Appendix FEIR-1
Draft EIR Comment Letters

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Summary of Comment Letters on the Draft EIR

No.	DATE	NAME/AGENCY	COMMENTS/CONTENTS
STATE AGENCIES			
1.	02-25-2021	State of California, California State Department of Transportation District 7 – Office of Regional Planning Miya Edmonson, IGR/CEQA Branch Chief 100 S. Main Street, Suite 100 Los Angeles, CA 90012	VMT, parking
LOCAL AGENCIES			
2.	03-17-2021	Los Angeles Unified School District Office of Environmental Health and Safety Christy Wong, Assistant CEQA Project Manager/Contract Professional 333 S. Beaudry Avenue, 21st Floor Los Angeles, CA 90017	School safety
3.	03-29-2021	Mashael Majid, Planning Director to Councilmember Nithya Raman 4th District 200 N. Spring Street, Room 415 Los Angeles, CA 90012	Supports Proposed Project, affordable housing
4.	03-24-2021	Mid City West Community Council Mehmet Berker, Mid City West Community Council 543 N. Fairfax Avenue, Suite 106 Los Angeles, CA 90036	Supports Proposed Project
ORGANIZATIONS			
5.	02-12-2021	Gabrieleno Band of Mission Indians – Kizh Nation Andrew Salas, Chairman P.O. Box 393 Covina, CA 91723	Tribal cultural resources
6.	03-29-2021	Friends of Hancock Park School to Los Angeles Dept. City Planning Shanon Dawn Trygstad, President 408 S. Fairfax Avenue Los Angeles, CA 90036	Supports Proposed Project
6A.	03-29-2021	Friends of Hancock Park School to Councilmember Raman Shanon Dawn Trygstad, President 408 S. Fairfax Avenue Los Angeles, CA 90036	Supports Proposed Project
7.	03-29-2021	Park La Brea Impacted Residents Group (PLBIRG) Barbara Gallen 502 S. Orange Grove Avenue Los Angeles, CA 90036	Air quality, greenhouse gas emissions, hazardous materials, noise, transportation, VMT, emergency response, cumulative impacts
8.	03-29-2021	Supporters Alliance for Environmental Responsibility (SAFER) Lozeau Drury, LLP Bryan Flynn 1939 Harrison Street, Ste. 150 Oakland, CA 94612	Adequacy of Draft EIR
9.	03-29-2021	A.F. Gilmore Company Peter Hayden, Director/Construction &	VMT, intersections and vehicle access, parking operations, transit, construction

Summary of Comment Letters on the Draft EIR

No.	DATE	NAME/AGENCY	COMMENTS/CONTENTS
		Development 6301 W. 3rd Street Los Angeles, CA 90036	activities, pedestrian safety, HVAC noise
INDIVIDUALS			
10.	02-24-2021	Balces, Mayra 569 S. Orange Grove Avenue Los Angeles, CA 90036 Mayra_CJ05@yahoo.com	Supports Proposed Project
11.	02-24-2021	Dean, Matthew 570 S. Orange Grove Avenue Los Angeles, CA 90036	Supports Proposed Project
12.	02-24-2021	Gysi, Ajani Bryant 560 S. Orange Grove Avenue Los Angeles, CA 90036 ajanibryantgysi@gmail.com	Supports Proposed Project
13.	02-24-2021	Hours, Chris 575 S. Orange Grove Avenue Los Angeles, CA 90036 Nyc7monaco@gmail.com	Supports Proposed Project
14.	02-24-2021	Khadeni, Casey 563 S. Ogden Drive Los Angeles, CA 90036	Supports Proposed Project
15.	02-24-2021	Khan, Faizal 555 S. Ogden Drive Los Angeles, CA 90036	Supports Proposed Project
16.	02-22-21	Levy, Shlomo 589 S. Orange Grove Avenue Los Angeles, CA 90036	Supports Proposed Project
17.	02-24-2021	Palms, J. 511 S. Ogden Drive Los Angeles, CA 90036	Supports Proposed Project
18.	02-24-2021	Name Illegible (from 6039 S. Orange Grove Avenue) 6039 S. Orange Grove Avenue Los Angeles, CA 90036	Supports Proposed Project
19.	02-24-2021	Williams, Annabella 507 S. Ogden Drive Los Angeles, CA 90036	Supports Proposed Project
20.	04-19-2021	Southwest Regional Council of Carpenters Mitchell M. Tsai, Attorney at Law 155 South El Molino Avenue, Suite 104 Pasadena, CA 91101	CEQA, air quality, greenhouse gas emissions, hazards and hazardous materials, planning and zoning, Covid-19.
20.A	03-08-2021	Soil Water Air Protection Enterprise (SWAPE) Matt Hagemann, P.G., C.Hg.; Paul Rosenfeld, Ph.D 2656 29th Street, Suite 201 Santa Monica, CA 90405	Greenhouse gas emissions.
20.B	03-26-2021	Soil Water Air Protection Enterprise (SWAPE) Matt Hagemann, P.G., C.Hg.; Paul Rosenfeld, Ph.D 2656 29th Street, Suite 201 Santa Monica, CA 90405	Air quality, greenhouse gas emissions.

