Exhibit A

Meridian Consultants

Los Angeles
706 S. Hill Street, 11th Floor
Los Angeles, CA 90014
(213) 335-3434

Westlake Village
920 Hampshire Road, Suite A5
Westlake Village, CA 91361
(805) 367-5720

September 13, 2021

Alan Como, AICP
City Planner
City of Los Angeles
Department of City Planning
221 N. Figueroa St., Room 1350
Los Angeles, CA 90012

Subject: Responses to Comments
Crenshaw Crossing Sustainable Communities Environmental Assessment (SCEA)

Dear Mr. Como,

Meridian Consultants assisted the Department of City Planning with the preparation of the Crenshaw Crossing SCEA (SCH No. 2021060246).

We have reviewed the comments on the SCEA submitted by Sharon Farwell and Mitchell M. Tsai on behalf of the Southwest Regional Council of Carpenters. Attached please find responses to these comments. Also attached are copies of the comment letters with individual comments identified by number for reference.

Please contact me if you have any questions on these responses.

Sincerely,

Meridian Consultants LLC

Tony Locacciato, AICP
Partner

COMMENT LETTER NO. 1

Sharon Farwell
sharonfarwell@sbcglobal.net
via email, 6/19/2021

Comment 1-1

Mr. Como,

Below is a list of questions and concerns I have (regarding the above case nos.) and would appreciate a response. Thank you in advance for your time.

- How is liquefaction mitigated under these sites?
- How is the shortage of water (aka drought) mitigated to authorize the addition of so many new single family units?
- Since the average height of a Black male adult is approximately 6', compact cars are not an option for some. Why would parking for compact cars only, not be discriminatory?
- Since the pandemic, I have seen multiple articles regarding the importance of outdoor private space and ample space indoors (for mental and physical health reasons). Furthermore, the reason why the Municipal Code set perimeters was for the same reasons. How does the City mitigate denser conditions and less outdoor space after the pandemic?

Once, again, thank you for your response.

Sharon Farwell

Response 1-1

This introductory comment identifies the individual numbered comments below. Please see the responses provided to these comments below.

Comment 1-2

1. **How is liquefaction mitigated under these sites?**

Response 1-2

As described on page 4.0-72 in Section 4.0: Initial Study Checklist and Environmental Analysis, VIII.: Geology and Soils, liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subjected to high-intensity ground shaking. Liquefaction occurs when three

general conditions exist: shallow groundwater; low-density, fine, clean, sandy soils; and strong ground motion.

The Project Site is in a designated liquefaction zone and analysis was performed as documented in the *Geotechnical Investigation* (Appendix E.1 of the SCEA) to evaluate the potential for liquefaction from a Design Earthquake (DE) level and a Maximum Considered Earthquake (MCE) level. The liquefaction analyses determined that the alluvial soils below the historic high groundwater depth could be prone to approximately 2.6 inches of liquefaction induced settlement during DE ground motion and MCE ground motion.

In addition to the *Geotechnical Investigation*, additional review of the available methods to mitigate the potential for liquefaction is provided in the *Geotechnical Recommendation Review for CEQA* (Appendix E.3 of the Sustainable Communities Environmental Assessment [SCEA]). Design options for the building foundations identified to mitigate for the liquefaction potential include, Cast-In-Drilled Hole concrete piles, Auger-Cast Pressure Grouted Displacement piles, or stone columns are all feasible options that can mitigate the potential for liquefaction on the Project Sites.

The Project would comply with the City's Building Code, which incorporates the Uniform Building Code and the California Building Code, to avoid potential impacts related to seismic-related ground failure, including liquefaction. The Project would also incorporate site-specific geotechnical recommendations contained in the *Geotechnical Investigation* completed for the Project and would also be required to comply with the conditions contained within the Department of Building and Safety's Geology and Soils Report Approval Letter for the Project. As a result, the Project would not exacerbate existing environmental conditions related to seismic related ground failure, including liquefaction or associated seismically induced settlement, which would result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury. Therefore, Project impacts associated with seismic-related ground failure including liquefaction will be less than significant during construction and operation of the Project.

Comment 1-3

2. **How is the shortage of water (aka drought) mitigated to authorize the addition of so many new single family units?**

Response 1-3

The Los Angeles Department of Water and Power (LADWP) prepared a Water Supply Assessment (WSA) for the proposed Project in accordance with the requirements of the California Water Code and California Environmental Quality Act. As required by state law, the WSA considers whether the City has sufficient water supplies available to meet the increase in water demand from the Project during normal, single-dry year and multiple-dry water demand periods (i.e., droughts).

The WSA determined that the City has adequate water supplies available to meet the total additional water demand of 78 AF annually for the Project in addition to the existing and planned future demands on LADWP during normal, single-dry, and multiple-dry water years periods.

The Project conforms with the use and intensity of development permitted by the City's General Plan. The anticipated water demand for the Project fall within LADWP's 2015 Urban Water Management Plan (UWMP)'s projected water supplies for normal, single-dry, and multiple-dry years through the year 2040 and is within the LADWP 2015 UWMP 25-year water demand growth projection.

The Project's water demand falls within the LADWP 2015 UWMP projected increase in Citywide water demands, while anticipating multi-dry year water supply conditions occurring at the same time. Additionally, LADWP's 2015 UWMP contains a water shortage contingency plan for multi-year dry hydrological periods. This water shortage contingency plan was implemented on June 1, 2009, when the Board adopted Shortage Year Rates, and the City Council implemented the landscape irrigation and prohibited use restrictions contained in the City's Water Conservation Ordinance.

Further, the project commits to implementing various conservation measures such as low-flow plumbing, kitchen and washer features, efficient pool equipment, micro-irrigation systems, turf dog run, and drought tolerant landscaping.

Comment 1-4

3. **Since the average height of a Black male adult is approximately 6', compact cars are not an option for some. Why would parking for compact cars only, not be discriminatory?**

Response 1-4

City of Los Angeles Municipal Code Section 12.21 A.5, Design of Parking Facilities, addresses the standard for compact space in Section 12.21 A.5 (c), which allows all parking stalls provided for residential uses in excess of one stall per unit to be designed to accommodate compact cars. In each parking area or garage containing 10 or more parking stalls for other than dwelling uses, up to 40 percent of the required stalls may be designed to accommodate compact cars.

The Project is requesting that in lieu of providing one (1) standard stall for each unit, that up to 43 percent on Site A and up to 34 percent on Site B may be allowed to be compact parking spaces, should it be necessary to accommodate the parking on the constrained site.

There would still be a majority of standard-sized spaces available on both sites. However, because of the site constraint, associated costs with parking, and design configuration of structural columns, compact spaces would help accommodate the required parking in an efficient manner.

Comment 1-5

4. **Since the pandemic, I have seen multiple articles regarding the importance of outdoor private space and ample space indoors (for mental and physical health reasons). Furthermore, the reason why the Municipal Code set perimeters was for the same reasons. How does the City mitigate denser conditions and less outdoor space after the pandemic?**

Response 1-5

The Project is a Joint Development project with the County of Los Angeles and Metro that is reserving 20 percent of its units as affordable housing. The State's Density Bonus statute allows projects that meet its affordable housing criteria an on-menu option to reduce the open space requirement by up to 20 percent. The statute incentivizes projects to provide increased levels of affordable housing in exchange for relief from certain development standards in order to offset construction and maintenance costs, such as the open space requirement.

In total, the Project currently provides more than the code requires. For both sites, the residential open space requirement would be 41,750 square feet, and the Project proposes to exceed that by providing 44,464 square feet via several outdoor courtyards, balconies, a pool deck, and community rooms. However, because the Project is split into two sites and Site A is constrained by sharing the block with the Shell gas station, Site A is only able to accommodate approximately 93.5 percent of its open space requirement – 23,850 square feet is required and 22,388 square feet is proposed, a reduction of 6.5 percent or 1,550 square feet. Site B has the entire block and is able to provide 22,076 square feet, exceeding its requirement of 17,900 square feet. In sum, the Project in total would exceed its open space requirement and not require a reduction. It is only Site A that would not be able to meet its requirement by approximately 6.5 percent or 1,550 square feet, which requires the request of the on-menu incentive.

Also, in addition to the residential open spaces described above, the Project would also provide almost 30,000 square feet of outdoor, landscaped promenade space. These areas are made up of the public right-of-way segments of Lower Exposition Boulevard and Bronson Avenue that are requested to be merged into the Project's tract. A small portion of this area would lend itself to the Project's loading and mechanical activities along Bronson Ave, and the large remainder between the Metro's E Line and the Project Site would be maintained as a landscaped and furnished promenade that would be publicly accessible and available for flexible community programming.

As demonstrated by this information, the Project would not be deficient nor have its residents feel there would be a lack of open space within the residential portions of the building. There will be a wide variety of recreational areas – passive and active – to appeal to the diverse range of residents' ages and lifestyles. In addition, the Project would also have an almost 30,000 square feet of outdoor street-level open space that would be available for community events, screenings and also provide passive open spaces on a daily basis.

Alan Como <alan.como@lacity.org>

Case Number: VTT-82282, CPA-2019-5425-DB-MCUP-SPP-SPR

1 message

sharon farwell <sharonfarwell@sbcglobal.net> Sat, Jun 19, 2021 at 8:16 PM
To: "alan.como@lacity.org" <alan.como@lacity.org>

Mr. Como,

Below is a list of questions and concerns I have (regarding the above case nos. and would appreciate a response. Thank you in advance for your time.

- How is liquefaction mitigated under these sites? 1-1
- How is the shortage of water (aka drought) mitigated to authorize the addition of so many new single family units? 1-2
- Since the average height of a Black male adult is approximately 6', compact cars are not an option for some. Why would parking for compact cars only, not be discriminatory? 1-3
- Since the pandemic, I have seen multiple articles regarding the importance of outdoor private space and ample space indoors (for mental and physical health reasons). Furthermore, the reason why the Municipal Code set perimeters was for the same reasons. How does the City mitigate denser conditions and less outdoor space after the pandemic? 1-4

Once, again, thank you for your response.

Sharon Farwell

COMMENT LETTER NO. 2

Mitchell M. Tsai
Attorney at Law
155 South El Molino Avenue
Suite 104
Pasadena, California 91101

Comment 2-1[1]

On behalf of the Southwest Regional Council of Carpenters (**"Commenter"** or **"Southwest Carpenters"**), my Office is submitting these comments on the City of Los Angeles (**"City"** or **"Lead Agency"**) Sustainable Communities Environmental Assessment (**"SCEA"**) for the Crenshaw Crossing Project (SCH No. 2021060246) (**"Project"**).

The Southwest Carpenters is a labor union representing more than 50,000 union carpenters in six states, including California, and has a strong interest in well-ordered land use planning, addressing the environmental impacts of development projects and equitable economic development.

Individual members of the Southwest Carpenters live, work, and recreate in the City and surrounding communities and would be directly affected by the Project's environmental impacts.

Response 2-1

The comment introduces the commenter. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-2

Commenter expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

Commenter incorporates by reference all comments raising issues regarding the SCEA submitted prior to certification of the EIR for the Project. *Citizens for Clean Energy v City of Woodland* (2014) 225 Cal. App. 4th 173, 191 (finding that any party who has objected to the Project's environmental documentation may assert any issue timely raised by other parties).

