, dry season/above-average water year, and dry season/below-average water year). The analysis should clearly define above-average or below-average rainfall year. 2) Under proposed project conditions, the percent reduction in flow from both the project area and study reach for a wet season/above-average water year, wet season/belowaverage water year, dry season/above-average water year, and dry season/belowaverage water year. 3) A quantitative analysis comparing the flow from the project area and other tributaries into the study reach, and their relative contribution to the hydrograph of the study reach. 4) An analysis of potential project-related changes to river hydraulics in both concrete and soft-bottom reaches. This includes water depth (percent change), wetted perimeter (acres gained/lost), and velocity (percent change). 5) An analysis of estimated water usage, including volumes withheld from the LA River, to create and maintain the restored habitats for each of the design options. ***Biological Resources Impact Assessment*** 1) A map of plant communities and important bird foraging and nesting habitat occurring in the study reach. Plant communities should be mapped at the alliance/association level using the Manual of California Vegetation (MCV), second edition (Sawyer et al. 2009). Also, CDFW recommends an updated and thorough floristic-based assessment of plant communities, following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018). 2) A comprehensive list of sensitive and special status plant and wildlife species, and sensitive plant communities, occurring in the study reach. For each biological resource, provide: a. A summary of species-specific habitat requirements; b. A discussion as to how the species or plant community may be significantly impacted directly or indirectly through habitat modification, as result of changes to hydrology (reduced flow) and hydraulics (water depth, wetted perimeter, velocity); and, c. A quantitative analysis and/or adequate discussion to evaluate whether the project would result in those significant impacts. 3) A discussion of whether construction, operations, and maintenance of diversion devices such as rubber dams, pipes, and tunnels, would have direct and/or indirect, permanent or temporal impact on biological resources. 4) An adequate discussion to address how the project may potentially affect on-going habitat recovery and restoration efforts. 5) An adequate discussion of project-related impacts on biological resources in relation to cumulative flow reductions. **Recommendation:** CDFW recommends avoidance of water practices and structures that use excessive amounts of water. In addition, CDFW recommends minimization of impacts that negatively affect water quality to the extent feasible (Fish & G. Code, § 5650).	The City of Los Angeles greatly appreciates the time and effort the CDFW put into reviewing the IFR. These comments and recommendations will be evaluated during Pre-Design and Design phases.
				Detailed Accounting for all Project-related Impacts	The IFR provides a general analysis of the current habitat characteristics, such as vegetation, wildlife species, aquatic species, and hydrology. CDFW is concerned that the vegetation located within the LA River along the Project site has not been categorized according to MCV classification, either by species or by alliance/vegetation community. As this habitat is known to support sensitive species (e.g., least Bell's vireo), accurate reporting of the vegetation type and acreage is vital in analyzing the potential impacts of the proposed Project designs. **Recommendation:** A thorough Impact Analysis should contain quantitative or qualitative descriptions of the Project site and impacts resulting from each component of the proposed Project designs. From this detailed accounting of impacts, the necessary mitigation can be planned for and thresholds for success can be established for the restoration efforts to be described in a monitoring and management plan. **Recommendation:** CDFW recommends identifying measured acreages of impacts to each of the sensitive habitats, using plant community descriptions found in the MCV that will be directly and indirectly impacted by Project-related activities. This impact analysis should include estimates of impacts resulting from all components of the Project, such as: -- removal or demolition of eastern concrete bank of the LA River; -- diversion of flows from the LA River; -- impounded sediment removal and excavation; -- temporary storage areas for excavated sediments; -- final deposition of excavated sediments; -- equipment staging areas; -- access roads; -- shading effects on habitat by bridges and overhangs; -- vegetation clearing and removal; -- estimated loss of sensitive vegetation on-site, adjacently in the LA River, or downstream (including temporary loss); and, -- estimated loss of habitat on-site or downstream (including temporary loss) in relation to sensitive wildlife and aquatic species reliant upon that habitat.	The City of Los Angeles greatly appreciates the time and effort the CDFW put into reviewing the IFR. These comments and recommendations will be evaluated during Pre-Design and Design phases.
				Impacts to Riparian Vegetation through Invasive Management	The Project is likely to impact riparian vegetation located in the LA River. Page of 8.163 describes the riparian habitat along the western edge of the Project site as "existing native vegetation includes willow, cottonwoods, box elders, Arizona ash, cattails, bulrush, and aquatic plants." Figure 8-1. Habitat Restoration in Reach 6 of the USACE Ecosystem Plan shows a map of the Project site and surrounding parcels with general overlays for potential modifications. It shows extensive "Invasive management" through the entire stretch of LA River that runs along the Project site. From this figure, it appears that nearly all vegetation located in the LA River is subject to "invasive management". CDFW is concerned that the invasive management program may result in type conversion of riparian and wetland habitat. If riparian vegetation is removed without appropriate mitigation, the resulting habitat type could be considered "open water" or "river". CDFW, as described in Fish and Game Code section 703(a), is guided by the Fish and Game Commission's policies. The Wetlands Resources policy of the Fish and Game Commission "…seek[s] to provide for the protection, preservation, restoration, enhancement and expansion of wetland habitat in California. Further, it is the policy of the Fish and Game Commission to strongly discourage development in or conversion of wetlands. It opposes, consistent with its legal authority, any development or conversion that would result in a reduction of wetland acreage or wetland habitat values. To that end, the Commission opposes wetland development proposals unless, at a minimum, Project mitigation assures there will be 'no net loss' of either wetland habitat values or acreage. The Commission strongly prefers mitigation which would achieve expansion of wetland acreage and enhancement of wetland habitat values" (CFGC 2005). **Recommendation:** The final design option for the Project should yield a greater acreage of riparian habitat, with similar species composition and density, than at the outset. According to State policy, there should be no net loss of riparian habitat within the LA River.	The City of Los Angeles greatly appreciates the time and effort the CDFW put into reviewing the IFR. These comments and recommendations will be evaluated during Pre-Design and Design phases.

Date	Name	Email	Organization	Chapter, Section, or Topic	Comment	Response
4/28/2021	Erinn Wilson-Olgin		California Department of Fish & Wildlife	Impacts to Least Bell's Vireo	The Project is likely to impact least Bell's vireo (Vireo bellii pusillus; LBV) found adjacent to the Project site within the LA River. According to page 8.163, during multiple surveys conducted by the United States Army Corps of Engineers (USACE), "LBV were detected in 2007, in 2009 during another survey, and again in 2013 in the Project vicinity, but breeding or nesting behavior has not been observed (USACE 2015)." A review of California Natural Diversity Database (CNDDB) includes multiple historic observations of LBV throughout the Glendale Narrows portion of the LA River. Project-related activities, such as diversion of flows of the LA River, vegetation clearing, introduction of noise, fugitive dust, and noise are likely to impact LBV in the LA River. **Recommendation #1:** CDFW recommends the City perform appropriate protocol surveys for LBV, available through the CDFW website, prior to Project construction (CDFW 2021b). The survey(s) should be performed based on the species found, or likely to occur, on the Project's site. Survey results including negative findings should be submitted to CDFW and United States Fish and Wildlife Service (USFWS) prior to implementing Project related ground disturbing activities. **Recommendation #2:** CDFW recommends fully avoiding impacts to LBV. The City should submit an avoidance plan to CDFW for review and comment. A final avoidance plan should be fully developed prior to implementing Project related ground disturbing activities. **Recommendation #3:** If "take" or adverse impacts to LBV cannot be avoided either during Project activities or over the life of the Project, the City must consult CDFW to determine if a California Endangered Species Act (CESA) Incidental Take Permit (ITP) is required (pursuant to Fish & Game Code, § 2080 et seq.) and with USFWS to determine if an ESA Incidental Take Statement (ITS) is required, prior to construction. Appropriate authorization from CDFW may include an Incidental Take Permit (ITP) or a Consistency Determination in certain circumstances, among other options [Fish & G. Code, §§ 2080.1, 2081, subds. (b) and (c)]. Early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit. Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.	The City of Los Angeles greatly appreciates the time and effort the CDFW put into reviewing the IFR. These comments and recommendations will be evaluated during Pre-Design and Design phases.
				Climate Change Scenarios	The IFR indicates that flow capacity for the Glendale Narrows reach of the LA River is well below capacity for a 100-year storm event. Page ES.20 states, "The existing design flow capacity in the River adjacent to the Project site is significantly less than the flow generated from a 100-year flood event. A 1992 analysis by the United States Army Corps of Engineers (USACE) showed the River channel capacity meets the 57-year flood level with the design cross-sections. The 2016 study by the USACE showed that this capacity has been further reduced by sediment deposition and plant growth in the River at this location. The existing capacity does not include climate change considerations and may underestimate future rainfall volumes and intensities. The USACE study includes an increased flow of 93,800 cubic feet per second, which reduces the channel capacity to an 11-year capacity." Based on the USACE evaluations, the Project site does not currently have the capacity to handle flows during large storm events. CDFW is concerned that the proposed design options for the Project may still not meet the necessary capacity for altered flows resulting from various climate change scenarios. **Recommendation:** CDFW recommends including potential climate change scenarios for flood and storm events in the hydraulic analysis. In the California State Wildlife Action Plan, climate change is identified as a significant stressor on the Conservation Targets and Strategies for all habitat types in the South Coast Region (CDFW 2105). Flow regimes, such as intensity, duration, or frequency of storm events, may change in the LA River due to climate change. Each of the proposed designs have their own strengths and weaknesses that may become more disparate with altered climate regimes. Each proposed design should be evaluated to consider multiple potential scenarios resulting from climate change.	The City of Los Angeles greatly appreciates the time and effort the CDFW put into reviewing the IFR. These comments and recommendations will be evaluated during Pre-Design and Design phases.
				Impacts of Recreation on Wildlife	The Project proposes to create recreational opportunities along the LA River where opportunities do not currently exist. These opportunities include pedestrian/bike trails, educational facilities, lookouts, boardwalks, channel access points, and pavilions. Recreational usage of the Project site may not be compatible with the goal of creating high-quality protected habitat. Increased visitor uses and recreation along the LA River has potential to impact wildlife and habitat through a variety of ways, including: -- Increased numbers of people and dogs; -- Increased area of influence; -- Increased noise levels; -- Increased trash or pet waste; -- Introduction of unnatural food sources via trash and trash receptacles; -- Loss of habitat due to erosion from non-official footpaths; and, -- Loss of habitat due to introduction or spread of invasive plant species. Wildlife could become displaced or extirpated from otherwise functional habitat where recreational activities are created or increased. Direct impacts on wildlife may include energetic costs to the animal, nest abandonment, reduced reproductive success, and reduced fitness. Seasonal closures alone may be insufficient to mitigate for the Project's potential to displace or extirpate wildlife. The City may have to reconsider removing or restricting certain recreational elements, such as kayaking in the LA River, in order to minimize impacts to nearby sensitive species and habitats. **Recommendation #1:** CDFW recommends the City include a thorough analysis of the impacts of recreational activities on biological resources for each of the design options. The results of the recreational usage analysis should be applied to selecting the preferred design option. At a minimum, an analysis should include: 1) potential direct and indirect impacts on wildlife as a function of each type of recreational activity proposed and associated increases in human activity, noise, and lighting; and, 2) potential for wildlife entanglement in furnishings (e.g., perimeter fencing or netting around fields or park space) associated with each recreational activity. **Recommendation #2:** CDFW recommends the City incorporate design elements that will functionally avoid known breeding and nursery sites for sensitive and special status species (e.g., LBV). At a minimum, a project should restrict or modify trails, trail dimensions, number of trails, spatial arrangement of trails, access points, and all recreation-related structures to avoid sensitive areas. An appropriate setback should consider the species (e.g., alert and flight initiation distances) and type and intensity of recreational use proposed (e.g., trail, pavilion, lookout). A project should restrict activities that are likely to have greater impacts such as dog walking and kayaking near sensitive and special status species habitat. A project should restrict the size of gathering areas such as pavilions to limit the number of users to a smaller group.	The City of Los Angeles greatly appreciates the time and effort the CDFW put into reviewing the IFR. These comments and recommendations will be evaluated during Pre-Design and Design phases.

