

Appendix D2

Utility Infrastructure Technical Report: Wastewater



1216-1224 MENLO AVENUE, LOS ANGELES, CA 90006
UTILITY INFRASTRUCTURE TECHNICAL REPORT: WASTEWATER
AUGUST 2020

PREPARED BY:

KPFF Consulting Engineers
700 South Flower Street, Suite 2100
Los Angeles, CA 90017
(213) 418-0201

Table of Contents

1. INTRODUCTION	1
1.1. PROJECT DESCRIPTION	1
1.2. SCOPE OF WORK	1
2. REGULATORY FRAMEWORK	1
3. EXISTING CONDITION	3
4. SIGNIFICANCE THRESHOLDS	4
5. METHODOLOGY	4
6. PROJECT IMPACTS	5
6.1. CONSTRUCTION	5
6.2. OPERATION	6
6.3. CUMULATIVE IMPACTS	7
7. LEVEL OF SIGNIFICANCE	8

Appendix

Exhibit 1- City of Los Angeles Bureau of Sanitation-Request for Wastewater Services Information

1. INTRODUCTION

1.1. PROJECT DESCRIPTION

The Project includes a new six-story residential building with 128 dwelling units and an existing three-story building that will be preserved and repurposed with residential amenities. The Project will be 100 percent affordable housing with five parking stalls located on the ground level.

1.2. SCOPE OF WORK

As a part of the environmental review process for the Project, the purpose of this technical report is to analyze the potential impact of the Project to the City's wastewater infrastructure systems.

2. REGULATORY FRAMEWORK

The City of Los Angeles has one of the largest sewer systems in the world including more than 6,600 miles of sewers serving a population of more than four million. The Los Angeles sewer system is comprised of three smaller systems: Hyperion Sanitary Sewer System, Terminal Island Water Reclamation Plant Sanitary Sewer System, and Los Angeles Regional Sanitary Sewer System.

The Project Site lies within the Hyperion Service Area served by the Hyperion Sanitary Sewer System and the Hyperion Treatment Plant. In January 2019, a Sewer System Management Plan (SSMP) was prepared for the Hyperion Sanitary Sewer System pursuant to the State Water Resources Control Board's (SWRCB) May 2, 2006 Statewide General Waste Discharge Requirements (WDRs)¹.

Sewer permit allocation for projects that discharge into the Hyperion Treatment Plant is regulated by Ordinance No. 166,060 adopted by the City in 1990. This Ordinance established an additional annual allotment of 5.0 million gallons per day, of which 34.5 percent (1.725 million gallons per day) is allocated for priority projects, 8 percent (0.4 million gallons per day) for public benefit projects, and 57.5 percent (2.875 million gallons per day) for non-priority projects (of which 65 percent is for residential projects and 35 percent for non-residential projects).

The City of Los Angeles Municipal Code (LAMC) includes regulations that allow the City to assure available sewer capacity for new projects and require fees for improvements to the infrastructure system. LAMC Section 64.15 requires that the City perform a Sewer Capacity Availability Request (SCAR) analysis when any person seeks a sewer permit to connect a property to the City's sewer collection system, proposes additional discharge through their existing public sewer connection, or proposes a future sewer connection or future development that is anticipated to generate 10,000 gallons or

¹ City of Los Angeles Department of Public Works, Bureau of Sanitation, Sewer System Management Plan, Version 3.0, January 2019.

more of sewage per day. A SCAR is an analysis of the existing sewer collection system to determine if there is adequate capacity existing in the sewer collection system to safely convey the newly generated sewage to the appropriate sewage treatment plant.

LAMC Section 64.11.2 requires the payment of fees for new connections to the sewer system to assure the sufficiency of sewer infrastructure. New connections to the sewer system are assessed a Sewerage Facilities Charge. The rate structure for the Sewerage Facilities Charge is based upon wastewater flow strength, as well as volume. The determination of wastewater strength for each applicable project is based on City guidelines for the average wastewater concentrations of two parameters (biological oxygen demand and suspended solids) for each type of land use. Fees paid to the Sewerage Facilities Charge fees are deposited in the City's Sewer Construction and Maintenance Fund for sewer and sewage-related purposes, including but not limited to industrial waste control and water reclamation purposes.