1 Footnotes to this *Comments and Responses* are bolded; footnotes from comment letters appear in regular text.

Response 2-2

The comment expresses the commenter's desire to provide additional comments and to incorporate by reference comments submitted by others. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-3

Moreover, Commenter requests that the Lead Agency provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act (**"CEQA"**), Cal Public Resources Code (PRC) § 21000 *et seq*, and the California Planning and Zoning Law (**"Planning and Zoning Law"**), Cal. Gov't Code §§ 65000–65010. California Public Resources Code Sections 21092.2, and 21167(f) and Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

Response 2-3

The comment request notice of all proceedings related to the Project. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-4

The City should require the Applicant to provide additional community benefits such as requiring local hire and use of a skilled and trained workforce to build the Project. The City should require the use of workers who have graduated from a Joint Labor Management apprenticeship training program approved by the State of California, or have at least as many hours of on-the-job experience in the applicable craft which would be required to graduate from such a state approved apprenticeship training program or who are registered apprentices in an apprenticeship training program approved by the State of California.

Response 2-4

The comment requests the imposition of additional community benefits related to local hiring and training programs. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project. In addition, it should be noted that the Project does not include any requests for approval of discretionary entitlements that require the provision of a public benefit by the applicable city regulations.

Comment 2-5

Community benefits such as local hire and skilled and trained workforce requirements can also be helpful to reduce environmental impacts and improve the positive economic impact of the Project. Local hire

provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project Site can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized economic benefits. As environmental consultants Matt Hagemann and Paul E. Rosenfeld note:

> [A]ny local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling.

Response 2-5

The comment contends that requiring construction workers to be hired within a 10-mile radius of the Project Site would reduce environmental impacts and improve the positive economic impacts of the Project. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Additionally, the comment provides no evidence that either a mitigation measure is necessary to reduce a significant impact related to Project construction nor that the requested mitigation would achieve a reduction in GHG emissions at the Project Site. For all the reasons described in Section 4.0, VIII of the SCEA, pages 3.0-79 through 3.0-100, as supported in Appendix F, GHG Emissions Output File, of the SCEA, the Project: (i) would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and, (ii) would not be in conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions (including the City's Green Building Code, Green Plan/Climate LA Plan, and Green New Deal and SCAG's 2020-2045 RTP/SCS reduction strategies).

Moreover, the requested local hire measure is speculative in assuming that the Applicant's varying labor demands would be met through the requirement and is not substantiated in relation to a specific GHG impact. The comment relies on Exhibit A to the comment letter, which, as shown in this comment itself, states that "the significance of the reduction would vary based on the location and urbanization level of the project site." Neither the comment nor Exhibit A provide any evidence of a significant GHG impact]. Therefore, the comment presents no credible evidence that such a measure is necessary or would reduce GHG emissions for the Project. See **Response to Comment No. 20e**, below.

Additionally, the comment does not provide any facts to support a contention that the requested mitigation measures would increase the positive economic effects of the Project nor the impact of potential increased positive economic impacts on the environment. The environment impact analysis of any project must be related to whether impacts resulting from the construction or operation of a proposed project would significantly affect the environment. A significant effect on the environment is defined as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project" (CEQA Guidelines Section 15002(g)). CEQA Guidelines Section 15382 further defines a

"significant effect on the environment" and states that "[a]n economic or social change by itself shall not be considered a significant effect on the environment." Moreover, CEQA Guidelines Section 15131 specifically states that "economic or social effects of a project shall not be treated as significant effects on the environment" and that economic or social effects "may be used to determine the significance of physical changes caused by the project." The comment presents no facts to substantiate an allegation that increased economic benefits are relevant to the significance of the physical changes which would be caused by the Project. Therefore, potential additional or enhanced economic impacts of the Project are not an appropriate area of CEQA analysis.

For all the foregoing reasons, the comment presents no facts to justify the City's imposition of a mitigation measure related to reduction of the Project's less-than-significant construction GHG emissions.

Comment 2-6

Skilled and trained workforce requirements promote the development of skilled trades that yield sustainable economic development. As the California Workforce Development Board and the UC Berkeley Center for Labor Research and Education concluded:

> . . . labor should be considered an investment rather than a cost – and investments in growing, diversifying, and upskilling California's workforce can positively affect returns on climate mitigation efforts. In other words, well trained workers are key to delivering emissions reductions and moving California closer to its climate targets.[1]

Recently, on May 7, 2021, the South Coast Air Quality Management District found that that the "[u]se of a local state-certified apprenticeship program or a skilled and trained workforce with a local hire component" can result in air pollutant reductions.[2]

Cities are increasingly adopting local skilled and trained workforce policies and requirements into general plans and municipal codes. For example, the City of Hayward 2040 General Plan requires the City to "promote local hiring . . . to help achieve a more positive jobs-housing balance, and reduce regional commuting, gas consumption, and greenhouse gas emissions."[3]

1 California Workforce Development Board (2020) Putting California on the High Road: A Jobs and Climate Action Plan for 2030 at p. ii, available at https://laborcenter.berkeley.edu/ wp-content/uploads/2020/09/Putting-California-on-the-High-Road.pdf

2 South Coast Air Quality Management District (May 7, 2021) Certify Final Environmental Assessment and Adopt Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions Program, and Proposed Rule 316 – Fees for Rule 2305, Submit Rule 2305 for Inclusion Into the SIP, and Approve Supporting Budget Actions, available at:http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf?sfvrsn=10

3 City of Hayward (2014) Hayward 2040 General Plan Policy Document at p. 3-99, available at:https://www.hayward-ca.gov/sites/default/files/documents/General_Plan_FINAL.pdf.

Response 2-6

The comment contends that the use of local hires, State-certified apprenticeship programs or a skilled workforce could result in reductions in air pollution, GHG emissions, and gas consumption reductions and promote job-housing balance. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Nonetheless, see **Response to Comment No. 5** regarding GHG emissions and economic and social benefits of the Project.

As to air quality impacts, as stated on pages 4.0-18 through 4.0-56 of the SCEA, Project construction would result in less than significant impacts with the exception of NOx emissions which would be reduced to less than significant with incorporation of the described mitigation measure PMM AQ-1. As described on page 4.0-29 of the SCEA, each phase of construction would result in varying levels of intensity and a number of construction personnel. The construction workforce would consist of approximately 28 worker trips per day during building construction; 60 worker trips per day during architectural coating; and 50 worker trips per day during paving. Table 4.3-1: Maximum Construction Emissions of the SCEA identifies both unmitigated and mitigated daily emissions that are estimated for peak construction days for each construction year and shows that construction emissions associated with the Project would exceed the SCAQMD threshold of significance only for NOx prior to mitigation. However, with implementation of Mitigation Measure PMM AQ-1 from SCAG's 2020–2045 RTP/SCS, emissions associated with NOx would be reduced to emissions below the South Coast Air Quality Management District's significance threshold. Therefore, impacts related to regional construction emissions would be less than significant with mitigation incorporated and no further mitigation measure is required. Although the comment provides no substantial evidence that the imposition of the requested mitigation measure would be feasible and would result in a reduction of air quality impacts for this Project, even if it were feasible and it was shown to reduce emissions, since PMM AQ-1 would reduce air quality impacts of construction of the Project to a less-than-significant level an additional mitigation measure would not be required.

As to a reduction of "gas consumption," this comment appears to relate to the consumption of petroleum-based fuels associated with construction worker travel to and from the Project Site; that is, transportation energy use. As described on pages 4.0-56, of the SCEA, the Project would consume less than 0.01 percent of available fuel resources for all its on and off-road construction activities. Thus, the Project would not result in inefficient, or unnecessary consumption of transportation resources during construction. Additionally, as stated on pages 4.0-62 through 4.0-63 of the SCEA, the 2020–2045 RTP/SCS focuses on reducing fossil fuel use by decreasing VMT, reducing building energy use, and increasing use of renewable sources. Vehicles used during Project construction activities would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations which reduces the consumption of petroleum based fuels. As for worker vehicles, newer vehicles sold on the market would be required to comply with Corporate Average Fuel Economy fuel economy standards expected to incrementally take effect. Accordingly, fuel consumption is anticipated to decrease over time through the use of higher energy efficiencies and higher efficient and alternative fuel vehicles. Moreover, because the Project Site's

location is unique for its proximity to both the existing Metro E Line, as well as being directly above the Expo/Crenshaw station currently under construction as part of the Metro K Line, and the proximately to numerous bus stops, the Project Site is easily accessible and highly connected with the City and the greater Los Angeles area. As such, the Project Site provides unique, extensive access to mass transit opportunities allowing construction workers to travel on public transportation to access the worksite. For all these reasons, transportation energy resource demand during construction would be less than significant and would not require imposition of a mitigation measure requiring local hires, or a trained or skilled local workforce.

Comment 2-7

In fact, the City of Hayward has gone as far as to adopt a Skilled Labor Force policy into its Downtown Specific Plan and municipal code, requiring developments in its Downtown area to requiring that the City "[c]ontribute to the stabilization of regional construction markets by spurring applicants of housing and nonresidential developments to require contractors to utilize apprentices from state-approved, joint labor-management training programs, . . ."[4] In addition, the City of Hayward requires all projects 30,000 square feet or larger to "utilize apprentices from state-approved, joint labor-management training programs."[5]

Response 2-7

The comment recites portions of a City of Hayward program. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-8

Locating jobs closer to residential areas can have significant environmental benefits. As the California Planning Roundtable noted in 2008:

> People who live and work in the same jurisdiction would be more likely to take transit, walk, or bicycle to work than residents of less balanced communities and their vehicle trips would be shorter. Benefits would include potential reductions in both vehicle miles traveled and vehicle hours traveled.[6]

In addition, local hire mandates as well as skill training are critical facets of a strategy to reduce vehicle miles traveled. As planning experts Robert Cervero and Michael Duncan noted, simply placing jobs near

4 City of Hayward (2019) Hayward Downtown Specific Plan at p. 5-24, available at https://www.hayward-ca.gov/sites/default/files/Hayward%20Downtown% 20Specific%20Plan.pdf.

5 City of Hayward Municipal Code, Chapter 10, § 28.5.3.020(C).

6 California Planning Roundtable (2008) Deconstructing Jobs-Housing Balance at p. 6, available at https://cproundtable.org/static/media/uploads/publications/cpr-jobs-housing.pdf.

housing stock is insufficient to achieve VMT reductions since the skill requirements of available local jobs must be matched to those held by local residents.[7] Some municipalities have tied local hire and skilled and trained workforce policies to local development permits to address transportation issues. As Cervero and Duncan note:

In nearly built-out Berkeley, CA, the approach to balancing jobs and housing is to create local jobs rather than to develop new housing. The city's First Source program encourages businesses to hire local residents, especially for entry- and intermediate-level jobs, and sponsors vocational training to ensure residents are employment-ready. While the program is voluntary, some 300 businesses have used it to date, placing more than 3,000 city residents in local jobs since it was launched in 1986. When needed, these carrots are matched by sticks, since the city is not shy about negotiating corporate participation in First Source as a condition of approval for development permits.

The City should consider utilizing skilled and trained workforce policies and requirements to benefit the local area economically and mitigate greenhouse gas, air quality and transportation impacts.