DEPARTMENT OF TRANSPORTATION
DISTRICT 7- OFFICE OF REGIONAL PLANNING
100 S. MAIN STREET, SUITE 100
LOS ANGELES, CA 90012
PHONE (213) 897-0067
FAX (213) 897-1337
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

February 25, 2021

Cesar Moreno
City of Los Angeles, Department of City Planning
221 N. Figueroa Street Suite 1350
Los Angeles, CA 90012

RE: 3rd and Fairfax Mixed-Use Project – Draft Environmental Impact Report (DEIR)
SCH# 2019029111
GTS# 07-LA-2019-03497
Vic. LA-2 PM 10.621

Dear Cesar Moreno:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The Proposed Project would involve the construction and operation of a new mixed-use development within the eastern portion of the existing Town & Country Shopping Center (Center or Project Site) that is currently developed with retail and commercial uses. The proposed development activities would be limited to the eastern portion of the Center (referred to as the Development Site in the Draft EIR) and would include the demolition of 151,048 square feet of existing retail uses and the construction of a mid-rise, eight-story mixed-use structure with two levels of subterranean parking, for a maximum height of 100 feet. The residential component of the Proposed Project would include up to 331 multi-family dwelling units and 83,994 square feet of newly developed commercial space for a total new floor area of 426,994 square feet. The western portion of the Project Site would remain and is not proposed to be demolished, altered, or developed as part of the Proposed Project. **1.1**

The nearest State facility to the proposed project is SR-2. After reviewing the DEIR, Caltrans has the following comments:

Caltrans acknowledges and supports infill development that provides a mix of land uses which allow a neighborhood to meet their needs for housing, work, and services, like the proposed Project aims to facilitate. Caltrans also concurs with Mitigation Measure MM-TRAFFIC-1, which unbundles car parking and provides additional bike infrastructure. While this is a step in the right direction, Caltrans recommends increasing the amount of bike parking to provide at least one long-term bicycle parking space per residential unit. Currently the Project provides approximately 1.5 car parking spaces per residential unit, but less than 0.48 long-term bike parking spaces per residential unit. Since the intention of MM-TRAFFIC-1 is to reduce car dependency and lower Vehicle Miles Travelled (VMT), Caltrans also recommends reducing the amount of car parking to the fewest number of spaces possible. Research looking at the relationship between land-use, parking, and transportation indicates that car parking prioritizes driving above all other travel **1.2**

modes and undermines a community's ability to choose public transit and active modes of transportation.

If the car parking must be built, it should be designed in a way that is conducive to adaptive reuse. They should contain flat floors with ramps on the exterior edge, so that they can be more easily converted to beneficial uses in the future. **1.2 cont.**

Caltrans does not expect project approval to result in a direct adverse impact to the existing State transportation facilities. Additionally, any transportation of heavy construction equipment and/or materials which requires use of oversized-transport vehicles on State highways will need a Caltrans transportation permit. We recommend large size truck trips be limited to off-peak commute periods. **1.3**

If you have any questions, please contact project coordinator Anthony Higgins, at anthony.higgins@dot.ca.gov and refer to GTS# 07-LA-2019-03497.

Sincerely,

Miya Edmonson

MIYA EDMONSON
IGR/CEQA Branch Chief
cc: Scott Morgan, State Clearinghouse

COMMENT LETTER NO.2

Los Angeles Unified School District

Office of Environmental Health and Safety

AUSTIN BEUTNER
Superintendent of Schools

CARLOS A. TORRES
Director, Environmental Health and Safety

JENNIFER FLORES
Deputy Director, Environmental Health and Safety

March 17, 2021

Cesar Moreno
City of Los Angeles, Department of City Planning
221 North Figueroa Street, Suite 1350
Los Angeles, CA 90012

Submitted via electronic mail

SUBJECT: 3rd and Fairfax Mixed-Use Project (ENV-2018-2771-EIR)

Dear Cesar Moreno:

Thank you for the opportunity to comment on the 3rd and Fairfax Mixed-Use Project (ENV-2018-2771-EIR). The Los Angeles Unified School District (LAUSD) previously submitted a comment letter, dated March 22, 2019, regarding the Initial Study that the City prepared for the Project. A copy of the previously submitted letter is attached. LAUSD understands that the proposed Project has not significantly changed since March 22, 2019 and as with the previous letter, asks that the City continue to consider the neighboring school in its development to ensure that the potential environmental impacts associated with the Project are substantially minimized, reduced, avoided, or otherwise mitigated.