In addition, the City establishes design criteria for sewer systems to assure that new infrastructure provides sewer capacity and operating characteristics to meet City Standards (Bureau of Engineering Special Order No. SO06-0691). Per this Special Order, laterals sewers, which are sewers 18 inches or less in diameter, must be designed for a planning period of 100 years. The Special Order also requires that sewers be designed so that the peak dry weather flow depth during their planning period shall not exceed one-half the pipe diameter.²

In 2006 the City approved the Integrated Resources Plan, which incorporates a Wastewater Facilities Plan.³ The Integrated Resources Plan was developed to meet future wastewater needs of more than 4.3 million residents expected to live within the City by 2020. In order to meet future demands posed by increased wastewater generation, the City has chosen to expand its current overall treatment capacity, while maximizing the potential to reuse recycled water through irrigation, and other approved uses.

In addition, the Bureau of Sanitation and LADWP have collaborated to develop the One Water LA 2040 Plan (Plan). The Plan takes a holistic and collaborative approach to consider all of the City's water resources from surface water, groundwater, potable water, wastewater, recycled water, dry-weather runoff, and stormwater as "One Water." An updated Wastewater Facilities Plan (WWFP) has been developed as part of the Plan, and will serve as an update of the Wastewater Facilities Plan that was included in the 2006 Integrated Resources Plan. The purpose of the WWFP is to guide decision making related to the implementation of system improvements to the City's wastewater collection and treatment facilities through year 2040.

² <http://www.environmentla.org/programs/thresholds/M-Public%20Utilities.pdf>.

³ City of Los Angeles, Department of Public Works, LA Sewers Website, Integrated Resources Plan Facilities Plan, Summary Report, December 2006.

3. EXISTING CONDITION

The Project Site is approximately 39,995 sq. ft. (0.92 ac) and is currently occupied by three structures, which include a two-story multi-family residential building containing eight dwelling units, a three-story former single-family residential building (containing approx. 7,757 sf), a two-story classroom building containing approximately 16,000 square feet of floor area operated by the Japanese Language School Unified School System, and a surface parking lot. The multi-family residential building and classroom building would be removed as part of the Project, and the existing single-family residential building would be adaptively reused to provide residential amenities (with a resulting floor area of approx. 7,687 sf). The Project fronts Menlo Avenue to the west and sits approximately mid-block between Pico Boulevard and West 11th Street. The Project fronts separate private developments on the north, east, and south.

Based on available record data provided by the City, there are two (2) 8-inch vitrified clay pipe (VCP) sewer lines that connect at a sewer manhole at the site frontage to form the sewer main service on Menlo Avenue that serves the site; in this report, they are referred to as separate “upstream” and “downstream” sewer pipes. Sewage flows north in Menlo Avenue and is intercepted to an 18-inch VCP main on 11th Street that flows east-to-west, perpendicular to the sewer lines on Menlo Avenue. Based on the City of Los Angeles Bureau of Engineering’s online Navigate LA database, the upstream sewer main at the proposed development’s frontage slopes at 0.88% north towards the aforementioned main and at 50% full has a calculated capacity of 0.52 cfs. The downstream sewer main at the proposed development’s frontage slopes at 1.76% towards the north and at 50% full has a calculated capacity of 0.74 cubic feet per second (cfs). Available records indicate that the upstream main in the south, fifteen (15) wyes and seven (7) laterals connect to the service. For the downstream main in the north has sixteen (16) sewer wyes and two (2) active laterals.

Wastewater generation estimates for the existing Project Site have been prepared based on Bureau of Sanitation (BOS) sewerage generation factors, as summarized in Table 1 below.