Response 2-8

The comment requests that the City include local, skilled workforce policies to benefit the local area's economy and to mitigate GHG, air quality and transportation impacts of the Project. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Nonetheless, please see **Response to Comment No. 5** and **Response to Comment No. 6**. As stated in Section 4.0 of the SCEA, the Project would not result in significant impacts related to GHG, air quality or transportation.

Comment 2-9

Also, the City should require the Project to be built to standards exceeding the current 2019 California Green Building Code and 2020 County of Los Angeles Green Building Standards Code to mitigate the Project's environmental impacts and to advance progress towards the State of California's environmental goals.

Response 2-9

The comment requests that the Project be built to exceed the State's and the County's Green Building Codes. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any

7 Cervero, Robert and Duncan, Michael (2006) Which Reduces Vehicle Travel More: Jobs-Housing Balance or Retail-Housing Mixing? Journal of the American Planning Association 72 (4), 475-490, 482, available at http://reconnectingamerica.org/assets/Uploads/UTCT-825.pdf.

physical environmental impacts caused by the Project that would justify the City requiring that the project be built to standards exceeding the State or County Green Building Codes.

Nonetheless, as stated in Sections 3.0 and 4.0 of the SCEA, the Project would be built to standards that exceed those requested by the commenter since the Project would be constructed to meet the Leadership in Energy and Environmental Design (LEED) Silver Standard or equivalent. The achievement of LEED Silver equivalent exceeds several Cal Green and County requirements. As discussed in Section 4.0, VIII of the SCEA, the Project would implement a construction and demolition waste diversion plan with a certified diversion rate of at least 75 percent. Less waste would be transported to landfills which would reduce fugitive CH_4 emissions. Reducing transportation of solid waste would minimize CO_2 and NO_2 emissions from the operation of trash collection vehicles. The Project would track waste performance by waste audits in line with LEED v4.1 Recertification. Additionally, the Project would include high efficiency water fixtures. Low Flow fixtures would meet WaterSense Guidelines by achieving 30 percent reduction. Water consumption would be tracked by metering in line with LEED v4.1 Recertification. Moreover, the Project would combine passive design features with energy efficient equipment and strategies such as airside economizers and intelligent controls that provide a pathway to achieving a high-performance building that meets LEED v4 requirements and exceeds Title 24 Energy 2019 Standard by 20 percent. These include features such as Energy Star or better appliances, tracking of energy performance with metering in line with LEED v4.1 Recertification. The Project would also provide 30 percent EV Ready and 10 percent EV Charging Stations of the total 502 parking spaces, consistent with City Ordinance No. 186,485.

See also, **Response to Comment No. 5** and **Response to Comment No. 6**.

Comment 2-10

I. THE PROJECT WOULD BE APPROVED IN VIOLATION OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

A. Background Concerning the California Environmental Quality Act

CEQA has two basic purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 California Code of Regulations (**"CCR"** or **"CEQA Guidelines"**) § 15002(a)(1).[8] "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564. The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached

8 The CEQA Guidelines, codified in Title 14 of the California Code of Regulations, section 150000 et seq, are regulatory guidelines promulgated by the state Natural Resources Agency for the implementation of CEQA. (Cal. Pub. Res. Code § 21083.) The CEQA Guidelines are given "great weight in interpreting CEQA except when . . . clearly unauthorized or erroneous." *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal. 4th 204, 217.

ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 (*Berkeley Jets)*; *County of Inyo v. Yorty* (1973) 32 Cal. App. 3d 795, 810.

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible, by requiring alternatives or mitigation measures. CEQA Guidelines

§ 15002(a)(2) and (3). *See also, Berkeley Jets,* 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553; *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1988) 47 Cal. 3d 376, 400. The EIR serves to provide public agencies and the public in general with information about the effect that a proposed project is likely to have on the environment and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines § 15002(a)(2). If the project has a significant effect on the environment, the agency may approve the project only upon finding that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns" specified in CEQA section 21081. CEQA Guidelines § 15092(b)(2)(A–B).

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position.' A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added) (quoting *Laurel Heights,* 47 Cal. 3d at 391, 409 fn. 12). Drawing this line and determining whether the EIR complies with CEQA's information disclosure requirements presents a question of law subject to independent review by the courts. (*Sierra Club v. Cnty. of Fresno* (2018) 6 Cal. 5th 502, 515; *Madera Oversight Coalition, Inc. v. County of Madera* (2011) 199 Cal. App. 4th 48, 102, 131.) As the court stated in *Berkeley Jets*, 91 Cal. App. 4th at 1355:

> A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process.

The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. The EIR's function is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been considered. For the EIR to serve these goals it must present information so that the foreseeable impacts of pursuing the project can be understood and weighed, and the public must be given an adequate opportunity to comment on that presentation before the decision to go forward is made. *Communities for a Better Environment v. Richmond* (2010) 184 Cal. App. 4th 70, 80 (quoting *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal. 4th 412, 449–450).

Response 2-10

The comment is a recitation of the commenter's views on the background of CEQA law. CEQA and cases involving CEQA speak for themselves. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project,

nor does the comment identify any violations of CEQA, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-11

I. THE PROJECT WOULD BE APPROVED IN VIOLATION OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

B. Background Concerning Sustainable Communities Environmental Assessments

SB 375 provides CEQA-based incentives and streamlining for certain residential, mixed-use, and transportation-oriented developments. SB 375 includes two optional CEQA streamlining options for local lead agencies.

First, under SB 375, residential and mixed-use projects that (1) are consistent with the use designation, density, building intensity, and applicable policies specified in a California Air Resources Board ("CARB")-approved sustainable communities strategy ("SCS") or alternative planning strategy ("APS") and (2) incorporate mitigation measures required by an "applicable prior environmental document," which may include the environmental impact report for the regional transportation plan, need not reference, describe or discuss growth-inducing impacts or project-specific or cumulative impacts on global warming or on the regional transportation network arising from automobiles or light-duty truck trips generated by the Project. PRC §21159.28(a).

Second, TPPs consistent with the SCS or APS may qualify for a total CEQA exemption or a Sustainable Communities Environmental Assessment ("SCEA"). PRC §21155.1-21155.2. A TPP is a specific project that must (1) be consistent with a CARB-approved SCS or APS; (2) contain at least 50 percent residential use, and if the project contains between 26 percent and 50 percent nonresidential uses, then a floor area ratio of not less than 0.75, (3) have a minimum net density of 20 units per acre; and (4) be located within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan. PRC §21155.

A TPP may be reviewed through a SCEA provided, *inter alia*, that (1) an initial study identifies "all significant or potentially significant impacts of the transit priority project... based on substantial evidence in light of the whole record" PRC §21155.2(b)(1); (2) the SCEA shall contain "measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study" PRC §21155.2(b)(2); and (3) "the lead agency's decision to review and approve a transit priority project with a sustainable communities environmental assessment" is "reviewed under the substantial evidence standard" PRC §21155.2(b)(7).

A SCEA is similar to a negative declaration in that the lead agency must identify and analyze all potentially significant or significant effects of the project and mitigate them to a level of less than significant. See PRC §21155.2(b).

If a legislative body of a city or county finds, after conducting a public hearing, that a transit priority project meets all of the requirements in subdivisions (a) and (b) and one of the requirements of

subdivision (c) of PRC § 21155.1, the TPP is declared to be a sustainable communities project and will be exempt from CEQA. PRC § 21155.1. At a minimum, the legislative body of a city or county must find that the project can be adequately served by existing utilities and that:

(1) the project site does not contain wetlands or riparian areas or have significant value as wildlife habitat,

(2) the project does not have a significant effect on historical resources,

(3) the project buildings are energy efficient,

(4) landscaping is designed to achieve 25 percent less water usage, and

(5) the project does not present a risk of public health exposure in violation of state or federal law.

PRC § 21155.1.

A SCEA may be approved by the lead agency after conducting a public hearing, reviewing the comments received, and finding that: (A) all potentially significant or significant effects required to be identified in the initial study have been identified and analyzed, (B) with respect to each significant effect on the environment required to be identified in the initial study, either of the following apply: (i) changes or alterations have been required in or incorporated into the project that avoid or mitigate the significant effects to a level of insignificance, and (ii) those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency. PRC §21155.2(b)(5).

The lead agency's decision to review and approve a TPP with a SCEA shall be reviewed under the substantial evidence standard. PRC §21155.2(b)(7).

Response 2- 11

The comment provides a summary of the legislative background and standards for an SCEA. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any violations of CEQA, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-12

I. THE PROJECT WOULD BE APPROVED IN VIOLATION OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

C. Due to the COVID-19 Crisis, the City Must Adopt a Mandatory Finding of Significance that the Project May Cause a Substantial Adverse Effect on Human Beings and Mitigate COVID-19 Impacts

CEQA requires that an agency make a finding of significance when a Project may cause a significant adverse effect on human beings. PRC § 21083(b)(3); CEQA Guidelines § 15065(a)(4).

Public health risks related to construction work requires a mandatory finding of significance under CEQA. Construction work has been defined as a Lower to High-risk activity for COVID-19 spread by the Occupations Safety and Health Administration. Recently, several construction sites have been identified as sources of community spread of COVID-19.[9]

Response 2-12

The comment contends that due to the current pandemic, CEQA requires a mandatory finding that the Project will have a significant impact to human health. The comment does not contain evidence that Project construction would cause or exacerbate an existing environmental condition, such as COVID-19. Moreover, contrary to the contention in the comment, CEQA does not require a "mandatory finding of significance" due to the current pandemic. CEQA requires an analysis of project impacts when there is substantial evidence that the *environmental effects* of a project will cause substantial adverse effects on human beings. The comment provides no evidence that any environmental effect of the Project is causing the pandemic. In fact, the Project must comply with all applicable regulatory requirements including any workplace safety requirements imposed by the California Occupations Safety and Health Administration. As such, construction of the Project would not have any environmental effects that would cause substantial adverse effects on human beings.

Comment 2- 13

SWRCC recommends that the Lead Agency adopt additional CEQA mitigation measures to mitigate public health risks from the Project's construction activities. SWRCC requests that the Lead Agency require safe on-site construction work practices as well as training and certification for any construction workers on the Project Site.

In particular, based upon SWRCC's experience with safe construction site work practices, SWRCC recommends that the Lead Agency require that while construction activities are being conducted at the Project Site:

Construction Site Design:

- The Project Site will be limited to two controlled entry points.
- Entry points will have temperature screening technicians taking temperature readings when the entry point is open.
- The Temperature Screening Site Plan shows details regarding access to the Project Site and Project Site logistics for conducting temperature screening.
- A 48-hour advance notice will be provided to all trades prior to the first day of temperature screening. The perimeter fence directly adjacent to the entry points will be clearly marked indicating the appropriate 6-foot social distancing position for when you approach the

9 Santa Clara County Public Health (June 12, 2020) COVID-19 CASES AT CONSTRUCTION SITES HIGHLIGHT NEED FOR CONTINUED VIGILANCE IN SECTORS THAT HAVE REOPENED, available at https://www.sccgov.org/sites/covid19/Pages/press-release-06-12-2020-cases-at-construction-sites.aspx.

screening area. Please reference the Apex temperature screening site map for additional details.

- There will be clear signage posted at the project site directing you through temperature screening.
- Provide hand washing stations throughout the construction site.