LAUSD's Hancock Park Elementary School bounds the Project site to the south. In large part as a result of a year's plus long process that engaged representatives from all major stakeholder groups, LAUSD's previously provided comments regarding the Project have been addressed in the Draft Environmental Impact Report (Draft EIR). LAUSD commented on environmental factors relating to air quality; noise (construction and operation related noise); transportation and traffic; and pedestrian safety. LAUSD does not have any additional comments at this time.

2.1

LAUSD's Office of Environmental Health & Safety's charge is to protect students, faculty, staff, and the integrity of the learning environment. LAUSD will continue to coordinate with the City and developer regarding this Project. If any issues are identified by LAUSD, we will bring them to the attention of the City. Please feel free to contact me at (213) 241-3394 should you require any additional information.

Sincerely,

Christy Wong
Assistant CEQA Project Manager/Contract Professional

c: Ashley Parker, Principal, Hancock Park Elementary School
Project File

Attachment: Comment Letter - 3rd and Fairfax Mixed-Use Project (ENV-2018-2771-EIR)

ATTACHMENT

Comment Letter - 3rd and Fairfax Mixed-Use Project (ENV-2018-2771-EIR)

Los Angeles Unified School District

Office of Environmental Health and Safety

March 22, 2019

Mindy Nguyen
City of Los Angeles, Department of City Planning
221 North Figueroa Street, Suite 1350
Los Angeles, CA 90012

SUBJECT: 3rd and Fairfax Mixed-Use Project (Town & Country)
ENV-2018-2771-EIR

Presented below are comments submitted on behalf of the Los Angeles Unified School District (LAUSD or District) regarding the Notice of Preparation of an Environmental Impact Report and Public Scoping Meeting for the subject property. Due to the fact that Hancock Park Elementary School is located directly south of the property, LAUSD requests that the project address the potentially adverse impacts on its students, staff, and parents.

Based on the extent/location of the proposed development, it is our opinion that construction-related environmental impacts on the surrounding community (traffic, pedestrian safety, etc.) will occur. Since the project is anticipated to have an adverse impact on LAUSD's campus, suggested mitigation measures designed to help reduce or eliminate such impacts are included in this response.

Air Quality

Construction activities for the proposed project would potentially result in short term effects on ambient air quality in the area resulting from equipment emissions and fugitive dust. Completing these activities when school is not in session will go a long way towards minimizing air quality impacts. To ensure that effective mitigation is applied to further reduce construction air pollutant impacts, we ask that the following language be included in the mitigation measures for air quality impacts:

- Implement all applicable provisions of Rule 403 for fugitive dust control during construction of the Project.
- Utilize low emission "clean diesel" equipment with new or modified engines manufactured to meet Tier 4 specifications, or retrofitted to comply with CARB's verified diesel emission control strategy (VDECS).
- Construction vehicles shall not idle in excess of five minutes.
- Ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications.
- Water/mist soil as it is being excavated and loaded onto the transportation trucks.
- Water/mist and/or apply surfactants to soil placed in transportation trucks prior to exiting the site.
- Minimize soil drop height into transportation trucks or stockpiles during dumping.
- Cover the bottom of the excavated area with polyethylene sheeting when work is not being performed.
- Place stockpiled soil on polyethylene sheeting and cover with similar material.
- Place stockpiled soil in areas shielded from prevailing winds.

- Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers).
- Install wheel washers (or steel shaker plates) where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour (mph).
- Excavation and transportation of soil known to contain hazardous substances should be limited to periods when school is not in session.

Noise

Noise created by construction activities may affect the school in proximity to the proposed project site. These construction activities include grading, earth moving, hauling, and use of heavy equipment.

LAUSD established maximum allowable noise levels to protect students and staff from noise impacts generated in terms of Leq. These standards were established based on regulations set forth by the California Department of Transportation and the City of Los Angeles. LAUSD's exterior noise standard is 67 dBA Leq and the interior noise standard is 45 dBA Leq. A noise level increase of 3 dBA or more over ambient noise levels is considered significant for existing schools and would require mitigation to achieve levels within 2 dBA of pre-project ambient level. To ensure that effective mitigations are employed to reduce construction related noise impacts on the campus, we ask that the following language be included in the mitigation measures for noise impacts:

- If the proposed mitigation measures do not reduce noise impacts to a level of insignificance, the project applicant shall develop new and appropriate measures to effectively mitigate construction related noise at the affected school. Provisions shall be made to allow the school and or designated representative(s) to notify the project applicant when such measures are warranted.
- All pile driving equipment shall be equipped with noise control devices and/or shall implement noise buffers with minimum quieting factor of 10dBA, to the extent feasible. If possible, drilled piles are preferred to driven piles.
- Demolition activities shall be scheduled for when school is not in session.