Table 1 – Estimated Existing Wastewater Generation			
Land Use	Units	Generation Rate (GPD/unit)	Total Sewage Generation (GPD)
Existing			
Residential: Apt – 2 BDR	8 Dwelling Units (DU)	150 GPD/DU	1,200
School: High School ^(a)	166 Students	11 GPD/Student	1,826
Subtotal Existing			3,026
^(a) Unit count based on an average of 95 SF/student			

4. SIGNIFICANCE THRESHOLDS

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts with regard to wastewater. These questions are as follows:

Would the project:

- Require or result in the relocation or construction of new or expanded water, wastewater or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

In the context of the above questions from the CEQA Guidelines, the *L.A. CEQA Thresholds Guide* states that a project would normally have a significant wastewater impact if:

- The project would cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained; or
- The project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or General Plan and its elements.

These thresholds are applicable to the Project and as such are used to determine if the Project would have significant wastewater impacts.

5. METHODOLOGY

The methodology for determining the significance of a project as it relates to a project's impact on wastewater collection and treatment infrastructure is based on the *L.A. CEQA Thresholds Guide*. This methodology involves a review of the project's environmental setting, project impacts, cumulative impacts, and mitigation measures (if required). The following has been considered as part of the determination for this Project:

Environmental Setting

- Location of the Project and appropriate points of connection to the wastewater collection system on the pertinent Wye Map;
- Description of the existing wastewater system which would serve the Project, including its capacity and current flows.

- Summary of adopted wastewater-related plans and policies that are relevant to the Project area.

Project Impacts

- Evaluate the Project wastewater needs (anticipated daily average wastewater flow), taking into account design or operational features that would reduce or offset service impacts;
- Compare the Project's wastewater needs to the appropriate sewer's capacity and/or the wastewater flows anticipated in the Wastewater Facilities Plan or General Plan.

This report analyzes the potential impacts of the Project on the existing public sewer infrastructure by comparing the estimated Project wastewater generation with the calculated available capacity of the existing facilities.

Pursuant to LAMC Section 64.15, BOS Wastewater Engineering Division made a preliminary analysis of the local and regional sewer conditions to determine if available wastewater conveyance and treatment capacity exists for future development of the Project Site. A Wastewater Services Information (WWSI) response letter from the City of Los Angeles details their findings. BOS's approach consisted of the study of a worst-case scenario envisioning peak demands from the relevant facilities occurring simultaneously on the wastewater system. The data used in this report are based on the findings of the BOS preliminary analysis. Refer to Exhibit 1 for the WWSI prepared for the Project, which contains the results of the BOS preliminary analysis.

6. PROJECT IMPACTS

6.1. CONSTRUCTION

Construction activities for the Project would result in a temporary increase in wastewater generation as a result of construction activities at the Project Site. Wastewater generation would occur incrementally throughout construction of the Project as a result of construction workers on-site. However, construction workers would utilize portable restrooms, which would not contribute to wastewater flows to the City's wastewater system. Thus, wastewater generation from Project construction activities is not anticipated to cause any increase in wastewater flows. Therefore, Project impacts associated with construction-period wastewater generation would be less than significant.

The Project will require construction of new on-site infrastructure to serve the new building. Construction impacts associated with wastewater infrastructure would primarily be confined to trenching for miscellaneous utility lines and connections to public infrastructure. Installation of wastewater infrastructure will be limited to on-site wastewater distribution, and minor off-site work associated with connections to the public main. Although no upgrades to the public main are anticipated, minor off-site work is required in order to connect to the public main. Therefore, as part of the Project, a construction management plan would be implemented to reduce any temporary

pedestrian and traffic impacts during construction, including maintaining two lanes of travel and ensuring safe pedestrian access and adequate emergency vehicle access. Overall, when considering impacts resulting from the installation of any required wastewater infrastructure, all impacts are of a relatively short-term duration (i.e., months) and would cease to occur once the installation is complete. Therefore, Project impacts on wastewater associated with construction activities would be less than significant.

6.2. OPERATION

In accordance with the *L.A. CEQA Thresholds Guide*, the base estimated sewer flows were based on the sewer generation factors for the Project's uses. Based on the type of use and generation factors, the Project will generate a net increase of approximately 14,569 gallons per day (GPD) of wastewater. Wastewater generation estimates have been prepared based on the City of LA Bureau of Sanitation sewerage generation factors for residential and commercial categories and are summarized in Table 2 below.