Testing Procedures:

- The temperature screening being used are non-contact devices.
- Temperature readings will not be recorded.
- Personnel will be screened upon entering the testing center and should only take 1-2 seconds per individual.
- Hard hats, head coverings, sweat, dirt, sunscreen or any other cosmetics must be removed on the forehead before temperature screening.
- Anyone who refuses to submit to a temperature screening or does not answer the health screening questions will be refused access to the Project Site.
- Screening will be performed at both entrances from 5:30 am to 7:30 am.; main gate [ZONE 1] and personnel gate [ZONE 2]
- After 7:30 am only the main gate entrance [ZONE 1] will continue to be used for temperature testing for anybody gaining entry to the project site such as returning personnel, deliveries, and visitors.
- If the digital thermometer displays a temperature reading above 100.0 degrees Fahrenheit, a second reading will be taken to verify an accurate reading.
- If the second reading confirms an elevated temperature, DHS will instruct the individual that he/she will not be allowed to enter the Project Site. DHS will also instruct the individual to promptly notify his/her supervisor and his/her human resources (HR) representative and provide them with a copy of Annex A.

Planning

- Require the development of an Infectious Disease Preparedness and Response Plan that will include basic infection prevention measures (requiring the use of personal protection equipment), policies and procedures for prompt identification and isolation of sick individuals, social distancing (prohibiting gatherings of no more than 10 people including all-hands meetings and all-hands lunches) communication and training and workplace controls that meet standards that may be promulgated by the Center for Disease Control, Occupational Safety and Health Administration, Cal/OSHA, California Department of Public Health or applicable local public health agencies.[10]

10 See also The Center for Construction Research and Training, North America's Building Trades Unions (April 27 2020) NABTU and CPWR COVIC-19 Standards for U.S Constructions Sites, available at: https://www.cpwr.com/sites/default/files/NABTU_CPWR_Standards_COVID-19.pdf; Los Angeles County Department of Public Works (2020) Guidelines for Construction Sites During COVID-19 Pandemic, available at: https://dpw.lacounty.gov/building-and-safety/docs/pw_guidelines-construction-sites.pdf.

Response 2-13

The comment requests the imposition of mitigation measures where there is no identification of a significant environmental impact that requires mitigation to reduce the impact to a less-than-significant level. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any violations of CEQA, nor does the comment identify any physical environmental impacts caused by the Project. See also **Response to Comment No. 12**.

Comment 2-14

The United Brotherhood of Carpenters and Carpenters International Training Fund has developed COVID-19 Training and Certification to ensure that Carpenter union members and apprentices conduct safe work practices. The Agency should require that all construction workers undergo COVID-19 Training and Certification before being allowed to conduct construction activities at the Project Site.

SWRCC has also developed a rigorous Infection Control Risk Assessment ("ICRA") training program to ensure it delivers a workforce that understands how to identify and control infection risks by implementing protocols to protect themselves and all others during renovation and construction projects in healthcare environments.[11]

ICRA protocols are intended to contain pathogens, control airflow, and protect patients during the construction, maintenance and renovation of healthcare facilities. ICRA protocols prevent cross contamination, minimizing the risk of secondary infections in patients at hospital facilities.

The City should require the Project to be built using a workforce trained in ICRA protocols.

Response 2-14

The comment contends that the City should require that the Project workforce be trained in ICRA protocols. However, the comment does not identify any significant physical environmental impacts that would result from the Project that require mitigation to reduce the impact to less than significant. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any violations of CEQA. See also **Response to Comment No. 12**.

11 For details concerning SWRCC's ICRA training program, see https://icrahealthcare.com/.

Comment 2-15

II. THE PROJECT SCEA IS INADEQUATE

A. The Project Cannot be Evaluated Under a SCEA since the SCEA Does Not Evaluate the Project's Consistency with the General Use Designation, Density, Building Intensity and Applicable Policies specified for the Project Area in SCAG's 2020 – 2045 RTP / SCS

Despite the fact that the Air Resources Board approved SCAG's 2020 – 2045 RTP / SCS titled "Connect SoCal" in October of last year,[12] the Project's SCEA claims that the Project qualifies to be evaluated under a SCEA since it is "consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in the SCAG **2016 – 2040 RTP / SCS**. SCEA at 1.0-2.

Section 21155 of the Cal. Public Resources Code does not state a project must be consistent with the 20160 – 2040 RTP / SCS, rather it requires that a project be "consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, for which the State Air Resources Board, . . . , has accepted." Since the most recent version of the SCAG's RTP / SCS approved by the Air Resources Board is the 2020 – 2045 RTP / SCS, the SCEA is required to evaluate consistency with the 2020 plan rather than the long outdated 2016 plan [sic].

Response 2-15

The comment contends that the SCEA should have analyzed the Project for consistency with the recently adopted 2020-2045 RTP/SCS. While Section 1.0: Introduction of the SCEA does state that the Project is consistent with the 2016-2040 RTP/SCS, the actual analysis shows that the Project is not in conflict with and therefore consistent with the latest version, the 2020-2045 RTP/SCS. See Section 3.0: SCEA Criteria, pages 3.0-2 through 3.0-11, and Section 4.0, pages 4.0-9.7 through 4.0-99 of the SCEA. As stated in Section 3.0, "The Project does not conflict with applicable goals and policies in the SCAG 2020–2045 RTP/SCS, as demonstrated by the analysis presented in **Table 3.2-1: Consistency Analysis 2020–2045 RTP/SCS**." Additionally, as described on pages 3.0-9 through 3.0-10 of the SCEA, the Project is consistent with the general use designations of the Urban Land Use Development Category in the RTP/SCS as it is an infill mixed-use redevelopment with high density, multifamily residential uses in a location with high level of mobility due to its access to mass transit. The Project is located within a HQTA as defined by SCAG and a TPA as defined by SB 743. Finally, as described on pages 3.0-10 through 3.0-11 of the SCEA, the Project is consistent with the Town Mixed Use place type as defined by SCAG since it would qualify as a walkable mixed-use neighborhood such as the mixed-use core of a small city or transit-oriented development, with a variety of uses and building types, of between 3 and 8 stories tall, with ground-floor retail space. The Project would develop two new, 8-story mixed-use buildings containing 401 total units and a total of

12 California Air Resources Board (Oct. 30, 2020) Executive Order G-20-239, available at https://ww2.arb.ca.gov/sites/default/files/2021-02/SCAG%202020%20SCS%20CARB%20Acceptance%20of%20GHG%20Quantification%20Determination%20Executive%20Or der.pdf

approximately 40,996 sq. ft. of ground floor commercial space. Based on the City's current household demographics, the average household size is 2.42 persons per household. Based on that average, the Project's 401 units would generate approximately 970 people which represents a nominal increase of far less than one percent of the City's current population and which is well within the growth estimates from SCAG's 2020–2045 RTP/SCS for the City. Similarly, as described on pages 4.0-98 of the SCEA, the Project's projected increase of 145 jobs is less than one percent of SCAG's projected employment growth for the City.

Therefore, since Sections 3.0 and 4.0 of the SCEA fully demonstrate consistency with Criterion 1: Project uses designation, density, building intensity, and applicable policies specified for the Project area in the SCAG 2020–2045 RTP/SCS, the comment fails to provide facts that demonstrate that the analysis is inadequate.

Comment 2-16

II. THE PROJECT SCEA IS INADEQUATE

B. <u>The SCEA Adopts an Improper Environmental Baseline by Failing to Evaluate Existing Conditions at the Project Site</u>

The SCEA improperly excludes the fact that currently the County is utilizing the Project Site as an interim housing for homeless families, families that would be removed if the Project was to be approved from the environmental baseline for the Project. SCEA at 2.0-6. "Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced . . . ." CEQA Guidelines § 15125(a).

While the SCEA speculates that this use is temporary, and claims that removal of this facility for homeless families is inevitable (a disturbing conclusion), CEQA does not allow such speculation on future uses. CEQA simply requires that the City analyze current existing conditions at the time of environmental analysis. Excluding the "interim" use of the Project Site for homeless housing violates CEQA.

Response 2-16

The comment contends that the baseline condition of the Project Site should be the existing interim homeless housing use. Pursuant to CEQA Guidelines Section 15125(a)(1), the baseline for the environmental review is the date that environmental analysis is commenced. As stated on page 2.0-6 of the SCEA, the existing interim use of the Project Site is temporary only and identified as such is Section 2.0: Project Description of the SCEA and page 1.0-6 of the Addendum to the SCEA which explains that the interim use was started due to the Governor's Executive Order of January 8, 2020. This interim use was not in existence at the time of the commencement of the preparation of the draft SCEA and therefore, pursuant to Section 15125(a)(1), is not included as part of the baseline conditions at the Project Site.

Comment 2-17

II. THE PROJECT SCEA IS INADEQUATE

C. The Project Cannot be Evaluated Under a SCEA since the SCEA Fails to Incorporate all Feasible Mitigation Measures from Prior Environmental Impact Reports

Section 21155.2 of the Cal. Public Resources Code requires that a Transit Priority Project incorporate all feasible mitigation measures, performance standards, or criteria from prior applicable environmental impact reports. However, the Project's EIR expressly rejects many, if not most of the applicable mitigation measures identified in SCAG's 2020 – 2045 RTP / SCS EIR without making a feasibility determination. EIR at 3.1-14 – 20.

For example, the EIR claims that items a through p of PMM AQ-1 need to be integrated into the Project because the Project would substantially implement the application portions of these items under existing regulatory requirements. However, not only do existing regulatory requirements not require many of the mitigation measures, for example the use of Tier 4 Final, the EIR fails to provide a reason why implementation of items a through p of PMM AQ-1 would not be feasible.

Response 2-17

The comment contends that it was impermissible for the SCEA to exclude some mitigation measures from prior EIRs due to existing regulations meeting or exceeding the mitigation measure or for failure to explain why it was not incorporate. The comment refers to a Project EIR and references EIR pages from a different project. There is no EIR for this Project. An SCEA was prepared and the pages referenced in the comment are not located in the SCEA. For example, the comment refers to the need to utilize Tier 4 Final standards for construction equipment and states that existing regulations do not include this Final standards requirement. However, as stated on page 4.0-35 of the SCEA, the Project does incorporate the relevant portions of PMM AQ-1 including a requirement to use Tier 4 Final standards on construction equipment. As to the portions of PMM AQ-1 that were not incorporated into the Project, as explained in Table 3.3-1, Mitigation Measures from the 2020–2045 RTP/SCS Program EIR Incorporated into the Project, of the SCEA, only those portions of the mitigation measure that were covered by existing regulatory measures which the Project is already obligated to comply with and those that are not applicable to the Project, were not incorporated into the Project. Examples of measures not applicable to the Project include item "s" which is only applicable to school projects, item "v" which is only applicable to airport project, item "w" which is only applicable to harbor projects, and item "z" which is only applicable to projects within 500 feet of a freeway. Moreover, Table 3.3-1 presents an explanation for each item included in PMM AQ-1 identifying why each was incorporated into the project or not and why. Therefore, the comments do not contain any facts supporting a contention that the incorporation of the relevant portions of prior EIR mitigation measures were inadequate or violate CEQA requirements for a SCEA.