Date	Name	Email	Organization	Chapter, Section, or Topic	Comment	Response
				Clustering of design elements	Chapter 8 of the IFR includes an analysis of edge effects on each of the proposed designs. A scoring system is used to generate rankings of the designs in how they may create habitats that are impacted by the nearby artificial structures (e.g., buildings, trails, lookouts). The IFR recognizes that the proposed designs can be improved. Page 8.196 states that "All the design options spread relatively intensive uses throughout the Project site. Clustering uses and moving them away from the River's edge will improve edge effect scores." CDFW is concerned that the proposed design options for the Project may yield lower quality restored habitat and potentially impact existing habitat by creating an increased area of influence from human-wildlife interface across the Project site. **Recommendation:** CDFW recommends clustering all buildings, trails, and artificial structures in a manner that allows for the maximal creation of natural habitat that is not adjacent to or bisected by artificial structures. Higher quality habitat is generally considered to be free of influence from artificial sources. By keeping natural areas designated as sensitive habitat isolated, rather than interspersed among artificial structures throughout the Project site, the relative site-specific edge effects will be kept to a minimum.	The City of Los Angeles greatly appreciates the time and effort the CDFW put into reviewing the IFR. These comments and recommendations will be evaluated during Pre-Design and Design phases.
4/30/21	Juan Corral	jccorral2@yahoo.com		General	The public comment link for the Taylor Yard G2 Implementation Feasibility Report is no longer open (about 24 hoursprior to the closing of public comments). When you attempt to access the page either through the 100 acre Partnershipwebsite or from the BOE web site you get the message "Page not found" (see snip it of page for reference). How is thecommunity going to submit their final comments if the link to submit is no longer functioning. Can you please make thepublic comment link active again. I am also requesting an extension for comments entries to be extended to at leastMonday May 3rd, 2021 to make up for the early deactivation of the page to submit comments.	Thank you for letting us know. As a result of this comment, we fixed the link, extended the deadline to May 3rd, and sent emails to notify the community. We apologize for the inconvenience.
4/30/2021 0:00	Julia Mason	deedub111@aol.com		General	I'm a lifelong educator and Angeleno. I enjoy the river. I have taught my elementary school students about theriver's history and efforts to rehabilitate it, have kayaked the river, participated in FOLAR events, regularly walkthe bikeway, etc. I believe that Lewis Macadams was right.	Thank you for submitting your preference. Your perspective has been noted and will be included in future design discussions.
				General	I prefer design option Island. We must prioritize habitat restoration, park user experience, economic return, capitalcost, and consistency with public input. T. An alteration as extreme as the river's channelization must be matchedby courageous innovation to unravel the damage and redress environmental injustices.	Thank you for submitting your preference. Your perspective has been noted and will be included in future design discussions.
				General	I agree completely with public commenter Tilly Hinton that habitat improvement must be prioritized. Thepresentation given at the recent public meeting (3/18) seemed to place a higher value on creating gatheringplaces for humans than on habitat creation, and this is also – unfortunately – the dominant theme of the DraftCounty Master Plan. The 100 acre parcel is the most crucial ecological site along the river's entire 51 miles. Theessential task of river restoration fails or succeeds here. Increasing habitat, biodiversity, and climate resilienceshould be the north star for the 100 acre partnership, and for Taylor Yard/G2. Genuine habitat restoration will bebeneficial to the ecosystem as a whole – cleaner air, mitigation of urban heat island effects, greater floodresiliency, increased carbon sequestration, a greener city, improved biodiversity – all beneficial for us humanswho are, try as we might to ignore it, an interdependent component of the environments in which we live. Tomake this a parkspace-first development would be a great loss of opportunity, whereas a biodiversity drivenapproach would be transformational for the immediate community, and the entire watershed. In terms of planting, while the report says planting would 'draw from' the County's Landscaping Guidelines and PlantPalettes. I didn't see any indication that it will at a minimum adhere to the standards in the Draft Los Angeles RiverMaster Plan of at least 85% being native to the LA River watershed and no more than 15% being non-native,non-invasive plants. This is essential, at a minimum.	The Ecosystem Restoration Plan assumes the project will restore approximately 39 acres, providing 649.6 Habitat Units (HUs) as calculated by Combined Habitat Assessment Protocols, approximately a threefold increase from baseline conditions at 219.3 HUs (see section 8.2.1). A key goal of the project is to meet the Ecosystem Restoration Plan's vision of a threefold total improvement and section 8.5 describes the methods by which this can be achieved. Please see section 6.4.3 regarding the planting pallette and Table 1.1 regarding consistency with existing plans. The City of Los Angeles will adhere to the standards in the plan once it is finalized.
				Paseo del Rio	I also agree with Ms. Hinton when she says: "My reading of the scant information provided on the design of the Paseo del Río suggests that the designsensibility is parkspace-first and human centric, given the list of possible inclusions – 'trails; native habitat; waterquality improvement features; greenspaces; trail recreational opportunities; kayak launches and landings;gathering spaces or outdoor classrooms; passive elements; and amenities such as access points, parking,restrooms, gates, lighting, and interpretive signage'. I would urge a habitat-first approach, of course incorporatingopportunities for people to access and benefit from new green and blue urban spaces, but prioritizing ecologicalintegrity. One of the most remarkable characteristics of the Los Angeles River is that it is an urban wilderness. Not in thesense of it being pristine, but rather that there are stretches of riverbed and bank where people can findspaciousness, can experience awe at the beautiful resilience of nature, can fish, birdwatch, engage in nature play, create (sanctioned and unsanctioned) art, play music, paint en plein air, or take a break outdoors fromovercrowded housing and hectic complex lives. The importance of this spaciousness has never been aspoignant as during this long pandemic year, when the respite of the river as open space has been a social safetynet. While so much of our city was shuttered, including gated green spaces such as the Lewis MacAdamsRiverfront Park, areas such as the Bowtie Parcel were a lifeline as they remained informally open to the public. Iask the project team and the landscape architects to consider ways to maintain some of these unstructured andorganic river qualities, these freedoms, in forthcoming design approaches." The river should have qualities of a natural place. I heard a young adult who had recently visited the LA HistoricalPark north of Chinatown say that she was disappointed that there seemed to be so much display and attention topointing out where the river had been and what the river was rather than providing actual views of andexperiences of the river itself. The river itself is what we must restore and allow Angelenos to enjoy.	Your perspective has been noted and will be included in future design discussions.
				On-site water quality improvement project	Please take advantage of this opportunity for onsite water improvement that will remediate the impacts ofenvironmental racism along this part of the river, particularly in light of the likely gentrification that will followdespite best efforts. The project team should investigate the efficacy of phyto-, ectomycorrhizal-, and myco -remediation science,which get little to no attention in the documentation thus far. Please don't simply seal the contamination underplastic that will do nothing to restore the neighborhood to ecological health. In particular, I ask that the project team investigate the efficacy of phyto-, ectomycorrhizal-, and myco -remediation science, which get little to no attention in the documentation thus far. There is an opportunity for the water quality project to be at an expanded ecosystem scale rather than confinedonly to the site. Could the project team evaluate costs and benefits of installing rain gardens and otherneighborhood infrastructure in the sub watershed? These would slow and filter stormwater flows while at thesame time creating micro green spaces in yards and streetscapes, and would demonstrate a genuine interest inthe wellbeing of nearby residents and communities. Once remediation is achieved, it would then be possible, I understand, to make the hundred acres a substantialsite for groundwater recharge, a game changer for climate resilience.	The project team and LASAN are currently exploring the feasibility of a study with University of California Riverside to test alternative remediation options for contaminated soils at Taylor Yard G2. The study will examine remediation strategies including extraction or stabilization with fungi, microbes, plants, or soil ammendments and will include both field testing and greenhouse experiments. An agreement between the City and UCR is currently in development and, if finalized, the community will be notified prior to the study's implementation. Any projects outside of the G2 parcel, such as community infrastructure, are currently outside of the scope of this project. However, the Community Taylor Yard Equity Strategy (Community TYES) aims to address concerns for the surrounding community, including infrastructure. More information can be found at the following page: https://www.lariver.org/community-taylor-yard-equity-strategy-community-tyes. Regarding groundwater recharge, please see Section 7.4.2. Further analysis on the feasibility of incorporating infiltration into the Project will be conducted to determine its compatibility with the remediation and site design.
				Green gentrification	With Cypress Park, Glassell Park, and Elysian Valley long plagued by multiple environmental injustices, and with gentrification and displacement already the next wave of exploitation, there needs to be a tangible set of mitigation and protection commitments from the City. While the IFR lists various reports, practices, goals and policies in general terms, there is no indication in particular as to how these will be applied in relation to theTaylor Yard/G2/100 Acre Partnership projects. This is not good enough, and I ask that, moving forward, the documentation includes specific and robust protections, ensuring that the creation of this environmental good actually distributes benefits to local neighborhoods, and to communities of color, rather than causing further instability, displacement, exploitation, and socio-economic disadvantage.	We appreciate your concerns. We are approaching this through the Community Taylor Yard Equity Strategy (Community TYES). The goal of Community TYES is to address community concerns in an inclusive, thoughtful, and proactive manner. Community TYES aims to recommend solutions and approaches to the following non-exhaustive list of concerns: workforce development and job training and creation, housing affordability and paths to homeownership, anti-displacement policies, small business retention and growth, youth enrichment, safety and public health, city services and infrastructure, income and wealth development, access and connectivity to open space, healthy and resilient neighborhoods, environmental justice, and cultural relevance and language access. More information can be found at the following page: https://www.lariver.org/community-taylor-yard-equity-strategy-community-tyes.