Table 2 – Estimated Proposed Wastewater Generation			
Land Use	Units	Generation Rate (GPD/unit)	Total Sewage Generation (GPD)
Existing			
Residential: Apt – 2 BDR	8 Dwelling Units (DU)	150 GPD/DU	1,200
School: High School ^(a)	166 Students	11 GPD/Student	1,826
Subtotal Existing			3,026
Proposed			
Residential: Apt - Bachelor	24 DU	75 GPD/DU	1,800
Residential: 1 Bedroom	39 DU	110 GPD/DU	4,290
Residential: 2 Bedrooms	33 DU	150 GPD/DU	4,950
Residential: 3 Bedrooms	32 DU	190 GPD/DU	6,080
Office Building ^(b)	1,250 SF	120 GPD/KGSF	150
Lounge ^(b)	6,507 SF	50 GPD/KGSF	325
Subtotal Proposed			17,595
Net Increase			14,569
^(a) Unit count based on 95 SF/student ^(b) It is understood that the existing building to remain will be repurposed as leasing/management office and amenity spaces for the Project			

A response to a Request for Wastewater Services Information (WWSI) from the City of Los Angeles was provided which concludes that the sewer system might be able to

accommodate the total flow for the proposed project. Further detailed gauging and evaluation is needed as a part of the permit process to identify specific sewer connection point(s), which will occur as part of the permitting process. The Bureau of Sanitation analyzed the Project demands in conjunction with existing conditions and forecasted growth. Refer to Exhibit 1 for a copy of the City of Los Angeles' response to WWSI.⁴

As further discussed below, the existing design capacity of the Hyperion Service Area is approximately 580 million gallons per day (which treats wastewater from DC Tillman and Los Angeles-Glendale Water Reclamation Plant).⁵ The Project's proposed additional wastewater generation is approximately 0.015 MGD. Currently up to 300 MGD is treated at the Hyperion Treatment Plant resulting in a treatment capacity of 280 MGD, which means the project would account for approximately 0.005 percent of the available capacity. Consequently, impacts on wastewater treatment capacity are less than significant.

Capacities of sewer lines at 50% full were analyzed using FlowMaster software. The existing capacity of the upstream 8-inch sewer line in Menlo at 50% full is approximately 0.52 cubic feet per second (cfs). The existing capacity of the downstream 8-inch sewer also in Menlo Avenue at 50% full is approximately 0.74 cubic feet per second (cfs). The Project's net increase in sewage generation is approximately 14,569 GPD (approximately 0.0225 cfs).

To be conservative in this analysis, it is assumed that 100% of the sewer generation from the project will go to the existing upstream sewer line in Menlo Avenue, which results in approximately 4.5 percent of the upstream pipe's half-full capacity and in approximately 3.1 percent of the downstream pipe's half-full capacity. For the closest impacted sewer for which BOS was able to provide current gauging data, the 18" sewer main in Dewey Ave, the proposed increase represents less than half of a percent of its half-full capacity. Due to this fact and the findings from the WWSI, impacts on wastewater infrastructure are anticipated to be less than significant.

6.3. CUMULATIVE IMPACTS

The Proposed Project will result in the additional generation of sewer flow. However, as discussed above the Bureau of Sanitation will conduct an analysis of existing and planned capacity and will determine that adequate capacity exists to serve the Project. Related projects connecting to the same sewer system are required to obtain a sewer connection permit and submit a Sewer Capacity Availability Request to the Bureau of Sanitation as part of the related project's development review. Impact determination will be provided following the completion of the SCAR analysis. If system upgrades are required as a

⁴ The analysis performed by Bureau of Sanitation reflected 131 units and the entire building to remain as office area, thus representing a more conservative analysis than the proposed condition.

⁵ City of Los Angeles Department of Public Works, Bureau of Sanitation, Hyperion Water Reclamation Plants, <https://www.lacitysan.org/san/faces/home/portal>, accessed August 18, 2020.

result of a given project's additional flow, arrangements would be made between the related project and the Bureau of Sanitation to construct the necessary improvements.