Comment 2-18

In addition, the EIR [*sic*] unlawfully fails to incorporate feasible mitigation measures simply on the basis that the SCEA did not identify a potentially significant impact. *See. e.g.* SCEA at 3.0 – 36. Section 21155.2 subd. (a) is unambiguous in stating that transit priority projects must incorporate "**all feasible mitigation measures**, performance standards or criteria set forth in prior environmental impact reports," irrespective of whether the SCEA finds a less than significant impact with mitigation. The Project is required to incorporate all feasible mitigation measures, regardless of whether the SCEA identifies a potentially significant impact.

Response 2-18

The comment contends that an SCEA must incorporate all feasible mitigation measures set forth in prior EIRs even when there is no significant impact to mitigate. In fact, the SCEA does incorporate mitigation measures from prior EIRs when there is no significant effect stating that, pursuant to CEQA Guidelines Section 21155.2, the prior mitigation measure is incorporated and would reduce the less than significant impact of the Project (see, for example, page 4.0-42, the mitigation measure for biological resources from the West Adams-Baldwin Hills-Leimert Community Plan EIR, MM-BR2, which is incorporated as required by PRC Section 21155.2 even though the Project would have no significant biological resources impacts). Additionally, the comment cites no authority for requiring the incorporation of a mitigation measure that by the terms of the mitigation measure is only required where the project level analysis finds a significant impact, as in the case for some of the mitigation measures of the EIR for the 2020-2045 RTP/SCS. As an example, the comment refers to the mitigation measure discussed on page 3.0-36 of the SCEA related to biological resources, PPM BIO-4. That mitigation measure specifically states: "In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines, a Lead Agency for a project can and should consider mitigation measures *to reduce substantial adverse effects related to wildlife movement, as applicable and feasible*." (emphasis added). However, as stated on pages 4.0-40 of the SCEA, the Project would have no substantial adverse effects related to wildlife movement because the Project Site is located in an urbanized area of the City and due to the urbanized surroundings, there are no wildlife corridors or native wildlife nursery sites on the Project Site or in the Project Site vicinity. Thus, the Project would not interfere with the movement of any residents or migratory wildlife. As such, there would be no impact to wildlife movement and, accordingly no "substantial adverse effect" triggering application of PPM BIO-4. Similarly, the SCEA does not incorporate mitigation measures that are identified in the EIR as a programmatic mitigation measure to be implemented by SCAG, and not as a project mitigation measure to be considered by local agencies in project-level environmental review. As such, the SCEA complies with the applicable requirements in the CEQA Guidelines. Accordingly, the comment provides no evidence to substantiate the comment's contention that the SCEA fails to incorporate mitigation measures from prior applicable EIRs.

Comment 2-19

If the City has any questions or concerns, feel free to contact my Office.

Response 2-19

The comment invites the City to contact the commenter. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2- 20a - Exhibit A: Letter from Mathew F. Hagemann and Dr. Paul Rosenfeld of Soil Water Air Protection Enterprise[2]

Soil Water Air Protection Enterprise ("SWAPE") is pleased to provide the following draft technical report explaining the significance of worker trips required for construction of land use development projects with respect to the estimation of greenhouse gas ("GHG") emissions. The report will also discuss the potential for local hire requirements to reduce the length of worker trips, and consequently, reduced or mitigate the potential GHG impacts.

Response 2-20a

This comment is an introduction by SWAPE of its draft technical report submitted as Exhibit A to the comments submitted by the Southwest Regional Council of Carpenters (**Comments No. 1** through **19**). The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project

Comment 2-20b

Worker Trips and Greenhouse Gas Calculations

The California Emissions Estimator Model ("CalEEMod") is a "statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects."[1] CalEEMod quantifies construction-related emissions associated with land use projects resulting from off-road construction equipment; on-road mobile equipment associated with workers, vendors, and hauling; fugitive dust associated with grading, demolition, truck loading, and on-road vehicles traveling along paved and unpaved roads; and architectural coating activities; and paving.[2]

The number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[3]

---

2 Comments to Exhibit A are numbered 20a through 20f.
Exhibits referenced within this Exhibit A were not included in the comment letter.

1 "California Emissions Estimator Model." CAPCOA, 2017, available at: http://www.aqmd.gov/caleemod/home.

2 "California Emissions Estimator Model." CAPCOA, 2017, available at: http://www.aqmd.gov/caleemod/home.

3 "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

Specifically, the number and length of vehicle trips is utilized to estimate the vehicle miles travelled ("VMT") associated with construction. Then, utilizing vehicle-class specific EMFAC 2014 emission factors, CalEEMod calculates the vehicle exhaust, evaporative, and dust emissions resulting from construction-related VMT, including personal vehicles for worker commuting.[4]

Specifically, in order to calculate VMT, CalEEMod multiplies the average daily trip rate by the average overall trip length (see excerpt below):

"VMTd = Σ(Average Daily Trip Rate i * Average Overall Trip Length i) n
Where:
n = Number of land uses being modeled."[5]

Furthermore, to calculate the on-road emissions associated with worker trips, CalEEMod utilizes the following equation (see excerpt below):

"Emissionspollutant = VMT * EFrunning,pollutant
Where:
Emissionspollutant = emissions from vehicle running for each pollutant
VMT = vehicle miles traveled
EFrunning,pollutant = emission factor for running emissions."[6]

Response 2-20b

The comment is a recitation of the methodology generally used to calculate emission from on-road vehicles used for construction workers trips to and from a worksite. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-20c

Thus, there is a direct relationship between trip length and VMT, as well as a direct relationship between VMT and vehicle running emissions. In other words, when the trip length is increased, the VMT and vehicle running emissions increase as a result. Thus, vehicle running emissions can be reduced by decreasing the average overall trip length, by way of a local hire requirement or otherwise.

Response 2-20c

The comment contends that vehicle running emissions can be reduced by decreasing the average overall trip length. The comment does not state a specific concern or question regarding the adequacy of the

4 "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
5 "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
6 "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.

SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-20d

Default Worker Trip Parameters and Potential Local Hire Requirements

As previously discussed, the number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[7] In order to understand how local hire requirements and associated worker trip length reductions impact GHG emissions calculations, it is important to consider the CalEEMod default worker trip parameters. CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence.[8] The default number of construction-related worker trips is calculated by multiplying the number of pieces of equipment for all phases by 1.25, with the exception of worker trips required for the building construction and architectural coating phases.[9] Furthermore, the worker trip vehicle class is a 50/25/25 percent mix of light duty autos, light duty truck class 1 and light duty truck class 2, respectively."[10] Finally, the default worker trip length is consistent with the length of the operational home-to-work vehicle trips.[11]

The operational home-to-work vehicle trip lengths are:

> "[B]ased on the *location* and *urbanization* selected on the project characteristic screen. These values were *supplied by the air districts or use a default average for the state*. Each district (or county) also assigns trip lengths for urban and rural settings" (emphasis added).[12]

Thus, the default worker trip length is based on the location and urbanization level selected by the User when modeling emissions. The below table shows the CalEEMod default rural and urban worker trip lengths by air basin (see excerpt below and Attachment A).[13]

---

7 "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

8 CalEEMod User Guide, available at: http://www.caleemod.com/, p. 1, 9.

9 "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

10 "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 21.

11 "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 21.

12 "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 21.

13 "Appendix D Default Data Tables." CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-84 – D-86.

Worker Trip Length by Air Basin		
Air Basin	**Rural (miles)**	**Urban (miles)**
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	**16.47**	**11.17**
Minimum	**10.80**	**10.80**
Maximum	**19.80**	**14.70**
Range	**9.00**	**3.90**

As demonstrated above, default rural worker trip lengths for air basins in California vary from 10.8- to 19.8-miles, with an average of 16.47 miles. Furthermore, default urban worker trip lengths vary from 10.8- to 14.7-miles, with an average of 11.17 miles. Thus, while default worker trip lengths vary by location, default urban worker trip lengths tend to be shorter in length. Based on these trends evident in the CalEEMod default worker trip lengths, we can reasonably assume that the efficacy of a local hire requirement is especially dependent upon the urbanization of the project site, as well as the project location.

Response 2-20d

The comment is a recitation of the default parameters used by the CalEEMod methodology to calculate worker trip length in California and states that the efficiency of a local hire requirement is dependent

upon the urbanization of the project site as well as the project location. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-20e

Practical Application of a Local Hire Requirement and Associated Impact

To provide an example of the potential impact of a local hire provision on construction-related GHG emissions, we estimated the significance of a local hire provision for the Village South Specific Plan ("Project") located in the City of Claremont ("City"). The Project proposed to construct 1,000 residential units, 100,000-SF of retail space, 45,000-SF of office space, as well as a 50-room hotel, on the 24-acre site. The Project location is classified as Urban and lies within the Los Angeles-South Coast County. As a result, the Project has a default worker trip length of 14.7 miles.[14] In an effort to evaluate the potential for a local hire provision to reduce the Project's construction-related GHG emissions, we prepared an updated model, reducing all worker trip lengths to 10 miles (see Attachment B). Our analysis estimates that if a local hire provision with a 10-mile radius were to be implemented, the GHG emissions associated with Project construction would decrease by approximately 17% (see table below and Attachment C).

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,623
Amortized Construction GHG Emissions (MT CO2e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,024
Amortized Construction GHG Emissions (MT CO2e/year)	100.80
% Decrease in Construction-related GHG Emissions	***17%***

As demonstrated above, by implementing a local hire provision requiring 10 mile worker trip lengths, the Project could reduce potential GHG emissions associated with construction worker trips. More broadly, any local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

This serves as an example of the potential impacts of local hire requirements on estimated project-level GHG emissions, though it does not indicate that local hire requirements would result in reduced construction-related GHG emission for all projects. As previously described, the significance of a local hire

14 "Appendix D Default Data Tables." CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-85.

requirement depends on the worker trip length enforced and the default worker trip length for the project's urbanization level and location.

Response 2-20e

This comment provides an example of the estimated reduction of GHG emissions resulting from imposition of a local hire program for a specific plan in the City of Claremont. The comment does not represent that the estimated reduction would be the same for the Project. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Specifically, the comment does not show that a local hire requirement for the Project could result in decreased worker trip length, which would reduce construction-related GHG emissions up to 17 percent as shown in the comment's example. The comment specifically states that "the significance of the reduction would vary based on the location and urbanization level of the project site." The comment only "serves as an example of the potential impacts of local hire requirements on estimated project-level GHG emissions, *though it does not indicate that local hire requirements would result in reduced construction-related GHG emission for all projects.*" (emphasis added) Clearly, the efficacy of a local hire measure for an unrelated project located over 60 miles from the Project Site does not guarantee the same for the Project with its unique location and access to public transportation. Moreover, the Draft EIR for the specific plan used as an example of potential reductions with a local hire requirement concluded that the GHG impact would be less than significant and no mitigation would be required.[3] See also **Response to Comment No. 5**.

Comment 2-20f

Disclaimer

SWAPE has received limited discovery. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Response 2-20f

3 See the *Village South Specific Plan Draft EIR*, Section 4.6: Greenhouse Gas Emissions, pages 4.6-19 through 4.6-30 (City of Claremont 2020).