Date	Name	Email	Organization	Chapter, Section, or Topic	Comment	Response
				Community engagement	I wish the project plan included more voices from the local Native communities. Where is their leadership? I ask the City and project team members to do all that they can to facilitate engagement of the general public withthe planning process, accommodating differentials of language, socioeconomic status, education, as well as cultural and social capital. You know as well as I that environmental injustices disproportionally impactdisadvantaged, minority, and marginalized communities. The City has a responsibility to show meaningfulleadership in this regard. This IFR should be a template for responsible planning that guides the future of the entire river and itsrelationship to the city and its restoration to ecological health.	The City fully supports your goals. For the Taylor Yard G2 River Park Project, indigenous communities have been engaged through community outreach, individual meetings, and site tours, as described in Sections 5.2 and 5.5. Indigenous communities will continue to be engaged through outreach, meetings, and site tours and will be formally engaged through consultation throughout the Environmental review process. For the Nature Conservancy Demonstration Project at the Bowtie Parcel, State Parks requested information from the Native American Heritage Commission and received a positive sacred lands result and a list of contacts in late 2020. State Parks sent consultation letters and received a response from the Gabrieleno Band of Mission Indians – Kizh Nation and initial interest from the Gabrieleno Tongva San Gabriel Band of Mission Indians. So far, State Parks has had several meetings with the Kizh Nation and hopes to meet with the San Gabriel Band. One benefit of the 100 Acre Partnership is our ability to build off of each other's success and established relationships. The Partnership will work together to ensure consistent outreach, engagement, and messaging. We are approaching this in two ways, through the hiring of a Community Engagement Consultant and through the Community Taylor Yard Equity Strategy (Community TYES). The Community Engagement Consultant will begin their work by focusing on the Partnership's first project, Paseo del Río. The Community Engagement Consultant will ensure that efforts to reach the community and stakeholders are comprehensive, effective, culturally relevant, and inclusive of disadvantaged and linguistically isolated communities. The Community Engagement Consultant will foster an open dialogue that will guide and inform the Partnership in the areas of design of the Paseo del Río greenway, brownfield restoration and environmental planning, equity strategies, and programming of the future open space. More information about the Request for Proposals for the Community Engagement Consultant can be found at the following page: https://www.100acrepartnership.org/documents. The goal of Community TYES is to address community concerns in an inclusive, thoughtful, and proactive manner. Community TYES aims to recommend solutions and approaches to the following non-exhaustive list of concerns: workforce development and job training and creation, housing affordability and paths to homeownership, anti-displacement policies, small business retention and growth, youth enrichment, safety and public health, city services and infrastructure, income and wealth development, access and connectivity to open space, healthy and resilient neighborhoods, environmental justice, and cultural relevance and language access. More information about Community TYES can be found at the following page: https://www.lariver.org/community-taylor-yard-equity-strategy-community-tyes.
4/30/2021 0:00	Marissa Christiansen		Friends of the Los Angeles River	General	Friends of the Los Angeles River (FoLAR) has been at the forefront of ensuring a publicly accessible and ecologically sustainable Los Angeles River by inspiring River stewardship through community engagement, education, advocacy , and thought leadership. For over 30 years, we have worked to create an enduring v ision of the River that acknowledges its legacy as a life-giving waterway and the critical benefits its restoration can bring to the surrounding communities. The Taylor Yard G2 River Park represents on opportunity to carry out that vision and set a precedent for future river projects.	Noted
				General	FoLAR has participated in post and ongoing planning processes along the LA River. As a participant in var ious planning efforts, including this one, we understand the s ignificance of the Toylor Yards and its potential for substantial ecological restoration. FoLAR echoes the priorities community members have shored through the stakeholder engagement processes thus far and believe nature, recreation, and the River must remain top priorities through this planning process. We continue to support the Soft Edge, Island, and Island Alternative design options reviewed in this report. I n this pivotal time , we need to take bold steps to ensure that we foster a resilient, healthy, and accessible River for current and future generations. The ARBOR study continues to be a guiding document that addresses these goals, and we hope to see parts of it realized in the next decades. FoLAR has supported the City in requesting federal funds to support the ARBOR vision, and we hope this project plays a role in doing so.	Noted
				General	Understanding the hurdles that come with channel widening and concrete remova l , we hope to see a project that prioritizes ecological health while ensuring that visitors have easy and direct access to the River and the enhanced ecological habitats planned for this section. Providing direct access will ensure that visitors con form deep connections to the River , help foster the next generation of River Stewards, and celebrate how communities already interact with the river via fishing, kayaking , and bird watching.	Your perspective has been noted and will be included in future design discussions.
				General	We are encouraged to see that this report suggests that the City will continue studying alternatives to explore opportunities outside of the study area, including the l00 Acres and the LA River Watershed, to determine how this stretch of the river can reach capacity for the 100-year storm event. By expanding beyond one specific site, we con find opportunities that will reduce flood risk for river adjacent communities, improve the ecological function of the River , and ensure that visitors will hove direct access to the River. Several alternatives presented within FoLAR 's Hydrology Study, align with this report, including opportunities for a bypass tunnel in the Glendale Narrows and identifying areas throughout the watershed that can store stormwater and divert runoff from flowing into the River.	Your perspective has been noted and will be included in future design discussions.
				General	FoLAR supports the efforts of the 100 Acre Partnership and its work in creating an inclusive, transparent, and community-driven process. FoLAR is optimistic in the next steps laid out in this report and looks forward to the creation of the Equitable Development Strategy to ensure that the City instates policies and programs to protect the adjacent communites from displacement and community destabilization.	Noted
				General	We look forward to seeing the next phase of this project and commend the City in its ingenuity to push for a climate resilient, equitably accessible, and ecologically restored LA River.	Noted
				General	I am an independent scholar and the founder/curator of Los Angeles River X. I have over a decade of international research and community engagement expertise in river landscapes and their complex interrelationships with surrounding communities, particularly the Los Angeles River. On that basis, I make the following comments on the Implementation Feasibility Report (IFR). I look forward to seeing them addressed as the planning and engagement process continues. As the report indicates that none of the three design options are actually intended to progress as described, I have kept my comments at the more macro scale rather than specifically commenting on the site planning options, Island, Soft Edge, and The Yards. Having said that, my preferred design option would be Island, given its positive evaluations for habitat restoration, park user experience, economic return, capital cost, consistency with public input. Though that design is not as highly rated in the IFR in terms of technical feasibility, I hope that your decisions are not constrained by taking the technically easiest option. An alteration as extreme as the river's channelization must be matched by courageous innovation to unravel the damage and redress environmental injustices. That is the task at hand.	Noted
				Chapter 8 - Habitat	I commend the next steps of Chapter 8 with regards to habitat improvement and I ask that these be prioritized moving forward. The presentation given at the recent public meeting (3/18) seemed to place a higher value on creating gathering places for humans than on habitat creation, and this is also – unfortunately – the dominant theme of the Draft County Master Plan. It is my view that the 100 acre parcel is – without exaggeration – the most crucial ecological site along the river's entire 51 miles. This is the place at which the ambitious but essential task of river restoration fails or succeeds. For this reason, increasing habitat, biodiversity, and climate resilience should be the north star for the 100 acre partnership, and for Taylor Yard/G2. Genuine habitat restoration will be beneficial to the ecosystem as a whole – cleaner air, mitigation of urban heat island effects, greater flood resiliency, increased carbon sequestration, a greener city, improved biodiversity – all beneficial for us humans who are, try as we might to ignore it, an interdependent component of the environments in which we live. To make this a parkspace-first development would be a great loss of opportunity, whereas a biodiversity driven approach would be transformational for the immediate community, and the entire watershed. In terms of planting, while the report says planting would 'draw from' the County's Landscaping Guidelines and Plant Palettes I didn't see any indication that it will at a minimum adhere to the standards in the Draft Los Angeles River Master Plan of at least 85% being native to the LA River watershed and no more than 15% being non-native, non-invasive plants. This is essential, at a minimum.	Thank you for your concerns. One of the 12 primary goals for our planning effort is consistency with existing plans. Specifically, we will be consistent with the Los Angeles River Master Plan (or "County Plan"), including its upcoming update, as stated in Table 1.1.