Wastewater generated by the proposed Project would be conveyed via the existing wastewater conveyance systems for treatment at the Hyperion Treatment Plant system. As previously stated, based on information from BOS, the existing design capacity of the Hyperion Service Area is approximately 450 million gallons per day (MGD)⁵ and the existing average daily flow for the system is approximately 260 MGD⁶. The estimated wastewater generation increase of 14,569 GPD, summarized in Table 2, comprises of less than 0.008 percent of the available capacity in the system. It is expected that the related projects would also be required to adhere to the BOS's annual wastewater flow increase allotment.

Based on these forecasts, the Project's increase in wastewater generation would be adequately accommodated within the Hyperion Service Area. In addition, the BOS analysis confirms that the Hyperion Treatment Plant has sufficient capacity and regulatory allotment for the proposed Project. Thus, operation of the Project would have a less than significant impact on wastewater treatment facilities.

7. LEVEL OF SIGNIFICANCE

Based on the analysis contained in this report no significant impacts have been identified to wastewater infrastructure for this Project.

⁶ City of Los Angeles Department of Public Works, Bureau of Sanitation, Sewer System Management Plan Hyperion Sanitary Sewer System, January 2019.

EXHIBIT 1

**BOARD OF PUBLIC WORKS
MEMBERS**

KEVIN JAMES
PRESIDENT

AURA GARCIA
VICE PRESIDENT

DR. MICHAEL R. DAVIS
PRESIDENT PRO TEMPORE

JESSICA M. CALOZA
COMMISSIONER

M. TERESA VILLEGAS
COMMISSIONER

CITY OF LOS ANGELES
CALIFORNIA



BUREAU OF SANITATION

ENRIQUE C. ZALDIVAR
DIRECTOR

TRACI J. MINAMIDE
CHIEF OPERATING OFFICER

LISA B. MOWERY
CHIEF FINANCIAL OFFICER

MAS DOJIRI
JOSE P. GARCIA
ALEXANDER E. HELOU
ASSISTANT DIRECTORS

TIMEYIN DAFETA
HYPERION EXECUTIVE PLANT MANAGER

**WASTEWATER ENGINEERING
SERVICES DIVISION**
274 MEDIA CENTER DRIVE

April 6, 2020

Mr. Daniel Haefeli
KPFF Consulting Engineers
700 S Flower Street, #2100
Los Angeles, CA 90017

Dear Mr. Haefeli,

1216 MENLO AVENUE - REQUEST FOR WASTEWATER SERVICES INFORMATION

This is in response to your April 2, 2020 letter requesting a review of your proposed mixed-use project located at 1216 Menlo Avenue, Los Angeles. The project will consist of (residential apartments and an office building). LA Sanitation has conducted a preliminary evaluation of the potential impacts to the wastewater and stormwater systems for the proposed project.

WASTEWATER REQUIREMENT

LA Sanitation, Wastewater Engineering Services Division (WESD) is charged with the task of evaluating the local sewer conditions and to determine if available wastewater capacity exists for future developments. The evaluation will determine cumulative sewer impacts and guide the planning process for any future sewer improvement projects needed to provide future capacity as the City grows and develops.

Projected Wastewater Discharges for the Proposed Project:

Type Description	Average Daily Flow per Type Description (GPD/UNIT)	Proposed No. of Units	Average Daily Flow (GPD)
Proposed			
Residential: Apt - Bachelor	75 GPD/DU	22 DU	1,650
Residential: 1 BDRMS	110 GPD/DU	40 DU	4,400
Residential: 2 BDRMS	150 GPD/DU	36 DU	5,400
Residential: 3 BDRMS	190 GPD/DU	33 DU	6,270
Office Building	120 GPD/1000 GSF	8,000 GSF	960
Total			18,680

zero waste • zero wasted water

SEWER AVAILABILITY

The sewer infrastructure in the vicinity of the proposed project includes an existing 8-inch line on Menlo ave. The sewage from the existing 8-inch line feeds into a 18-inch line on 11th st before discharging into a 21-inch sewer line on Dewey Ave. Figure 1 shows the details of the sewer system within the vicinity of the project. The current flow level (d/D) in the 8-inch line cannot be determined at this time without additional gauging.