The comment contains a disclaimer specifically stating that SWAPE has received limited information on the Project. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-21 - Exhibit B: Bio of Paul Rosenfeld, Ph.D. (included as an attachment to these responses)

Response 2-21

The comment is a 10-page curriculum vitae of Dr. Paul Rosenfeld. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

Comment 2-22 - Exhibit C: Bio of Matthew F. Hagemann (included as an attachment to these responses)

Response 2-22 - Exhibit C

The comment is a 9-page curriculum vitae of Matthew F. Hagemann. The comment does not state a specific concern or question regarding the adequacy of the SCEA in identifying and analyzing the environmental impacts of the Project, nor does the comment identify any physical environmental impacts caused by the Project.

P: (626) 381-9248
F: (626) 389-5414
E: info@mitchtsailaw.com

Mitchell M. Tsai
Attorney At Law

155 South El Molino Avenue
Suite 104
Pasadena, California 91101

VIA E-MAIL

July 9, 2021

Alan Como
221 N. Figueroa St., Room 1350
Los Angeles, CA 90012
Email: Alan.Como@lacity.org

RE: Sustainable Communities Environmental Assessment for the Crenshaw Crossing Project (SCH No. 2021060246)

Dear Mr. Como,

On behalf of the Southwest Regional Council of Carpenters ("**Commenter**" or "**Southwest Carpenters**"), my Office is submitting these comments on the City of Los Angeles ("**City**" or "**Lead Agency**") Sustainable Communities Environmental Assessment ("**SCEA**") for the Crenshaw Crossing Project (SCH No. 2021060246) ("**Project**").

The Southwest Carpenters is a labor union representing more than 50,000 union carpenters in six states, including California, and has a strong interest in well-ordered land use planning, addressing the environmental impacts of development projects and equitable economic development.

Individual members of the Southwest Carpenters live, work, and recreate in the City and surrounding communities and would be directly affected by the Project's environmental impacts.

2-1

Commenter expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

Commenter incorporates by reference all comments raising issues regarding the SCEA submitted prior to certification of the EIR for the Project. *Citizens for Clean Energy v City of Woodland* (2014) 225 Cal. App. 4th 173, 191 (finding that any party who has objected

2-2

to the Project's environmental documentation may assert any issue timely raised by other parties).

Moreover, Commenter requests that the Lead Agency provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act ("**CEQA**"), Cal Public Resources Code ("**PRC**") § 21000 *et seq*, and the California Planning and Zoning Law ("**Planning and Zoning Law**"), Cal. Gov't Code §§ 65000–65010. California Public Resources Code Sections 21092.2, and 21167(f) and Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body. 2-3

The City should require the Applicant to provide additional community benefits such as requiring local hire and use of a skilled and trained workforce to build the Project. The City should require the use of workers who have graduated from a Joint Labor Management apprenticeship training program approved by the State of California, or have at least as many hours of on-the-job experience in the applicable craft which would be required to graduate from such a state approved apprenticeship training program or who are registered apprentices in an apprenticeship training program approved by the State of California. 2-4

Community benefits such as local hire and skilled and trained workforce requirements can also be helpful to reduce environmental impacts and improve the positive economic impact of the Project. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project Site can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized economic benefits. As environmental consultants Matt Hagemann and Paul E. Rosenfeld note: 2-5

> [A]ny local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling.

Skilled and trained workforce requirements promote the development of skilled trades that yield sustainable economic development. As the California Workforce Development Board and the UC Berkeley Center for Labor Research and Education concluded:

> . . . labor should be considered an investment rather than a cost – and investments in growing, diversifying, and upskilling California's workforce can positively affect returns on climate mitigation efforts. In other words, well trained workers are key to delivering emissions reductions and moving California closer to its climate targets.[1]

2-6

Recently, on May 7, 2021, the South Coast Air Quality Management District found that that the "[u]se of a local state-certified apprenticeship program or a skilled and trained workforce with a local hire component" can result in air pollutant reductions.[2]

Cities are increasingly adopting local skilled and trained workforce policies and requirements into general plans and municipal codes. For example, the City of Hayward 2040 General Plan requires the City to "promote local hiring . . . to help achieve a more positive jobs-housing balance, and reduce regional commuting, gas consumption, and greenhouse gas emissions."[3]

In fact, the City of Hayward has gone as far as to adopt a Skilled Labor Force policy into its Downtown Specific Plan and municipal code, requiring developments in its Downtown area to requiring that the City "[c]ontribute to the stabilization of regional construction markets by spurring applicants of housing and nonresidential developments to require contractors to utilize apprentices from state-approved, joint

2-7

[1] California Workforce Development Board (2020) Putting California on the High Road: A Jobs and Climate Action Plan for 2030 at p. ii, *available at* https://laborcenter.berkeley.edu/wp-content/uploads/2020/09/Putting-California-on-the-High-Road.pdf

[2] South Coast Air Quality Management District (May 7, 2021) Certify Final Environmental Assessment and Adopt Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions Program, and Proposed Rule 316 – Fees for Rule 2305, Submit Rule 2305 for Inclusion Into the SIP, and Approve Supporting Budget Actions, *available at* http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf?sfvrsn=10

[3] City of Hayward (2014) Hayward 2040 General Plan Policy Document at p. 3-99, *available at* https://www.hayward-ca.gov/sites/default/files/documents/General_Plan_FINAL.pdf

labor-management training programs, . . .”[4] In addition, the City of Hayward requires all projects 30,000 square feet or larger to “utilize apprentices from state-approved, joint labor-management training programs.”[5]

Locating jobs closer to residential areas can have significant environmental benefits. As the California Planning Roundtable noted in 2008:

> People who live and work in the same jurisdiction would be more likely to take transit, walk, or bicycle to work than residents of less balanced communities and their vehicle trips would be shorter. Benefits would include potential reductions in both vehicle miles traveled and vehicle hours traveled.[6]

In addition, local hire mandates as well as skill training are critical facets of a strategy to reduce vehicle miles traveled. As planning experts Robert Cervero and Michael Duncan noted, simply placing jobs near housing stock is insufficient to achieve VMT reductions since the skill requirements of available local jobs must be matched to those held by local residents.[7] Some municipalities have tied local hire and skilled and trained workforce policies to local development permits to address transportation issues. As Cervero and Duncan note:

> In nearly built-out Berkeley, CA, the approach to balancing jobs and housing is to create local jobs rather than to develop new housing.” The city’s First Source program encourages businesses to hire local residents, especially for entry- and intermediate-level jobs, and sponsors vocational training to ensure residents are employment-ready. While the program is voluntary, some 300 businesses have used it to date, placing more than 3,000 city residents in local jobs since it was launched in 1986. When

2-8

[4] City of Hayward (2019) Hayward Downtown Specific Plan at p. 5-24, *available at* https://www.hayward-ca.gov/sites/default/files/Hayward%20Downtown%20Specific%20Plan.pdf.

[5] City of Hayward Municipal Code, Chapter 10, § 28.5.3.020(C).

[6] California Planning Roundtable (2008) Deconstructing Jobs-Housing Balance at p. 6, *available at* https://cproundtable.org/static/media/uploads/publications/cpr-jobs-housing.pdf

[7] Cervero, Robert and Duncan, Michael (2006) Which Reduces Vehicle Travel More: Jobs-Housing Balance or Retail-Housing Mixing? Journal of the American Planning Association 72 (4), 475-490, 482, *available at* http://reconnectingamerica.org/assets/Uploads/UTCT-825.pdf.

needed, these carrots are matched by sticks, since the city is not shy about negotiating corporate participation in First Source as a condition of approval for development permits.

The City should consider utilizing skilled and trained workforce policies and requirements to benefit the local area economically and mitigate greenhouse gas, air quality and transportation impacts.

2-9

Also, the City should require the Project to be built to standards exceeding the current 2019 California Green Building Code and 2020 County of Los Angeles Green Building Standards Code to mitigate the Project's environmental impacts and to advance progress towards the State of California's environmental goals.

I. THE PROJECT WOULD BE APPROVED IN VIOLATION OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

A. Background Concerning the California Environmental Quality Act

CEQA has two basic purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 California Code of Regulations ("**CCR**" or "**CEQA Guidelines**") § 15002(a)(1).[8] "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR 'protects not only the environment but also informed self-government.' [Citation.]" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564. The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets")*; *County of Inyo v. Yorty* (1973) 32 Cal. App. 3d 795, 810.

2-10

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures. CEQA Guidelines § 15002(a)(2) and (3). *See also, Berkeley Jets,* 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta*

[8] The CEQA Guidelines, codified in Title 14 of the California Code of Regulations, section 150000 et seq, are regulatory guidelines promulgated by the state Natural Resources Agency for the implementation of CEQA. (Cal. Pub. Res. Code § 21083.) The CEQA Guidelines are given "great weight in interpreting CEQA except when . . . clearly unauthorized or erroneous." *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal. 4th 204, 217.

Valley v. Board of Supervisors (1990) 52 Cal. 3d 553; *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1988) 47 Cal. 3d 376, 400. The EIR serves to provide public agencies and the public in general with information about the effect that a proposed project is likely to have on the environment and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines § 15002(a)(2). If the project has a significant effect on the environment, the agency may approve the project only upon finding that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns" specified in CEQA section 21081. CEQA Guidelines § 15092(b)(2)(A–B).

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position.' A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added) (quoting *Laurel Heights,* 47 Cal. 3d at 391, 409 fn. 12). Drawing this line and determining whether the EIR complies with CEQA's information disclosure requirements presents a question of law subject to independent review by the courts. (*Sierra Club v. Cnty. of Fresno* (2018) 6 Cal. 5th 502, 515; *Madera Oversight Coalition, Inc. v. County of Madera* (2011) 199 Cal. App. 4th 48, 102, 131.) As the court stated in *Berkeley Jets*, 91 Cal. App. 4th at 1355:

> A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process.

The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. The EIR's function is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been considered. For the EIR to serve these goals it must present information so that the foreseeable impacts of pursuing the project can be understood and weighed, and the public must be given an adequate opportunity to comment on that presentation before the decision to go forward is made. *Communities for a Better Environment v. Richmond* (2010) 184 Cal. App. 4th 70, 80 (quoting *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal. 4th 412, 449–450).

B. Background Concerning Sustainable Communities Environmental Assessments

SB 375 provides CEQA-based incentives and streamlining for certain residential, mixed-use, and transportation-oriented developments. SB 375 includes two optional CEQA streamlining options for local lead agencies.

First, under SB 375, residential and mixed-use projects that (1) are consistent with the use designation, density, building intensity, and applicable policies specified in a California Air Resources Board ("CARB")-approved sustainable communities strategy ("SCS") or alternative planning strategy ("APS") and (2) incorporate mitigation measures required by an "applicable prior environmental document," which may include the environmental impact report for the regional transportation plan, need not reference, describe or discuss growth-inducing impacts or project-specific or cumulative impacts on global warming or on the regional transportation network arising from automobiles or light-duty truck trips generated by the Project. PRC §21159.28(a).

Second, TPPs consistent with the SCS or APS may qualify for a total CEQA exemption or a Sustainable Communities Environmental Assessment ("SCEA"). PRC §21155.1-21155.2. A TPP is a specific project that must (1) be consistent with a CARB-approved SCS or APS; (2) contain at least 50 percent residential use, and if the project contains between 26 percent and 50 percent nonresidential uses, then a floor area ratio of not less than 0.75, (3) have a minimum net density of 20 units per acre; and (4) be located within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan. PRC §21155.