Date	Name	Email	Organization	Chapter, Section, or Topic	Comment	Response
4/30/2021 0:00	Tilly Hinton	tilly@goodisbetter.net		Paseo del Río	My reading of the scant information provided on the design of the Paseo del Río suggests that the design sensibility is parkspace-first and human centric, given the list of possible inclusions – 'trails; native habitat; water quality improvement features; greenspaces; trail recreational opportunities; kayak launches and landings; gathering spaces or outdoor classrooms; passive elements; and amenities such as access points, parking, restrooms, gates, lighting, and interpretive signage'. I would urge a habitat-first approach, of course incorporating opportunities for people to access and benefit from new green and blue urban spaces, but prioritizing ecological integrity. One of the most remarkable characteristics of the Los Angeles River is that it is an urban wilderness. Not in the sense of it being pristine, but rather that there are stretches of riverbed and bank where people can find spaciousness, can experience awe at the beautiful resilience of nature, can fish, birdwatch, engage in nature play, create (sanctioned and unsanctioned) art, play music, paint en plein air, or take a break outdoors from overcrowded housing and hectic complex lives. The importance of this spaciousness has never been as poignant as during this long pandemic year, when the respite of the river as open space has been a social safety net. While so much of our city was shuttered, including gated green spaces such as the Lewis MacAdams Riverfront Park, areas such as the Bowtie Parcel were a lifeline as they remained informally open to the public. I ask the project team and the landscape architects to consider ways to maintain some of these unstructured and organic river qualities, these freedoms, in forthcoming design approaches.	Your perspective has been noted and will be included in future design discussions.
				On-site water quality improvement project	The onsite water quality improvement project has the potential to set a powerful blueprint for the future park, by making ecological remediation foundational. My hope is that the project will be visionary, at the forefront of science and innovation. In particular, I ask that the project team canvass possibilities for genuine remediation of the contaminated soil rather than simply sealing the filtration system with an impermeable plastic layer. Likewise, I hope to see forefront science in terms of water quality improvement mechanisms. For a community that has long experienced the burdens of environmental racism, there must be more profound remediation than simply accepting toxicity and minimizing its effects. In particular, I ask that the project team investigate the efficacy of phyto-, ectomycorrhizal-, and myco -remediation science, which get little to no attention in the documentation thus far. There is an opportunity for the water quality project to be at an expanded ecosystem scale rather than confined only to the site. Could the project team evaluate costs and benefits of installing rain gardens and other neighborhood infrastructure in the sub watershed? These would slow and filter stormwater flows while at the same time creating micro green spaces in yards and streetscapes, and would demonstrate a genuine interest in the wellbeing of nearby residents and communities. Once remediation is achieved, it would then be possible, I understand, to make the hundred acres a substantial site for groundwater recharge, a game changer for climate resilience.	The project team and LASAN are currently exploring the feasibility of a study with University of California Riverside to test alternative remediation options for contaminated soils at Taylor Yard G2. The study will examine remediation strategies including extraction or stabilization with fungi, microbes, plants, or soil ammendments and will include both field testing and greenhouse experiments. An agreement between the City and UCR is currently in development and, if finalized, the community will be notified prior to the study's implementation. Any projects outside of the G2 parcel, such as community infrastructure, are currently outside of the scope of this project. However, the Community Taylor Yard Equity Strategy (Community TYES) aims to address concerns for the surrounding community, including infrastructure. More information can be found at the following page: https://www.lariver.org/community-taylor-yard-equity-strategy-community-tyes. Regarding groundwater recharge, please see Section 7.4.2. Further analysis on the feasibility of incorporating infiltration into the Project will be conducted to determine its compatibility with the remediation and site design.
				Green gentrification	With Cypress Park, Glassell Park, and Elysian Valley long plagued by multiple environmental injustices, and with gentrification and displacement already the next wave of exploitation, there needs to be a tangible set of mitigation and protection commitments from the City. While the IFR lists various reports, practices, goals and policies in general terms, there is no indication in particular as to how these will be applied in relation to the Taylor Yard/G2/100 Acre Partnership projects. This is not good enough, and I ask that, moving forward, the documentation includes specific and robust protections, ensuring that the creation of this environmental good actually distributes benefits to local neighborhoods, and to communities of color, rather than causing further instability, displacement, exploitation, and socio-economic disadvantage.	We appreciate your concerns. We are approaching this through the Community Taylor Yard Equity Strategy (Community TYES). The goal of Community TYES is to address community concerns in an inclusive, thoughtful, and proactive manner. Community TYES aims to recommend solutions and approaches to the following non-exhaustive list of concerns: workforce development and job training and creation, housing affordability and paths to homeownership, anti-displacement policies, small business retention and growth, youth enrichment, safety and public health, city services and infrastructure, income and wealth development, access and connectivity to open space, healthy and resilient neighborhoods, environmental justice, and cultural relevance and language access. More information can be found at the following page: https://www.lariver.org/community-taylor-yard-equity-strategy-community-tyes.
				Community engagement	I ask the City and project team members to do all that they can to facilitate engagement of the general public with the planning process, accommodating differentials of language, socioeconomic status, education, as well as cultural and social capital. You know as well as I that environmental injustices disproportionally impact disadvantaged, minority, and marginalized communities. The City has a responsibility to show meaningful leadership in this regard.	The City fully supports your goals. We are approaching this in two ways, through the hiring of a Community Engagement Consultant and through the Community Taylor Yard Equity Strategy (Community TYES). The Community Engagement Consultant will begin their work by focusing on the Partnership's first project, Paseo del Río. The Community Engagement Consultant will ensure that efforts to reach the community and stakeholders are comprehensive, effective, culturally relevant, and inclusive of disadvantaged and linguistically isolated communities. The Community Engagement Consultant will foster an open dialogue that will guide and inform the Partnership in the areas of design of the Paseo del Río greenway, brownfield restoration and environmental planning, equity strategies, and programming of the future open space. More information about the Request for Proposals for the Community Engagement Consultant can be found at the following page: https://www.100acrepartnership.org/documents. The goal of Community TYES is to address community concerns in an inclusive, thoughtful, and proactive manner. Community TYES aims to recommend solutions and approaches to the following non-exhaustive list of concerns: workforce development and job training and creation, housing affordability and paths to homeownership, anti-displacement policies, small business retention and growth, youth enrichment, safety and public health, city services and infrastructure, income and wealth development, access and connectivity to open space, healthy and resilient neighborhoods, environmental justice, and cultural relevance and language access. More information about Community TYES can be found at the following page: https://www.lariver.org/community-taylor-yard-equity-strategy-community-tyes.
				General	This IFR is about so much more than the building of a future city park on the east bank of the river. What happens on the 100 Acre partnership properties is the canary in the coal mine for the future of Los Angeles. The decisions made for this site are decisions for the entire river and city. I look forward to seeing your responses to public comment and the next steps that are taken at Taylor Yard.	Noted
				Executive Summary	"A wide range of techniques was employed, from traditional community meetings to informal one-on-one or small group discussions. The formation of two Project Advisory Stakeholder Committees was an asset to the Project team by facilitating discussions with and among key engaged stakeholders." THE COMMUNITIES THAT ARE DIRECTLY IMPACTED BY THIS PROJECT (CYPRESS PARK, GLASSEL PARK AND ELYSIAN VALLEY) WERE NEVER INFORMED OR INVITED TO ANY THESE COMMUNITY MEETINGS UNTIL THE COMMUNITY FOUND OUT AND COMPLAINED. ALSO, THESE COMMUNITIES WERE NEVER INVITED TO THIS ADVISORY COMMITTEE WHICH WAS PRESELECTED AND NOT A TRUE VOICE OF THE COMMUNITY THEY CLAIM TO REPRESENT.	Public participation began on the Project in September 2017 when BOE solicited community feedback in the selection of the consultant team that would assist in the initial technical studies and site planning option development. In 2018, BOE created a widely-distributed survey to solicit design feedback and received over 1,300 responses. The survey was distributed at a community meeting, made available online on the Project website, emailed to the Project's contact database, promoted on the Project team members' social media platforms, and taken to several community events. Throughout the Project process, BOE has periodically attended Neighborhood Council meetings and provided Project updates for the adjacent communities of Cypress Park, Glassell Park, Atwater Village, Lincoln Heights, and Elysian Valley. BOE has also provided updates at meetings for the Alliance of River Communities, a regional alliance of 14 East and Northeast Los Angeles Neighborhood Councils along the River. In addition to the community and stakeholder engagement events, innovative, grassroots engagement techniques initiated by NGO team members have concentrated on creating a dialogue among community leaders and engaging interested stakeholders "where they are" in the community. Regular email updates are distributed through the ever-growing Project contact database. Annual Community Updates are distributed by mail under the guidance of DTSC, including over 6,000 local addresses in 2020. In 2021, the 100 Acre Partnership hired a Community Engagement Consultant to ensure that efforts to reach the community and stakeholders are comprehensive, effective, culturally relevant, and inclusive of disadvantaged and linguistically isolated communities. The Community Engagement Consultant will foster an open dialogue that will guide and inform the Partnership in the areas of design of the Paseo del Río greenway, brownfield restoration and environmental planning, equity strategies, and programming of the future open space. More information about the Request for Proposals for the Community Engagement Consultant can be found at the following page: https://www.100acrepartnership.org/documents.
				Executive Summary	ES.6 "Potential economic return." KAYAKING IN THE RIVER IS NOT SAFE BECAUSE OF ALL THE SEWAGE THAT IS STILL BEING DUMPED INTO THE WATER. ALSO, THIS AND ANY OTHER ACTIVIED TO BE HELD IN THE PARK SHOULD BE FREE TO THE RESIDENTS THAT LIVED THERE ESPECIALLY BECAUSE THEY ARE UNDERSERVED MINORTIES THAT WILL NOT BE ABLE TO AFFORD WHAT IS IN THERE BACK YARD.	Thank you for your concern. LA Sanitation and Environment staff test LA River water twice per week at three locations in both Recreation Zones operated by MRCA. Please visit lariverrecreation.org for maps and more information on the Recreation Zones. Samples are lab-tested for the presence of E. coli bacteria, results are compared to State of California water quality standards for water contact recreation, and the status is displayed on a table at lacitysan.org/lariverquality and at several water quality beacons located within the Recreation Zones. At the date this comment was submitted, kayaking was closed due to the pandemic. Since both zones were opened on May 31, 2021, the Elysian Valley River Recreation Zone, which is adjacent to the Taylor Yard G2 parcel, has been red once, which was the only occurance that prompted a closure of the recreation zone in that area. Regarding the cost of activities, financing and revenue-generation plans will be developed as the Project moves forward and your concerns will be discussed.