The current approximate flow level (d/D) and the design capacities at d/D of 50% in the sewer system are as follows:

Pipe Diameter (in)	Pipe Location	Current Gauging d/D (%)	50% Design Capacity
8	Menlo Ave	*	481,031 GPD
18	11 th St	*	1.48 MGD
18	Dewey Ave	36	3.06 MGD
21	Dewey Ave	*	2.23 MGD
24	Dewey Ave	*	2.25 MGD
27	San Marino St	54	2.62 MGD

* No gauging available

Based on estimated flows, it appears the sewer system might be able to accommodate the total flow for your proposed project. Further detailed gauging and evaluation will be needed as part of the permit process to identify a specific sewer connection point. If the public sewer lacks sufficient capacity, then the developer will be required to build sewer lines to a point in the sewer system with sufficient capacity. A final approval for sewer capacity and connection permit will be made at the time. Ultimately, this sewage flow will be conveyed to the Hyperion Water Reclamation Plant, which has sufficient capacity for the project.

All sanitary wastewater ejectors and fire tank overflow ejectors shall be designed, operated, and maintained as separate systems. All sanitary wastewater ejectors with ejection rates greater than 30 GPM shall be reviewed and must be approved by LASAN WESD staff prior to other City plan check approvals. Lateral connection of development shall adhere to Bureau of Engineering Sewer Design Manual Section F 480.

If you have any questions, please call Christopher DeMonbrun at (323) 342-1567 or email at chris.demonbrun@lacity.org.

STORMWATER REQUIREMENTS

LA Sanitation, Stormwater Program is charged with the task of ensuring the implementation of the Municipal Stormwater Permit requirements within the City of Los Angeles. We anticipate the following requirements would apply for this project.

POST-CONSTRUCTION MITIGATION REQUIREMENTS

In accordance with the Municipal Separate Storm Sewer (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (Order No. R4-2012-0175, NPDES No. CAS004001) and the City of Los Angeles Stormwater and Urban Runoff Pollution Control requirements (Chapter VI,

Article 4.4, of the Los Angeles Municipal Code), the Project shall comply with all mandatory provisions to the Stormwater Pollution Control Measures for Development Planning (also known as

Low Impact Development [LID] Ordinance). Prior to issuance of grading or building permits, the applicant shall submit a LID Plan to the City of Los Angeles, Public Works, LA Sanitation, Stormwater Program for review and approval. The LID Plan shall be prepared consistent with the requirements of the Planning and Land Development Handbook for Low Impact Development.

Current regulations prioritize infiltration, capture/use, and then biofiltration as the preferred stormwater control measures. The relevant documents can be found at: www.lacitysan.org. It is advised that input regarding LID requirements be received in the preliminary design phases of the project from plan-checking staff. Additional information regarding LID requirements can be found at: www.lacitysan.org or by visiting the stormwater public counter at 201 N. Figueroa, 2nd Fl, Suite 280.

GREEN STREETS

The City is developing a Green Street Initiative that will require projects to implement Green Street elements in the parkway areas between the roadway and sidewalk of the public right-of-way to capture and retain stormwater and urban runoff to mitigate the impact of stormwater runoff and other environmental concerns. The goals of the Green Street elements are to improve the water quality of stormwater runoff, recharge local ground water basins, improve air quality, reduce the heat island effect of street pavement, enhance pedestrian use of sidewalks, and encourage alternate means of transportation. The Green Street elements may include infiltration systems, biofiltration swales, and permeable pavements where stormwater can be easily directed from the streets into the parkways and can be implemented in conjunction with the LID requirements. Green Street standard plans can be found at: www.eng2.lacity.org/techdocs/stdplans/

CONSTRUCTION REQUIREMENTS

All construction sites are required to implement a minimum set of BMPs for erosion control, sediment control, non-stormwater management, and waste management. In addition, construction sites with active grading permits are required to prepare and implement a Wet Weather Erosion Control Plan during the rainy season between October 1 and April 15. Construction sites that disturb more than one-acre of land are subject to the NPDES Construction General Permit issued by the State of California, and are required to prepare, submit, and implement the Storm Water Pollution Prevention Plan (SWPPP).