2-11

A TPP may be reviewed through a SCEA provided, *inter alia*, that (1) an initial study identifies "all significant or potentially significant impacts of the transit priority project… based on substantial evidence in light of the whole record" PRC §21155.2(b)(1); (2) the SCEA shall contain "measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study" PRC §21155.2(b)(2); and (3) "the lead agency's decision to review and approve a transit priority project with a sustainable communities environmental assessment" is "reviewed under the substantial evidence standard" PRC §21155.2(b)(7).

A SCEA is similar to a negative declaration in that the lead agency must identify and

analyze all potentially significant or significant effects of the project and mitigate them to a level of less than significant. See PRC §21155.2(b).

If a legislative body of a city or county finds, after conducting a public hearing, that a transit priority project meets all of the requirements subdivisions (a) and (b) and one of the requirements of subdivision (c) of PRC § 21155.1, the TPP is declared to be a sustainable communities project and will be exempt from CEQA. PRC § 21155.1. At a minimum, the legislative body of a city or county must find that the project can be adequately served by existing utilities and that:

(1) the project site does not contain wetlands or riparian areas or have significant value as wildlife habitat,

(2) the project does not have a significant effect on historical resources,

(3) the project buildings are energy efficient,

(4) landscaping is designed to achieve 25 percent less water usage, and

(5) the project does not present a risk of public health exposure in violation of state or federal law.

PRC § 21155.1.

A SCEA may be approved by the lead agency after conducting a public hearing, reviewing the comments received, and finding that: (A) all potentially significant or significant effects required to be identified in the initial study have been identified and analyzed, (B) with respect to each significant effect on the environment required to be identified in the initial study, either of the following apply: (i) changes or alterations have been required in or incorporated into the project that avoid or mitigate the significant effects to a level of insignificance, and (ii) those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency. PRC §21155.2(b)(5).

The lead agency's decision to review and approve a TPP with a SCEA shall be reviewed under the substantial evidence standard. PRC §21155.2(b)(7).

C. Due to the COVID-19 Crisis, the City Must Adopt a Mandatory Finding of Significance that the Project May Cause a Substantial Adverse Effect on Human Beings and Mitigate COVID-19 Impacts

CEQA requires that an agency make a finding of significance when a Project may cause a significant adverse effect on human beings. PRC § 21083(b)(3); CEQA Guidelines § 15065(a)(4). 2-12

Public health risks related to construction work requires a mandatory finding of significance under CEQA. Construction work has been defined as a Lower to High-risk activity for COVID-19 spread by the Occupations Safety and Health Administration. Recently, several construction sites have been identified as sources of community spread of COVID-19.[9]

SWRCC recommends that the Lead Agency adopt additional CEQA mitigation measures to mitigate public health risks from the Project's construction activities. SWRCC requests that the Lead Agency require safe on-site construction work practices as well as training and certification for any construction workers on the Project Site.

In particular, based upon SWRCC's experience with safe construction site work practices, SWRCC recommends that the Lead Agency require that while construction activities are being conducted at the Project Site: 2-13

Construction Site Design:

- The Project Site will be limited to two controlled entry points.
- Entry points will have temperature screening technicians taking temperature readings when the entry point is open.
- The Temperature Screening Site Plan shows details regarding access to the Project Site and Project Site logistics for conducting temperature screening.
- A 48-hour advance notice will be provided to all trades prior to the first day of temperature screening.

[9] Santa Clara County Public Health (June 12, 2020) COVID-19 CASES AT CONSTRUCTION SITES HIGHLIGHT NEED FOR CONTINUED VIGILANCE IN SECTORS THAT HAVE REOPENED, *available at* https://www.sccgov.org/sites/covid19/Pages/press-release-06-12-2020-cases-at-construction-sites.aspx.

- The perimeter fence directly adjacent to the entry points will be clearly marked indicating the appropriate 6-foot social distancing position for when you approach the screening area. Please reference the Apex temperature screening site map for additional details.
- There will be clear signage posted at the project site directing you through temperature screening.
- Provide hand washing stations throughout the construction site.

Testing Procedures:

- The temperature screening being used are non-contact devices.
- Temperature readings will not be recorded.
- Personnel will be screened upon entering the testing center and should only take 1-2 seconds per individual.
- Hard hats, head coverings, sweat, dirt, sunscreen or any other cosmetics must be removed on the forehead before temperature screening.
- Anyone who refuses to submit to a temperature screening or does not answer the health screening questions will be refused access to the Project Site.
- Screening will be performed at both entrances from 5:30 am to 7:30 am.; main gate [ZONE 1] and personnel gate [ZONE 2]
- After 7:30 am only the main gate entrance [ZONE 1] will continue to be used for temperature testing for anybody gaining entry to the project site such as returning personnel, deliveries, and visitors.
- If the digital thermometer displays a temperature reading above 100.0 degrees Fahrenheit, a second reading will be taken to verify an accurate reading.

- If the second reading confirms an elevated temperature, DHS will instruct the individual that he/she will not be allowed to enter the Project Site. DHS will also instruct the individual to promptly notify his/her supervisor and his/her human resources (HR) representative and provide them with a copy of Annex A.

Planning

- Require the development of an Infectious Disease Preparedness and Response Plan that will include basic infection prevention measures (requiring the use of personal protection equipment), policies and procedures for prompt identification and isolation of sick individuals, social distancing (prohibiting gatherings of no more than 10 people including all-hands meetings and all-hands lunches) communication and training and workplace controls that meet standards that may be promulgated by the Center for Disease Control, Occupational Safety and Health Administration, Cal/OSHA, California Department of Public Health or applicable local public health agencies.[10]

The United Brotherhood of Carpenters and Carpenters International Training Fund has developed COVID-19 Training and Certification to ensure that Carpenter union members and apprentices conduct safe work practices. The Agency should require that all construction workers undergo COVID-19 Training and Certification before being allowed to conduct construction activities at the Project Site.

2-14

SWRCC has also developed a rigorous Infection Control Risk Assessment ("**ICRA**") training program to ensure it delivers a workforce that understands how to identify and

[10] *See also* The Center for Construction Research and Training, North America's Building Trades Unions (April 27 2020) NABTU and CPWR COVIC-19 Standards for U.S Constructions Sites, *available at* https://www.cpwr.com/sites/default/files/NABTU_CPWR_Standards_COVID-19.pdf; Los Angeles County Department of Public Works (2020) Guidelines for Construction Sites During COVID-19 Pandemic, *available at* https://dpw.lacounty.gov/building-and-safety/docs/pw_guidelines-construction-sites.pdf.

control infection risks by implementing protocols to protect themselves and all others during renovation and construction projects in healthcare environments.[11]

ICRA protocols are intended to contain pathogens, control airflow, and protect patients during the construction, maintenance and renovation of healthcare facilities. ICRA protocols prevent cross contamination, minimizing the risk of secondary infections in patients at hospital facilities.

The City should require the Project to be built using a workforce trained in ICRA protocols.

II. THE PROJECT SCEA IS INADEQUATE

A. The Project Cannot be Evaluated Under a SCEA since the SCEA Does Not Evaluate the Project's Consistency with the General Use Designation, Density, Building Intensity and Applicable Policies specified for the Project Area in SCAG's 2020 – 2045 RTP / SCS

Despite the fact that the Air Resources Board approved SCAG's 2020 – 2045 RTP / SCS titled "Connect SoCal" in October of last year,[12] the Project's SCEA claims that the Project qualifies to be evaluated under a SCEA since it is "consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in the SCAG **2016 – 2040 RTP / SCS**. SCEA at 1.0-2.

2-15

Section 21155 of the Cal. Public Resources Code does not state a project must be consistent with the 20160 – 2040 RTP / SCS, rather it requires that a project be "consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, for which the State Air Resources Board, . . . , has accepted." Since the most recent version of the SCAG's RTP / SCS approved by the Air Resources Board is the 2020 – 2045 RTP / SCS, the SCEA is required to evaluate consistency with the 2020 plan rather than the long outdated 2016 plan

[11] For details concerning SWRCC's ICRA training program, *see* https://icrahealthcare.com/.
[12] California Air Resources Board (Oct. 30, 2020) Executive Order G-20-239, *available at* https://ww2.arb.ca.gov/sites/default/files/2021-02/SCAG%202020%20SCS%20CARB%20Acceptance%20of%20GHG%20Quantification%20Determination%20Executive%20Order.pdf

B. The SCEA Adopts an Improper Environmental Baseline by Failing to Evaluate Existing Conditions at the Project Site

The SCEA improperly excludes the fact that currently the County is utilizing the Project Site as an interim housing for homeless families, families that would be removed if the Project was to be approved from the environmental baseline for the Project. SCEA at 2.0-6. "Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced . . . ." CEQA Guidelines § 15125(a). 2-16

While the SCEA speculates that this use is temporary, and claims that removal of this facility for homeless families is inevitable (a disturbing conclusion), CEQA does not allow such speculation on future uses. CEQA simply requires that the City analyze current existing conditions at the time of environmental analysis. Excluding the "interim" use of the Project Site for homeless housing violates CEQA.

C. The Project Cannot be Evaluated Under a SCEA since the SCEA Fails to Incorporate all Feasible Mitigation Measures from Prior Environmental Impact Reports

Section 21155.2 of the Cal. Public Resources Code requires that a Transit Priority Project incorporate all feasible mitigation measures, performance standards, or criteria from prior applicable environmental impact reports. However, the Project's EIR expressly rejects many, if not most of the applicable mitigation measures identified in SCAG's 2020 – 2045 RTP / SCS EIR without making a feasibility determination. EIR at 3.1-14 – 20. 2-17

For example, the EIR claims that items a through p of PMM AQ-1 need to be integrated into the Project because the Project would substantially implement the application portions of these items under existing regulatory requirements. However, not only do existing regulatory requirements not require many of the mitigation measures, for example the use of Tier 4 Final, the EIR fails to provide a reason why implementation of items a through p of PMM AQ-1 would not be feasible.

In addition, the EIR unlawfully fails to incorporate feasible mitigation measures simply on the basis that the SCEA did not identify a potentially significant impact. *See. e.g.* SCEA at 3.0 – 36. Section 21155.2 subd. (a) is unambiguous in stating that transit priority projects must incorporate "**all feasible mitigation measures**, performance 2-18

standards or criteria set forth in prior environmental Impact reports," irrespective of whether the SCEA finds a less than significant impact with mitigation. The Project is required to incorporate all feasible mitigation measures, regardless of whether the SCEA identifies a potentially significant impact. Y

If the City has any questions or concerns, feel free to contact my Office.

Sincerely

Mitchell M. Tsai
Attorneys for Southwest Regional
Council of Carpenters

Attached:

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling (Exhibit A);

Air Quality and GHG Expert Paul Rosenfeld CV (Exhibit B); and

Air Quality and GHG Expert Matt Hagemann CV (Exhibit C).

EXHIBIT A

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

2656 29th Street, Suite 201
Santa Monica, CA 90405

Matt Hagemann, P.G, C.Hg.
(949) 887-9013
mhagemann@swape.com

Paul E. Rosenfeld, PhD
(310) 795-2335
prosenfeld@swape.com

March 8, 2021

Mitchell M. Tsai
155 South El Molino, Suite 104
Pasadena, CA 91101

Subject: Local Hire Requirements and Considerations for Greenhouse Gas Modeling

Dear Mr. Tsai,

Soil Water Air Protection Enterprise ("SWAPE") is pleased to provide the following draft technical report explaining the significance of worker trips required for construction of land use development projects with respect to the estimation of greenhouse gas ("GHG") emissions. The report will also discuss the potential for local hire requirements to reduce the length of worker trips, and consequently, reduced or mitigate the potential GHG impacts.