Date	Name	Email	Organization	Chapter, Section, or Topic	Comment	Response
5/2/2021 0:19	Anonymous 6			Executive Summary	There is existing flood risk in the Glendale Narrows. River flow conditions make widening the channel and introducing vegetation a potential risk to flood control. ALSO, THIS RIVER HAS RISEN IN THE PAST TO FLOOD THE WALK PATH NEXT TO IT. THIS AREA IS ALSO KNOW TO HAVE VERY LARGE FLOODS AND ANYTHING TO CHANGE THE HYDROLOGY AND FLOW OF THE RIVER JUST ADDS TO THE INCREASE RISK OF FLOODING TO THE HOMES CLOSE TO THE RIVER, ESPECIALLY ELYSIAN VALLEY.	Flood risk in the area as a result of the Project has been and will continue to be taken very seriously. BOE will not consider alternatives that increase flood risk to surrounding communities. Please see Section ES.7 subsection "River Hydraulics and Flood Control." Please also see Section ES.8 regarding widening the river channel at the Project location and its effect on flood risk.
				Executive Summary	"Improving safe site access and establishing connections between neighborhoods is a priority for all stakeholders. Coordinating access through the G1 parcel, across the railroad tracks to Rio de Los Angeles State Park and Sonia Sotomayor Center for Arts and Sciences, and across the River to Elysian Valley will create functional unity." THE PLAN STATES WHAT IT WILL BUILD BUT NOT WHO WILL MAINTAIN IT OR BE RESPONSIBLE FOR SAFETY ON THE BRIDGE CONNECTING ELYSIAN VALLEY TO THE PARK WHICH WILL PROBABLY BE USED MORE BY THE CHILDREN ATTENDING THE LOCAL SCHOOLS. BECAUSE OF THE MANY JURISDICTIONS AROUND THE RIVER, NONE TAKES ON THIS ACCOUNTABILITY AND LAPD CANNOT GO IN AND PROVIDE ANY SAFETY.	Safety is a top priority for the City. As stated by the commenter, jurisdiction of the River is complicated and each project location has different stakeholders. The City has been dealing with this issue with increasing frequency as more bridges along the River are being constructed. This is a concern the City takes seriously. The responsible party to maintain a bridge at the Project site will be identified as the Project is initiated.
				Executive Summary	"A financial strategy incorporating appropriate partnerships will be developed to ensure continued Project success." WHAT ARE THESE PARTNERSHIPS, WHO WILL MONITARILY BENEFIT FROM THEM AND WILL IT BE AT THE COST OF THE UNDERSERVED FAMILIES THAT LIVE IN THE AREA.	We appreciate your concern. The partners have not yet been identified. Financing and revenue-generation plans will be developed as the Project moves forward and your concerns will be discussed.
				Chapter 2, Section 2.6	California High Speed Rail THERE HAS BEEN NOT ANY TRUE COLLABORATION WITH THE HIGH SPEED RAIL WHO HAS PROMISED THE COMMUNITY SOUND WALLS TO DIMISH THE SOUND AND PROVIDE SAFETY. THESE WALLS WILL TAKE AWAY FROM THE COMMUNITY THE OPPORTUNITY TO HAVE A VISUAL CONNECTION TO THE PARK. SO NOT ONLY WILL THE COMMUNITY MIGHT NOT BE ABLE TO AFFORD THE ACTIVITIES AT THE PARK BUT WILL NOT BE ABLE TO HAVE A LINE OF VISION TO IT EITHER. ALSO, YOU ARE WORKING TO DECONTAMINATE BUT THE HIGH SPEED RAIL PLUS EXISTING RAIL LINES WILL JUST KEEP CONTAMINATING THE AIR AROUND THE PARK.	The IFR reflects BOE's outreach to the High-Speed Rail Authority in section 2.6, "Potential Future Site Requirements." For more information on the High-Speed Rail project, please visit: https://hsr.ca.gov/programs/environmental-planning/. Please note that the Draft Environmental Impact Report / Environmental Impact Statement for the Burbank to Los Angeles section is currently available under the "Tier 2" documents tab. The document is currently being finalized. Regarding how the High-Speed Rail project's design will impact access to and visibility of the site, we appreciate your concerns. We will coordinate more closely with the High-Speed Rail Authority as the Taylor Yard G2 River Project progresses.
				Chapter 3, Section 3.2	"This alternative involved excavating shallow soil "hot spots" in areas 2.5 to 5 feet bgs within those previously identified areas of potential concern, in addition to installing a soil VES, carrying out a passive bioventing soil treatment program, and capping the remainder of the site. Figure 3-2 illustrates the remedial activities recommended in the Remedial Action Plan, which is the current DTSC-approved plan for remediation of the Project site." DOES THIS MEAN THAT DTSC HAS ALREADY DISCUSSED AND RECOMMENDED HOW TO REMIDIATE THE SITE? WHY HAS THE PUBLIC NOT BEEN INFORMED AND USTING THE VES SYSTEM IT CAN TAKE MANY YEARS TO COMPLETE.	DTSC has not recommended or approved a remediation strategy for the Taylor Yard G2 River Park. The section cited by the commenter is in reference to the 2014 Remedial Action Plan under the Union Pacific's agreement with DTSC, not the current work. The remediation strategy for the Taylor Yard G2 River Park will be developed concurrently with the development of the Project's design, as the Project's design will help identify necessary remediation methods and, in turn, necessary remediation methods will dictate and help determine possibilities for the Project's design. All proposed remediation options and cleanup goals will be developed based on the site risk assessment and anticipated public use.
				Chapter 3, Section 3.2.1	"In soil, lead is generally found at its highest concentrations in the surface to 5-foot range." IN THE PRESENTATIONS TO THE COMMUNITY, THE SURFACE DEPTH OF LEAD AND THE DANGER TO CHILDREN HAVE BEEN DENIED OR DIMNISHED. TRUE TRANSPARENCY SHOULD BE MAKE TO THE PUBLIC THROUGH COMMUNITY MEETINGS AND NOT FEEL SAFE THAT IT HAS BEEN PUT INTO THIS REPORT WITHOUT ANY DUE DILIGENCE.	The City does not diminish the risk of lead exposure and that was the reasoning behind the testing performed in 2018 and the planned remediation. For information about testing, sampling, results, and the presentation made to the community in May 2019, please visit: https://tayloryardriverprojects.lacity.org/cleanup-and-site-remediation. Remediation strategies cannot be determined until the Project's design has been initiated, as both will heavily influence each other, and thus remediation strategies cannot be included in this report. Please note that the Report of Findings is included in this report in Appendix A and is located at the following link: https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=19470006&doc_id=60402786
				Chapter 3, Section 3.2.2	Ground Water Conditions THIS REPORTS STATES THAT THERE IS NOT RISK TO THE PROJECT OR GROUND WATER DUE TO THE POLLUCK SUPERFUND AND DENIES THAT IT HAS ENTERED THE SITE, YET THE DATE COLLECTED BY THE CASITAS PROJECT WITH IS PROJECTED TO BE CONSTRUCTED ON PART OF G1 STATES OTHERWISE.	As shown in Figure 1-3, the Casitas Lofts project is located on parcel H and is not part of the G1 parcel. Please refer to the USEPA website for additional information on the San Fernando Valley Area 4 (SFV Area 4) Superfund site referenced by the commenter: https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0902253. Additional information can be found under the "Site Documents & Data" tab. Parcel H is upgradient of the G2 parcel and will therefore have different groundwater conditions. The USEPA oversees the cleanup of SFV Area 4 and appears to be adequately addressing migration of the regional groundwater VOC plume to the G2 parcel. Through annual monitoring overseen by DTSC, it has been determined that the groundwater beneath the G2 parcel is no longer significantly impacted by the SFV Area 4 VOC plume.
				Chapter 3, Section 3.2.2	"Although the current groundwater impacts are limited, the contaminated soil conditions on the Project site raise concerns that infiltration of surface water (natural or engineered) could result in downward migration of contaminants to groundwater." THE CONSTRUCTION OF UNCOVERING THE DRAINS AND TAKING THEM OUT OF THE CONTAINMENT STRUCTURE WHERE THEY WERE SAFE FROM FURTHER CONTIMINATION JUST INCREASES THE RISK OF ADDING THE FURTHER CONTAMINATION OF THE WATER MAKING ACTIVITIES SUCH AS KAYAKING UNSAFE.	Your concern is noted. Daylighting stormwater in a best management practice (BMP) design is a common water quality improvement method. Local examples include: Broadway Neighborhood Stormwater Greenway (https://ascelibrary.org/doi/10.1061/9780784480632.006), South Los Angeles Wetland Park (https://psomas.com/projects/south-los-angeles-wetland-park/), and the Ed P. Reyes Greenway (https://www2.nacwa.org/images/stories/public/awards/2015oe_city_of_los_angeles.pdf).
				Chapter 3, Section 3.3	"Engineered caps require ongoing maintenance of the cap and monitoring. They also have the potential to restrict future land use." WHO WILL BE RESPONSIBLE FOR THE ONGOING MAINTENANCE OF THE CAP AND THE MONITORING. AND, IN WHAT WAY WILL IT RESTRICT FUTURE LAND USE. IS THIS FORM ON DE-CONTAMINATION GOOD FOR RESIDENTIAL AND PARK USE?	Currently, the City owns and operates the parcel and will be responsible for maintenance. The remediation strategy for the Taylor Yard G2 River Park will be developed concurrently with the development of the Project's design, as the Project's design will help identify necessary remediation methods and, in turn, necessary remediation methods will dictate and help determine possibilities for the Project's design. Remediation options and cleanup goals will be developed based on the site risk assessment and anticipated public use. For more information on capping, please see the following document produced by DTSC: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/11/PT-R_Metals_Main_Text_0808-2.pdf. Additional resources on proven technologies for remediation can be found here: https://dtsc.ca.gov/proven-technologies-remedies-documents/
				Chapter 3	"Because schools and residences now surround the Project site, and the potential future site use includes a park where children and families will gather, it is imperative that the Project is designed, constructed, and operated to protect site users, the surrounding community, and ecological receptors from any negative impacts from contaminants." THIS SHOULD BE FOLLOWED TO THE LETTER, BUT SO FAR, DURING TESTING AND OTHER ACTIVITIES ON THE SITE, DUST HAS MIGRATED TO THE LOCAL SCHOOLS AND PARKS FILLED WITH FAMILIES AND CHILREN WITH NOT CONCERN FOR THEIR SAFETY. INCLUDE IN THE PLAN THE ADDITION OF AIR MONITORS THAT ARE ACCESSABLE TO THE PUBLIC, THE RESIDENTS, THE SCHOOLS AND THE SURROUNDING BUSINESS TO DETERMINE SAFETY BEFORE ENTERING THE AREA.	All testing has been done under the oversight of DTSC. DTSC and AQMD do not rerquire air monitoring at this time. The Response Plan will include a section regarding air monitoring. Details will be provided in the Response Plan and will be available for public review.
5/2/2021 23:24	Anonymous 7			Chapter 1	Due to the plan for the site to be used as a natural space to re-establish sensitive ecosystems and at the same time also be the location where community members will be able to engage in recreation and exercise, jog, walk, play, etc which will increase the rate of aerobic rate, the community has raised the issue about the remediation plans agreed by DTSC with the City of Los Angeles via CLRRA to be raised to residential and not industrial standards. The community wants the site to be remediated to residential standards and has made it know in various Neighborhood Council meetings and community meetings where 100-acre Partnership, BOE, and DTSC have been present.	We understand your concern. References to industrial standards are consistent with prior anticipated uses, see the following Remedial Action Plan prepared for the Union Pacific Railroad Company: https://www.envirostor.dtsc.ca.gov/public/deliverable_documents/8006086587/RAP-TYARDG2-02032014.pdf. The cleanup goals the City will meet will be set by DTSC according to anticipated public use and the site risk assessment.
5/2/2021 23:47	Anonymous 8			Chapter 2	There is a mention on pg. 2.41 of pipeline easement at the east edge of the project that most community members were not aware of its existence. In case of an accidental spill, making the site a stormwater capture project in close proximity to an active oil pipeline would be detrimental not only to the site and adjacent community but to downriver communities. A spill of oil onto the storm drains will definitely make it onto the river. The IFR did not outline a potential spill risk and its proximity to current storm drains or future water drains that may impact the design and location of a Water Quality and Initial Park Improvements Project features.	We have noted this pipeline easement and are making the public aware through this report. The concern expressed here about the potential for an accident or spill is duly noted and will be considered in all design decisions.