If there are questions regarding the stormwater requirements, please call WPP's plan-checking counter at (213) 482-7066. WPD's plan-checking counter can also be visited at 201 N. Figueroa, 2nd Fl, Suite 280.

GROUNDWATER DEWATERING REUSE OPTIONS

The Los Angeles Department of Water and Power (LADWP) is charged with the task of supplying water and power to the residents and businesses in the City of Los Angeles. One of the sources of water includes groundwater. The majority of groundwater in the City of Los Angeles is adjudicated, and the rights of which are owned and managed by various parties. Extraction of groundwater within the City from any depth by law requires metering and regular reporting to the appropriate Court-appointed Watermaster. LADWP facilitates this reporting process, and may assess and collect

associated fees for the usage of the City's water rights. The party performing the dewatering should inform the property owners about the reporting requirement and associated usage fees.

On April 22, 2016 the City of Los Angeles Council passed Ordinance 184248 amending the City of Los Angeles Building Code, requiring developers to consider beneficial reuse of groundwater as a conservation measure and alternative to the common practice of discharging groundwater to the storm drain (SEC. 99.04.305.4). It reads as follows: "Where groundwater is being extracted and discharged, a system for onsite reuse of the groundwater, shall be developed and constructed. Alternatively, the groundwater may be discharged to the sewer."

Groundwater may be beneficially used as landscape irrigation, cooling tower make-up, and construction (dust control, concrete mixing, soil compaction, etc.). Different applications may require various levels of treatment ranging from chemical additives to filtration systems. When onsite reuse is not available the groundwater may be discharged to the sewer system. This allows the water to be potentially reused as recycled water once it has been treated at a water reclamation plant. If groundwater is discharged into the storm drain it offers no potential for reuse. The onsite beneficial reuse of groundwater can reduce or eliminate costs associated with sewer and storm drain permitting and monitoring. Opting for onsite reuse or discharge to the sewer system are the preferred methods for disposing of groundwater.

To help offset costs of water conservation and reuse systems, LADWP offers Technical Assistance Program (TAP), which provides engineering and technical assistance for qualified projects. Financial incentives are also available. Currently, LADWP provides an incentive of \$1.75 for every 1,000 gallons of water saved during the first two years of a five-year conservation project. Conservation projects that last 10 years are eligible to receive the incentive during the first four years. Other water conservation assistance programs may be available from Metropolitan Water District of Southern California. To learn more about available water conservation assistance programs, please contact LADWP Rebate Programs 1-888-376-3314 and LADWP TAP 1-800-544-4498, selection "3".

For more information related to beneficial reuse of groundwater, please contact Greg Reed, Manager of Water Rights and Groundwater Management, at (213)367-2117 or greg.reed@ladwp.com.

SOLID RESOURCE REQUIREMENTS

The City has a standard requirement that applies to all proposed residential developments of four or more units or where the addition of floor areas is 25 percent or more, and all other development projects where the addition of floor area is 30 percent or more. Such developments must set aside a recycling area or room for onsite recycling activities. For more details of this requirement, please contact LA Sanitation Solid Resources Recycling hotline 213-922-8300.