Worker Trips and Greenhouse Gas Calculations

The California Emissions Estimator Model ("CalEEMod") is a "statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects."[1] CalEEMod quantifies construction-related emissions associated with land use projects resulting from off-road construction equipment; on-road mobile equipment associated with workers, vendors, and hauling; fugitive dust associated with grading, demolition, truck loading, and on-road vehicles traveling along paved and unpaved roads; and architectural coating activities; and paving.[2]

The number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[3]

[1] "California Emissions Estimator Model." CAPCOA, 2017, *available at:* http://www.aqmd.gov/caleemod/home.
[2] "California Emissions Estimator Model." CAPCOA, 2017, *available at:* http://www.aqmd.gov/caleemod/home.
[3] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

Specifically, the number and length of vehicle trips is utilized to estimate the vehicle miles travelled ("VMT") associated with construction. Then, utilizing vehicle-class specific EMFAC 2014 emission factors, CalEEMod calculates the vehicle exhaust, evaporative, and dust emissions resulting from construction-related VMT, including personal vehicles for worker commuting.[4]

Specifically, in order to calculate VMT, CalEEMod multiplies the average daily trip rate by the average overall trip length (see excerpt below):

> "$VMT_d = \Sigma(\text{Average Daily Trip Rate}_i * \text{Average Overall Trip Length}_i)_n$
>
> Where:
>
> n = Number of land uses being modeled."[5]

Furthermore, to calculate the on-road emissions associated with worker trips, CalEEMod utilizes the following equation (see excerpt below):

> "$\text{Emissions}_{pollutant} = VMT * EF_{running,pollutant}$
>
> Where:
>
> $\text{Emissions}_{pollutant}$ = emissions from vehicle running for each pollutant
>
> VMT = vehicle miles traveled
>
> $EF_{running,pollutant}$ = emission factor for running emissions."[6]

Thus, there is a direct relationship between trip length and VMT, as well as a direct relationship between VMT and vehicle running emissions. In other words, when the trip length is increased, the VMT and vehicle running emissions increase as a result. Thus, vehicle running emissions can be reduced by decreasing the average overall trip length, by way of a local hire requirement or otherwise.

Default Worker Trip Parameters and Potential Local Hire Requirements

As previously discussed, the number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[7] In order to understand how local hire requirements and associated worker trip length reductions impact GHG emissions calculations, it is important to consider the CalEEMod default worker trip parameters. CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence.[8] The default number of construction-related worker trips is calculated by multiplying the

[4] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14-15.
[5] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 23.
[6] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
[7] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.
[8] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 1, 9.

number of pieces of equipment for all phases by 1.25, with the exception of worker trips required for the building construction and architectural coating phases.[9] Furthermore, the worker trip vehicle class is a 50/25/25 percent mix of light duty autos, light duty truck class 1 and light duty truck class 2, respectively."[10] Finally, the default worker trip length is consistent with the length of the operational home-to-work vehicle trips.[11] The operational home-to-work vehicle trip lengths are:

> "[B]ased on the *location* and *urbanization* selected on the project characteristic screen. These values were *supplied by the air districts or use a default average for the state*. Each district (or county) also assigns trip lengths for urban and rural settings" (emphasis added). [12]

Thus, the default worker trip length is based on the location and urbanization level selected by the User when modeling emissions. The below table shows the CalEEMod default rural and urban worker trip lengths by air basin (see excerpt below and Attachment A).[13]

Worker Trip Length by Air Basin

Air Basin	Rural (miles)	Urban (miles)
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	**16.47**	**11.17**
Minimum	**10.80**	**10.80**
Maximum	**19.80**	**14.70**
Range	**9.00**	**3.90**

[9] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.
[10] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
[11] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14.
[12] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 21.
[13] "Appendix D Default Data Tables." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-84 – D-86.

As demonstrated above, default rural worker trip lengths for air basins in California vary from 10.8- to 19.8-miles, with an average of 16.47 miles. Furthermore, default urban worker trip lengths vary from 10.8- to 14.7-miles, with an average of 11.17 miles. Thus, while default worker trip lengths vary by location, default urban worker trip lengths tend to be shorter in length. Based on these trends evident in the CalEEMod default worker trip lengths, we can reasonably assume that the efficacy of a local hire requirement is especially dependent upon the urbanization of the project site, as well as the project location.

Practical Application of a Local Hire Requirement and Associated Impact

To provide an example of the potential impact of a local hire provision on construction-related GHG emissions, we estimated the significance of a local hire provision for the Village South Specific Plan ("Project") located in the City of Claremont ("City"). The Project proposed to construct 1,000 residential units, 100,000-SF of retail space, 45,000-SF of office space, as well as a 50-room hotel, on the 24-acre site. The Project location is classified as Urban and lies within the Los Angeles-South Coast County. As a result, the Project has a default worker trip length of 14.7 miles.[14] In an effort to evaluate the potential for a local hire provision to reduce the Project's construction-related GHG emissions, we prepared an updated model, reducing all worker trip lengths to 10 miles (see Attachment B). Our analysis estimates that if a local hire provision with a 10-mile radius were to be implemented, the GHG emissions associated with Project construction would decrease by approximately 17% (see table below and Attachment C).

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO_2e)	3,623
Amortized Construction GHG Emissions (MT CO_2e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,024
Amortized Construction GHG Emissions (MT CO_2e/year)	100.80
% Decrease in Construction-related GHG Emissions	***17%***

As demonstrated above, by implementing a local hire provision requiring 10 mile worker trip lengths, the Project could reduce potential GHG emissions associated with construction worker trips. More broadly, any local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

This serves as an example of the potential impacts of local hire requirements on estimated project-level GHG emissions, though it does not indicate that local hire requirements would result in reduced construction-related GHG emission for all projects. As previously described, the significance of a local hire requirement depends on the worker trip length enforced and the default worker trip length for the project's urbanization level and location.

[14] "Appendix D Default Data Tables." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-85.

Disclaimer

SWAPE has received limited discovery. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

Matt Hagemann, P.G., C.Hg.

Paul E. Rosenfeld, Ph.D.

EXHIBIT B

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

SOIL WATER AIR PROTECTION ENTERPRISE
2656 29th Street, Suite 201
Santa Monica, California 90405
Attn: Paul Rosenfeld, Ph.D.
Mobil: (310) 795-2335
Office: (310) 452-5555
Fax: (310) 452-5550
Email: prosenfeld@swape.com

Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from unconventional oil drilling operations, oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, and many other industrial and agricultural sources. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at dozens of sites and has testified as an expert witness on more than ten cases involving exposure to air contaminants from industrial sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health.* 18:48

Simons, R.A., Seo, Y. **Rosenfeld, P**., (2015) Modeling the Effect of Refinery Emission On Residential Property Value. Journal of Real Estate Research. 27(3):321-342

Chen, J. A, Zapata A. R., Sutherland A. J., Molmen, D.R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.,** Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermod and Empirical Data. *American Journal of Environmental Science*, 8(6), 622-632.

Rosenfeld, P.E. & Feng, L. (2011). *The Risks of Hazardous Waste.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences*. 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health*. 73(6), 34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*. Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution,* 123 (17), 319-327.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research*. 105, 194-197.

Rosenfeld, P.E., J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

Rosenfeld, P. E., M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities.* Boston Massachusetts: Elsevier Publishing

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.

Rosenfeld P. E., J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004.* New Orleans, October 2-6, 2004.

Rosenfeld, P.E., and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49(9), 171-178.

Rosenfeld, P. E., Grey, M. A., Sellew, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research*. 76(4), 310-315.

Rosenfeld, P.E., Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office*, Publications Clearinghouse (MS–6), Sacramento, CA Publication #442-02-008.

Rosenfeld, P.E., and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.

Rosenfeld, P.E., and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality.* 29, 1662-1668.

Rosenfeld, P.E., C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research*. 73(4), 363-367.

Rosenfeld, P.E., and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.

Rosenfeld, P.E., and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research*. 131(1-4), 247-262.

Chollack, T. and **P. Rosenfeld. (**1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.

Rosenfeld, P. E. (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).

Rosenfeld, P. E. (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).

Rosenfeld, P. E. (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

Rosenfeld, P. E. (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.

Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

Presentations:

Rosenfeld, P.E., Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society.* Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution.* Lecture conducted from Boston, MA.

Rosenfeld, P.E. (April 19-23, 2009). Perfluoroctanoic Acid (PFOA) and Perfluoroactane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

Rosenfeld, P.E. (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States" Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23rd Annual International Conferences on Soils Sediment and Water.* Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The *23rd Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting.* Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition.* Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference.* Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference.* Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference.* Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference.* Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants*.. Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conferenc*e. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E, C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University.
Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the United States District Court For The District of New Jersey
Duarte et al, *Plaintiffs,* vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 2:17-cv-01624-ES-SCM
Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk, *Plaintiffs,* vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" *Defendant.*
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No.: No. BC615636
Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiff vs. The 3M Company et al., Defendants
Case: No 1:16-cv-02531-RBJ
Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No 1923
Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants
Cause No C12-01481
Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 8-23-2017

In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No.: LC102019 (c/w BC582154)
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs,* vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Jerry Dovico, et al., Plaintiffs vs. Valley View Sine LLC, et al., Defendants
Law No,: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Doug Pauls, et al.,, et al., Plaintiffs vs. Richard Warren, et al., Defendants
Law No,: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

In The Third Judicial District County of Dona Ana, New Mexico
Betty Gonzalez, et al. Plaintiffs vs. Del Oro Dairy, Del Oro Real Estate LLC, Jerry Settles and Deward DeRuyter, Defendants
Rosenfeld Deposition: July 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the United States District Court Western District of Oklahoma
Tommy McCarty, et al., Plaintiffs, v. Oklahoma City Landfill, LLC d/b/a Southeast Oklahoma City Landfill, et al. Defendants.
Case No. 5:12-cv-01152-C
Rosenfeld Deposition: July 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant.*
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs,* vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court of Southern District of Texas Galveston Division
Kyle Cannon, Eugene Donovan, Genaro Ramirez, Carol Sassler, and Harvey Walton, each Individually and on behalf of those similarly situated, *Plaintiffs,* vs. BP Products North America, Inc., *Defendant.*
Case 3:10-cv-00622
Rosenfeld Deposition: February 2012
Rosenfeld Trial: April 2013

In the Circuit Court of Baltimore County Maryland
Philip E. Cvach, II et al., *Plaintiffs* vs. Two Farms, Inc. d/b/a Royal Farms, Defendants
Case Number: 03-C-12-012487 OT
Rosenfeld Deposition: September 2013

EXHIBIT C

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

1640 5th St.., Suite 204 Santa
Santa Monica, California 90401
Tel: (949) 887-9013
Email: mhagemann@swape.com

Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

Geologic and Hydrogeologic Characterization
Industrial Stormwater Compliance
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2014;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 100 environmental impact reports since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, Valley Fever, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a community adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.

- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt taught physical geology (lecture and lab and introductory geology at Golden West College in Huntington Beach, California from 2010 to 2014.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F**. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.