Date	Name	Email	Organization	Chapter, Section, or Topic	Comment	Response
5/3/2021 0:04	Anonymous 9			Chapter 2	Currently, the Bike and Pedestrian Bridge landing walkway onto the Cypress Park side of the river will cross over the Metrolink Tail track which is a walking hazard. I am hoping the project managers are addressing this issue as this will affect access to the site. The second comment is that currently the Bike and Pedestrian Bridge construction laydown is in the Taylor Yard G2 site which is contaminated and trucks have been recorded driving at excesses of 30 miles per hour creating dust that travels onto the soccer fields and the Taylor Yard Village housing. Another thing that was missed on the IFR when reporting on the Bike and Pedestrian Bridge construction laydown area is that it currently has a pile of sediment (about 30 truckloads worth) within that laydown from the river that was deemed contaminated due to being left uncovered within the G2 site that needs to be disposed of correctly as contaminated soil due to the presence of lead and arsenic. pg. 2.46	The Taylor Yard Bikeway/Pedestrian Bridge team is working closely with Metrolink to ensure rail use is uninterrupted and to reduce tripping hazards. This entrance will be ADA-compliant. BOE has been closely coordinating with DTSC and conducted air monitoring, dust mitigation measures, including reduced speed, using water trucks to wet surface soil, using track-out plates at entrances and exits, and laying gravel on vehicle routes on the site. BOE is also working with easement holders to ensure all staff accessing the parcel are using reduced speeds. The referenced sediment pile consists of rocks removed from the River by the US Army Corps of Engineers. The City requested the rocks be left on-site so they can be used on future projects. The rocks will be cleaned prior to use on projects under the oversight of DTSC.
5/3/2021 0:11	Anonymous 10			Chapter 2	In regards to site constraints, if the Cal High-Speed Rail Authority is to use the current railroad tracks, they will need to create a sound wall between the railroad tracks and the adjacent properties creating a physical barrier that will keep the community east of the railroad tracks from enjoying the view of the nature park proposed at the site. This will also affect ingress and egress from the site as bridges will need to meet new requirements set by the Cal High-Speed Rail Authority if the plan to create a bridge over the rails is to be considered to increase access from the east of the river communities. The Cal High Speel Rail Authority mentioned last year that they also plan to run underground power lines adjacent to the rails and will need an extra 20 feet from the current tracks. This will also change not only access but the project plans as well.	The IFR reflects BOE's outreach to the High-Speed Rail Authority in section 2.6, "Potential Future Site Requirements." For more information on the High-Speed Rail project, please visit: https://hsr.ca.gov/programs/environmental-planning/. Please note that the Draft Environmental Impact Report / Environmental Impact Statement for the Burbank to Los Angeles section is currently available under the "Tier 2" documents tab. The document is currently being finalized. Regarding how the High-Speed Rail project's design will impact safety, access, and visibility, we appreciate your concerns. We will coordinate more closely with the High-Speed Rail Authority as the Taylor Yard G2 River Project progresses.
5/3/2021 0:16	Anonymous 11			Chapter 2	"Depending on Metrolink's final design of the new tail tracks, the ingress/egress easement may need to be relocated, for which Metrolink would be responsible."(Page 2.51). When reports like these mention that other entities are responsible to address main issues in regards to ingress and egress from the sites, this concerns us as for community first priority is public safety while entities like Metrolink only priority is to be functional and meets minimum requirements. I would want a more concrete plan than leaving it up to Metrolink to address the site ingress and egress. We are too far along in the process to be left up to Metrolink.	Noted
5/3/2021 0:21	Anonymous 12			Chapter 2	"If planning for the River Park Station progresses, close coordination with the City, Metro, and Metrolink will be required. "(Page 2.51). I also suggest having the High-Speed Rail Authority involve in the River Park Station planning since they will also impact the use and accessibility of the station and the esthetics of the site if they also get to use the tracks as well. I am not even sure how that would also affect the safety of having a stop there with the High-Speed rails next to it.	We appreciate your concerns. Safety is a top priority for the City. We will coordinate more closely with the High-Speed Rail Authority as the Taylor Yard G2 River Project progresses.
5/3/2021 0:32	Anonymous 13			Chapter 2	"Further refinement will be required to determine where these storm drains originate, verify that it is stormwater in the storm drains, and identify where stormwater is entering." (pg. 2.54) It is worrisome that on the IFR they have some of the main storm drains identified that go under the site but still have some drains that are not known where they originate and if they indeed only carrying stormwater. Is that not LARQWB job to investigate and document all storm drains that lead to the river particularly since one of the board members for LARQWB is very closely tied with the site since her non-profit has been directly connected with various site projects?	As future projects are implemented, further subsurface studies and investigations will be completed and addressed. All utilities will be identified and documented in record drawings. For more information on the roles of the Los Angeles Regional Water Quality Control Board (LARWQCB), please visit: https://www.waterboards.ca.gov/losangeles/about_us/. Staff of oversight agencies operate on a daily basis under their standard operating procedures. The concern you have expressed is duly noted. It is our experience that when there are potential conflicts of interest, board members will recuse themselves from decisions.
5/3/2021 0:45	Anonymous 14			Chapter 2	"Within the Project site, there are possible abandoned sewers because of past uses on the site." (pg. 2.56) At this level of the site evaluations, not knowing all possible sewer lines and their impacts on groundwater, aquifers, and runoff at the site particularly since a water project has been proposed at the site tells me this project is not of high priority to the project managers. All of these things should have been confirmed and verify before this report was created.	As future projects are implemented, further subsurface studies and investigations will be completed and addressed. All utilities will be identified and documented in record drawings.
5/3/2021 0:52	Anonymous 15			Chapter 3	"Beginning in 2000, a pilot study on the effectiveness of Vapor Extraction Systems (VESs) began on the Project site, which resulted in DTSC's approval of the performance of the VES systems to remove volatile organic compounds (VOCs) from the soil (Camp, Dresser, and McKee, Inc. [CDM 2014a])" (pg. 3.58) I would have liked to know more about what Vapor Extraction Systems (VES) consist of and how effective and what kind of impacts this may have on air quality since it has been mentioned in the document various times but without giving detail of what it entails and its pro's and con's to air quality and possible health hazards particularly since we now have a residential complex, schools and a park less then 500 feet from the site. .	A summary of the VES operation and results are available in the site activities in Envirostor at this link: https://www.envirostor.dtsc.ca.gov/regulators/deliverable_documents/1797241032/TYARD-Area%203%20Workplan%2004072011.pdf. For more information on VES systems, please see the following document produced by DTSC: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/11/cVOC_040110.pdf. Additional resources on proven technologies for remediation can be found here: https://dtsc.ca.gov/proven-technologies-remedies-documents/.
5/3/2021 0:57	Anonymous 16			Chapter 3	"In 1990, UPRR, then the Southern Pacific Transportation Company, entered into an Enforceable Agreement with the State of California. The purpose of the agreement was to ensure that the nature and extent of releases of hazardous substances from the site are thoroughly investigated and that appropriate remedial actions are taken." (pg. 3.58) It is alarming that dust suppressor use was only considered as of late 2019 (2 years after the city of Los Angeles bought the property) when the property has been classified since the 1990's of being a brownfield site due to its historical use.	The City purchased the site in 2017. Right away, the City began the California Land Reuse and Revitalization Act (CLRRA) process with DTSC and a Voluntary Cleanup Agreement under CLRRA was executed in 2018. In the summer of 2018, BOE performed site assessments including soil sampling and testing to identify contaminants and contamination levels. In an effort to ease community concerns regarding dust, BOE began applying a dust suppressant on an annual basis under the direction of DTSC.
5/3/2021 1:00	Anonymous 17			Chapter 3	"Within the MRCA easement, the City is obligated to remediate per the existing Remedial Action Plan to industrial standards, as agreed upon in the terms of the purchase and sale agreement for the easement." (pg. 3.61) If people will be using the site to exercise and establish nature ecosystems why is the bar set so low to industrial standards remediation?	We understand your concern. References to industrial standards are consistent with prior anticipated uses, see the following Remedial Action Plan prepared for the Union Pacific Railroad Company: https://www.envirostor.dtsc.ca.gov/public/deliverable_documents/8006086587/RAP-TYARDG2-02032014.pdf. The cleanup goals the City will meet will be set by DTSC according to anticipated public use and the site risk assessment.
5/3/2021 1:16	Anonymous 18			Chapter 3	Soil and ground water conditions: In the Report of Finding July 2020- WSP/BOE reported using bore cuttings to backfill the bores which DTSC Jessy Fierro commented on the finding comment letter in Envirostor for the site, that backfilling any bores with cuttings will contaminate the bores not only at set depths but will need to be considered to be contaminated throughout the length of the bores. Because this activity could have had the potential to contaminate the groundwater and no longer provide an accurate state of the soil due to cross-contamination at various depths it should have been reported on the IFR as some limitations or oversights in regards to the assessments. In addition that was not the only error that WSP/BOE engaged in during the soil assessment of the site back in 2018. Jessy's comment letter also comments on how the assessors moved dirt by regrading some slopes prior to some soil sample collection which may have the potential of affecting the analytical results from surface and shallow soil samplings.	Backfilling borings with soil cuttings was not appropriate. In the Response to Comments letter, WSP concurred with the DTSC Geologist Comment and indicated that the future practice will be to backfill with clean fill material. Test pits were backfilled in accordance with the Work Plan approved by DTSC. Soil removed during test pit sampling and observation was replaced in layers and tamped down with the excavator bucket. Regrading of surface soil was needed to provide safe access during drilling. The amount of soil disturbed was kept to a minimum. No soil samples were collected from regraded areas because they were considered disturbed.
5/3/2021 1:27	Anonymous 19			Chapter 3	In the report of findings July 2020, but not on this document, it is indicated that the railroad easements and 50 feet radius from the High Voltage power lines were not surveyed (no soil bores or testing) were conducted in those locations. This is of concern since 2 of the designs proposed the possible relocation of the tail rail tracks and the High voltage power lines towers which will require the need to excavate and disturb the soil below the towers and tracks. In order for the IFR to be complete, detailed data on how contaminated the soil is below the towers and tail tracks are required.	As future projects are implemented, further subsurface studies and investigations will be completed and addressed.
5/3/2021 1:34	Anonymous 20			Chapter 3	"Recent sampling results indicate the groundwater impacts are limited to a select few locations and contaminants. Therefore, the groundwater beneath the Project site is no longer significantly impacted by the SFV Area 4 VOC plume." (pg. 3.69) This statement is inaccurate and misleading since an increase in rainfall may again increase the Pollock contaminated plume to migrate and again impact the groundwater at the site.	Please refer to the USEPA website for additional information on the San Fernando Valley Area 4 (SFV Area 4) Superfund site referenced by the commenter: https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0902253. Additional information can be found under the "Site Documents & Data" tab. Through annual monitoring overseen by DTSC, it has been determined that the groundwater beneath the G2 parcel is no longer significantly impacted by the SFV Area 4 VOC plume. Groundwater monitoring will continue on an annual basis.
5/3/2021 1:40	Anonymous 21			Chapter 3	In summary, it seems that the design selected will be dictating the type of remediation when a more equitable and safety conscious approach is to design the site based on its current level of contaminations and seek the route with the least potential of exposure of contaminants onto the adjacent communities and the river ecosystems.	This is not accurate. The Project's design will help identify necessary remediation methods and, in turn, necessary remediation methods will dictate and help determine possibilities for the Project's design. The remediation strategy for the Taylor Yard G2 River Park will be developed concurrently with the development of the Project's design. All proposed remediation options and cleanup goals will be developed based on the site risk assessment and anticipated public use.
5/3/2021 1:43	Anonymous 22			Chapter 4	If the High Speed Rail Authority follow through with the plan to use the current railroad tracks as a corridor for the HSRA, the possibility to place the towers next to the tracks may be infeasible due to the extra 10 to 15 feet needed for the extra track and underground power lines to power the High Speed trains and the height bridge requirements to access the site from the Glassell Park and Cypress Park area. 4.73	Noted