Sincerely,

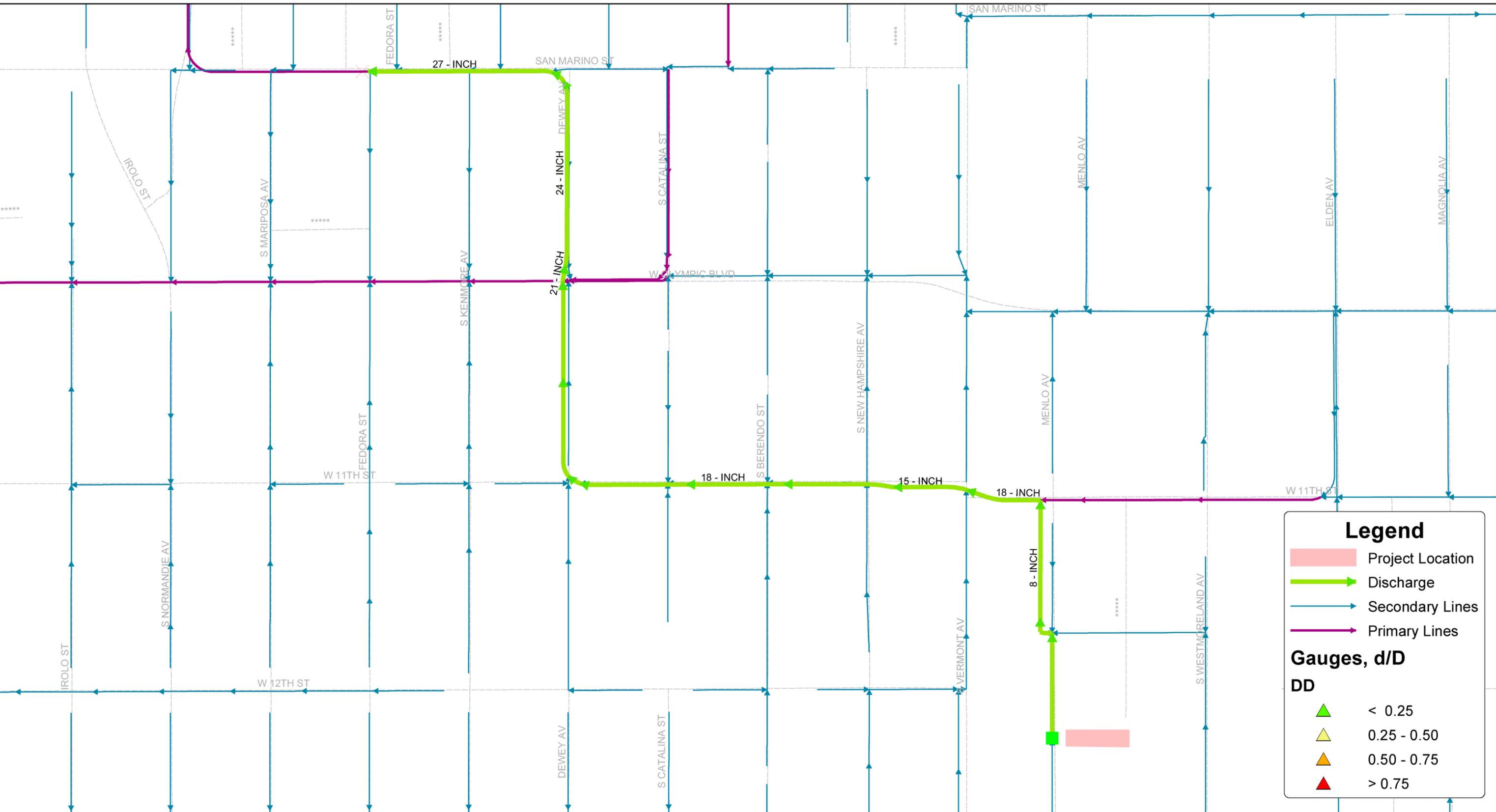


Ali Poosti, Division Manager
Wastewater Engineering Services Division
LA Sanitation and Environment

AP/CD: gc

Attachment: Figure 1 - Sewer Map

c: Kosta Kaporis, LASAN
Cyrous Gilani, LASAN
Christopher DeMonbrun, LASAN



Legend

- Project Location
- Discharge
- Secondary Lines
- Primary Lines

Gauges, d/D

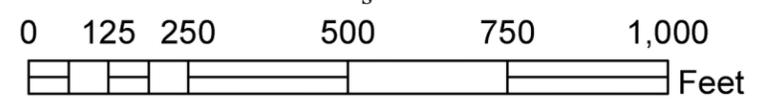
DD

- < 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- > 0.75

Wastewater Engineering Services Division
Bureau of Sanitation
City of Los Angeles



Figure 1
1216 Menlo Ave
Sewer Map



Thomas Brother Data reproduced with permission granted by THOMAS BROS MAP