Date	Name	Email	Organization	Chapter, Section, or Topic	Comment	Response
5/3/2021 1:47	Anonymous 23			Chapter 6	"The Yards option does not include any Riverfront excavation; therefore, these remediation steps would not be implemented." pg. 6.134 Because of the least movement of dirt and less potential to expose local communities and river ecosystem to contaminants via dust or soil, etc. the design for the Yards is becoming the only option.	Noted
5/3/2021 1:50	Anonymous 24			Chapter 6	To have an open water feature project, that collects stormwater from adjacent properties, from rainfall, and stores these waters at the site while multiple ongoing projects in and around the site ar active may inadvertently contaminate such waters via fugitive dust from the site itself, traffic, and from the railroad activities such as the testing Metrolink Central Maintenance Facility intermittently conducts.	These concerns are duly noted and all deisgns will address this. Dust migration will be mitigated during construction according to South Coast AQMD Rules 403 and 1466. For more information on Rule 403, please visit: https://www.aqmd.gov/home/rules-compliance/compliance/rule-403-dust-control-information. For more information on Rule 1466, please visit: https://www.aqmd.gov/home/rules-compliance/compliance/rule-1466.
5/3/2021 1:58	Anonymous 25			Chapter 7	Why was this site selected for a water remediation project since the risk and concern that contaminants found at the site may migrate into the groundwater systems via stormwater storage and containment at the site via percolation? It does not make any sense to have water stored at a contaminated site which set contaminants may leach or percolate into the shallow groundwater via gravity or run off into the river with a higher concentrations of contaminants.	The Proposition O Water Quality Improvements Project primarily consists of a stormwater quality improvement feature (best management practice [BMP]) for treatment of onsite and urban runoff is a bioretention facility with an underdrain and liner (Bioretention BMP). Bioretention facilities are landscaped shallow depressions that capture and filter stormwater runoff according to the Low Impact Development (LID) Manual (https://www.lacitysan.org/cs/groups/sg_sw/documents/document/y250/mde3/~edisp/cnt017152.pdf). These facilities have a layer of plants and soil where pollutants can be filtered, adsorbed, and biodegraded as stormwater percolates through the soil media. Once stormwater saturates the media materials and fills the Bioretention BMP, an underdrain system conveys the treated stormwater to an outlet. Because of the existing soil contamination found on-site from previous industrial uses, an impermeable liner would be used to prevent infiltration into underlying soils.
5/3/2021 2:00	Anonymous 26			Chapter 8	"Hydrologic studies of the channel indicate that reducing velocities may increase flood risk, which is not an acceptable outcome. Additional studies are needed to determine the viability of any channel modifications." (pg. 8.174) So if this is a fact and 2 of the designs propose some change to the river channels which may decrease velocity why are they still being considered	The IFR documents all investigations and does not recommend a specific path forward. This concern will be addressed in future discussions and designs.
5/3/2021 2:08	Anonymous 27			Chapter 9	The idea that air quality will be improved in the long run once the projects are completed at the site but ignore the air quality during the constructions, the movement of contaminated soil that will definitely generate fugitive dust in close proximity to schools, the Rio de Los Angeles State Park, and residential complex all within less than 500 feet from the site is not fair for the local communities to bear. The multiple projects at the site will take years to be completed while the community, particularly our children during that time, will be exposed to various health hazardous contaminants.	We appreciate your concern. All construction activities will be conducted according to South Coast AQMD Rules 403 and 1466. For more information on Rule 403, please visit: https://www.aqmd.gov/home/rules-compliance/compliance/rule-403-dust-control-information. For more information on Rule 1466, please visit: https://www.aqmd.gov/home/rules-compliance/compliance/rule-1466. DTSC and AQMD do not require air monitoring at this time.
5/3/2021 2:16	Anonymous 28			Chapter 9	"Environmental Justice – The Project would provide localized air quality benefits by improving air quality. The surrounding communities include several high-scoring CalEnviroScreen census tracts, which are targets for improved infrastructure. Creating a public park and activating an otherwise underutilized space would create a safer environment and provide much-needed green space in an underserved area." (pg. 9.215) To use the term Environmental Justice, while the adjacent communities of color will bear the brunt of the dust and bad air quality during the work at the site due to traffic and disturbance of the soil at the site for years to come is deceitful.	We appreciate your concern. All construction activities will be conducted according to South Coast AQMD Rules 403 and 1466. For more information on Rule 403, please visit: https://www.aqmd.gov/home/rules-compliance/compliance/rule-403-dust-control-information. For more information on Rule 1466, please visit: https://www.aqmd.gov/home/rules-compliance/compliance/rule-1466. DTSC and AQMD do not require air monitoring at this time.
5/3/2021 2:22	Anonymous 29			Chapter 11	"This category is predominantly made up of parking revenues. A total of 400 parking spaces for the Project was estimated, limiting the total potential revenue generated by charging a parking fee." (pg. 11.244) I highly recommend for no parking fee as this will exclude many community members from patronizing the site once it is completed. The city and state will use our tax dollars to purchase and remediate the site and then exclude many of us because we cannot afford to pay the parking fee- it is not equitable. Not only will our community members that live adjacent to the site will suffer the effects from the noise, the dust, etc. and once done will exclude us by charging a fee to enjoy it via parking fees.	We appreciate your concern. Financing and revenue-generation plans will be developed as the Project moves forward and your concerns will be discussed.
5/3/2021 2:49	Anonymous 30			Chapter 14	Potential conflict of interest in regards to permits provided by LARWQCB and the various projects at the site. One of the LARWQCB board members owns an NGO directly connected with the site and is also an active board member for both SMMC (provided funding for the various site projects) and MRCA (who has an easement at the site from the City of Los Angeles). The Water Quality and Initial Park Improvements Project will mainly be on the MRCA easement parcel and will depend on LARWQCB providing permits and approvals for its operations. The Water Quality and Initial Park Improvement Project is also seeking funding from various grants and Propositions via the SMMC, and MRCA. She is currently a board member for all 3 entities.	Staff of oversight agencies operate on a daily basis under their standard operating procedures. The concern you have expressed is duly noted. It is our experience that when there are potential conflicts of interest, board members will recuse themselves from decisions.
5/3/2021 19:21	Anonymous 31			Executive Summary, ES5	Of the three options considered, it's clear that the Island option comes closest to meeting the Project mission. Yet its challenges may result in short-sighted reductions in scope that are a too-common result in Los Angeles. The Yards approach represents a fall-back strategy that would be better than nothing, but nothing compared to what is possible. The Island vision is what will capture public will and make achievement of this ambitious project a reality — but only if the potential of full renovation of the River is embraced. This entails true Watershed thinking and advocacy.	Noted
				Executive Summary, ES8	Within the Executive Summary are some of the more troubling assumptions that affect the entire Report. Consider: The mission and vision for the City's acquisition of G2 was to enhance the River's renovation and awareness not just within the target area, but the entire LA River Watershed. But what we find demonstrates a lack of principled Watershed thinking to guide the project. The G2 project has the potential to be a driver for multiple ecological and stormwater resilience initiatives both upstream and downstream from the Glendale Narrows. Instead, we see statements and analyses that reflect traditional large-scale civil engineering thinking. Tackling stormwater management requires a multi-pronged strategy of distributed small enhancements, larger specific interventions, and a shift in civic philosophy. All this could be well underway even today as this early level of implementation review is underway. For example, see this statement in pages ES.20 & 21: "Using the entire 40-acre site for water storage and assuming a 20-foot depth results in 800 acre-feet of stormwater storage. Assuming the River has a storm event like 2019 with the 11,000 cubic feet per second recorded as inflow to the Sepulveda Dam, the site would fill up in under 60 minutes. The current estimate for the 100-year design flow is 93,800 cubic feet per second. This flow rate would fill the site within 7 minutes." This assertion makes mockery of logical incremental planning in any discipline. It's like saying, "There's no point in encouraging homes to use rain barrels because a rain barrel would be filled within .000078 seconds at max flows of 93,800 cubic feet/sec." This is a ludicrous and dismissive approach, betraying a civil engineering mindset of large-scale projects or nothing, which we find in the same paragraph: "It will also require large scale distributed water storage reservoirs." This statement is misleading. Yes, large scale storage is one component of sustainable stormwater management, but even more important and feasible are multiple strategies that are to this day given short shrift in Los Angeles, compared with comparable solutions in large and small Western dryland cities. These include local rooftop rain capture, parking lot and street diversions, small scale distributed ground water recharge, and many others familiar to anyone following these issues. These potentials are not even mentioned. Likewise, dismissing the capture onsite at G2 as irrelevant misses the point that there are multiple similar sized potential stormwater capture opportunities within the basin, including various open spaces near the River and its tributaries, the Silver Lake Reservoir, parklands that can be temporarily inundated (much as with Sepulveda Basin). All these incremental capacities are highly relevant. Again, it is not adequate to dismiss these strategies as outside the project scope and boundaries. Indeed, they are critical to its success. The City's investment in G2 must be leveraged to advance sustainable watershed management to a level already taken for granted in other cities. The greatest danger to success of the G2 project is not its scale, scope and cost: it is that it may collapse for lack of sufficient vision and initiative to create public will towards its full achievement.	We appreciate your feedback and your concerns. Our intent is to develop the G2 parcel before regional strategies are fully implemented. We are in complete support of regional strategies for stormwater responses that reduce flood risk and alter river-adjacent parcels. The regional-scale thinking reflected in this comment has been captured in many planning efforts and will continue to be part of the conversation.

Date	Name	Email	Organization	Chapter, Section, or Topic	Comment	Response
				Chapter 7, 7.4.1	Although River hydraulics are complex and seemingly contradictory, a key driver of the planning process must include a commitment to making the maximum contribution towards water sustainability in capture, flood management, recharge, and reuse. However, we see a mindset of massive civil engineering projects rather than a level of watershed thinking that can achieve results with vastly less disruption of the built environment, cost and negative environmental consequences. Consider this statement at 7.4.1, p 7.160: "It would take a new basin at the same order of magnitude as the Sepulveda and Hansen Basins for the Glendale Narrows to meet the capacity of a 100-year flood event (County of Los Angeles 2019)." As noted in my ES comment, this is highly misleading. Such a project is not feasible in the highly developed basin, yet similar benefits can be obtained by multiple strategies including local rainfall capture, small scale runoff diversion, infiltration and reuse. They likewise become part of public awareness of water, its challenges and benefits. This document should be reflecting a much more diverse and sensitive level of water enhancement strategies.	We appreciate your feedback and your concerns.

LA RIVER PARK AT TAYLOR YARD PARTNERSHIP: LETTER OF INTENT

A collection of publicly-owned properties along the Los Angeles River (LA River) --pieces of the former "Taylor Yard" rail maintenance yard--form an approximately 100-acre area that is being transformed into a significantly-restored signature park. As envisioned by the Los Angeles River Revitalization Master Plan (LARRMP), many relevant plans, numerous supporters including the Los Angeles River State Park Partners, those 100 acres will be home to restored habitats, engaging recreational activities, cultural and educational enrichments, and a full mile of access to the LA River.

The LA River properties included in the 100-acre unified open space are: (1) The Rio de Los Angeles (RdLA) State Park, an existing 40-acre park owned by California State Parks (State Parks) and managed cooperatively by State Parks and the City of Los Angeles (City) through its Department of Recreation and Parks (RAP); (2) The Taylor Yard G1 parcel, an 18-acre property also known as the "Bowtie" parcel for its distinctive boundary shape, which is owned and managed and in the process of design by State Parks; and (3) The Taylor Yard G2 parcel, a 42-acre property that is owned by the City. The Mountains Recreation and Conservation Authority (MRCA) purchased and now holds the rights to a 12.5-acre easement within the Taylor Yard G2 parcel owned by the City. It is subject to use restrictions under grant funding agreements with the California Wildlife Conservation Board and the Santa Monica Mountains Conservancy, as well as subject to appropriate design, implementation, and early activation integration. Together, these agencies--the City, State Parks, and the MRCA--shall be known as "The River Parties."

The purpose of this letter is to express The River Parties' mutual intent to cooperate to create a unified LA River Park at Taylor Yard (working title) in recognition of the significant mutual public benefits to be realized by cooperating on the design, construction, financing, operation, maintenance and management of the project. The LA River Park will be developed to a standard of global excellence. It will be unique in biological and social character and will be the single largest open space along the LA River to be created in 100 years. The Park will directly benefit the residents of the surrounding neighborhoods and the City at large, it will be a signature feature of Southern California.

The River Parties recognize common goals:

- Create a world-class, physically-connected and unified public open space that advances revitalization of the Los Angeles River and supports urban ecology

- Engage local communities and stakeholders to guide development of the project

- Establish equity, ecology, River revitalization and flood management as the cornerstones for the Park's design, implementation, and programming

- Increase Park access by linking the interiors of the Park and the exteriors of the Parks and community to new transportation options

- Incorporate safety, sustainability and resilience into the remediation, design, construction, operation, and stewardship of the park

- Restore ecosystem values and native habitats along the LA River

- Integrate the Park and the LA River by rethinking the LA River's bank

- Include River activities in the short-term, mid-term and long-term vision

- Establish facilities to enable cultural, artistic, community, and educational experiences and skills

- Curate appropriate revenue-generating programming to provide rich user experiences, to help develop the project, and to sustain future operation and maintenance

- Create physical and programmatic connections between local educational centers and the project's outdoor learning environment

- Provide varied passive and active recreational opportunities and play spaces within the park

- Improve and enhance athletic fields at Rio de Los Angeles State Park

- Establish on-site stewardship staff, on-going daily programming and encourage neighborhood community care

- Include educational, artistic, and cultural/historical partners in the Park's development, programming, and operation

- Create safe and easy physical connections between all of the areas of the 100 acres and to the surrounding communities on both sides of the River

To fulfill these common goals, The River Parties intend to work together to:

- Establish a cooperative agreement within one (1) year to define a collaborative approach to the remediation, design, construction, financing, operation, and management of the project

- Articulate and implement a common vision for the 100-acre area that is ecologically focused and community-driven and delivers on goals outlined above

- Coordinate on marketing, communication and outreach of the common vision

- Seek other implementation and program partners through a wide-ranging engagement process and City-led contracting process

- Provide near-term public programming on each of the properties, as feasible.
- Cooperatively raise funds for design and implementation from multiple sources and using creative value capture techniques
- Engage regulatory and permitting agencies to secure necessary approvals for site remediation, water quality, flood control, and all other environmental reviews consistent with the CEQA and NEPA processes
- Secure necessary authorizations to execute various partnership agreements

The River Parties understand that this Letter of Intent is not a financial commitment to future expenditures and does not create any obligations, legal or otherwise, between them that do not already exist.

On behalf of California State Parks:

Craig Sap, Parks Superintendent

Date: 12/30/19

On behalf of the Mountains Recreation and Conservation Authority:

Joseph T. Edmiston, Executive Officer

Date: 12-11-19

On behalf of the City of Los Angeles:

Michael A. Shull, General Manager, Department of Recreation and Parks

Date: 12/13/19

Gary Lee Moore

Gary Lee Moore, City Engineer, Bureau of Engineering

Date: 1-10-20