Traffic/Transportation

LAUSD's Transportation Branch **must be contacted** at (213) 580-2950 regarding the potential impact upon existing school bus routes. The Project Manager or designee will have to notify the LAUSD Transportation Branch of the expected start and ending dates for various portions of the project that may affect traffic near the campus. To ensure that effective mitigations are employed to reduce construction and operation related transportation impacts on this campus, we ask that the following language be included in the mitigation measures for traffic impacts:

- Site access and exit should be restricted to 3rd Street to avoid use of local streets to the extent feasible.
- School buses must have unrestricted access to the campus.
- During the construction phase, truck traffic and construction vehicles may not cause traffic delays for our transported students.
- During and after construction changed traffic patterns, lane adjustment, traffic light patterns, and altered bus stops may not affect school buses' on-time performance and passenger safety.
- Construction trucks and other vehicles are required to stop when encountering school buses using red-flashing-lights must-stop-indicators per the California Vehicle Code.
- Contractors must install and maintain appropriate traffic controls (signs and signals) to ensure vehicular safety.

- Contractors must maintain ongoing communication with LAUSD school administrators, providing sufficient notice to forewarn children and parents when existing vehicle routes to school may be impacted.
- Parents dropping off their children must have access to the passenger loading areas.

Pedestrian Safety

Construction activities that include street closures, the presence of heavy equipment and increased truck trips to haul materials on and off the project site can lead to safety hazards for people walking in the vicinity of the construction site. As shown in Attachment A "Pedestrian Routes for Hancock Park Elementary School," the recommended crossings to be used from each block in the school attendance areas include the project site crossings. Due to the proximity of the school, a pedestrian safety study should be included in the Environmental Impact Report.

To ensure that effective mitigations are employed to reduce construction and operation related pedestrian safety impacts on the campus, we ask that the following language be included in the mitigation measures for pedestrian safety impacts:

- Contractors must maintain ongoing communication with LAUSD school administrators, providing sufficient notice to forewarn children and parents when existing pedestrian routes to school may be impacted.
- Contractors must maintain safe and convenient pedestrian routes to the campus. The District will provide School Pedestrian Route Maps upon your request.
- Contractors must install and maintain appropriate traffic controls (signs and signals) to ensure pedestrian and vehicular safety.
- No staging or parking of construction-related vehicles, including worker-transport vehicles, will occur on or immediately adjacent to the campus.
- Funding for crossing guards at the contractor's expense is required when safety of children may be compromised by construction-related activities at impacted school crossings.
- Barriers and/or fencing must be installed to secure construction equipment and to minimize trespassing, vandalism, short-cut attractions, and attractive nuisances.
- Contractors are required to provide security patrols (at their expense) to minimize trespassing, vandalism, and short-cut attractions.

Additionally, the school community has expressed concerns regarding the negative impacts of the completed development project. These concerns include:

- Noise impacts from driving through, idling, horn hocking, delivery trucks and service vehicles driving along the alley adjacent to the school.
- Traffic congestion impacts from additional residential and retail vehicle trips and deliveries.

The concerns expressed by the school community may be addressed by mitigation measures such as:

- The installation of a 20ft wall along the northern end of the campus.
- Relocation of classrooms along the alley to the southern end of the campus.
- The replacement of existing classrooms with sound proofing features.
- Curb cutouts for drop-off and pick-up of students along Ogden and Colgate.
- The installation of a traffic signal at Ogden and Colgate.

The District's charge is to protect the health and safety of students and staff, and the integrity of the learning environment. The comments presented in this letter identify potential environmental impacts related to the proposed project that must be addressed to ensure the welfare of the students attending Hancock Park Elementary School, their teachers and the staff, as well as to assuage the concerns of the parents of these

students. Therefore, the measures set forth in these comments should be adopted as mitigation measures to offset unmitigated impacts on the Hancock Park Elementary School students, teachers and staff.

Thank you for your attention to this matter. If you need additional information please contact me at (213) 241-3394.

Regards,

Christy Wong
Assistant CEQA Project Manager

CC: Nick Melvoin, LAUSD Board Vice President
Carlos Torres, LAUSD Office of Environmental Health and Safety Director
Al Grazioli, LAUSD Asset Development Director
Gwenn Godek, LAUSD CEQA Advisor
Ashley Parker, Hancock Park Elementary School Principal
Shanon Trygstad, Friends of Hancock Park School President
Emma Howard, CD4 Senior Planning Deputy
Rob Fisher, Mid City Field Deputy and Community Planner

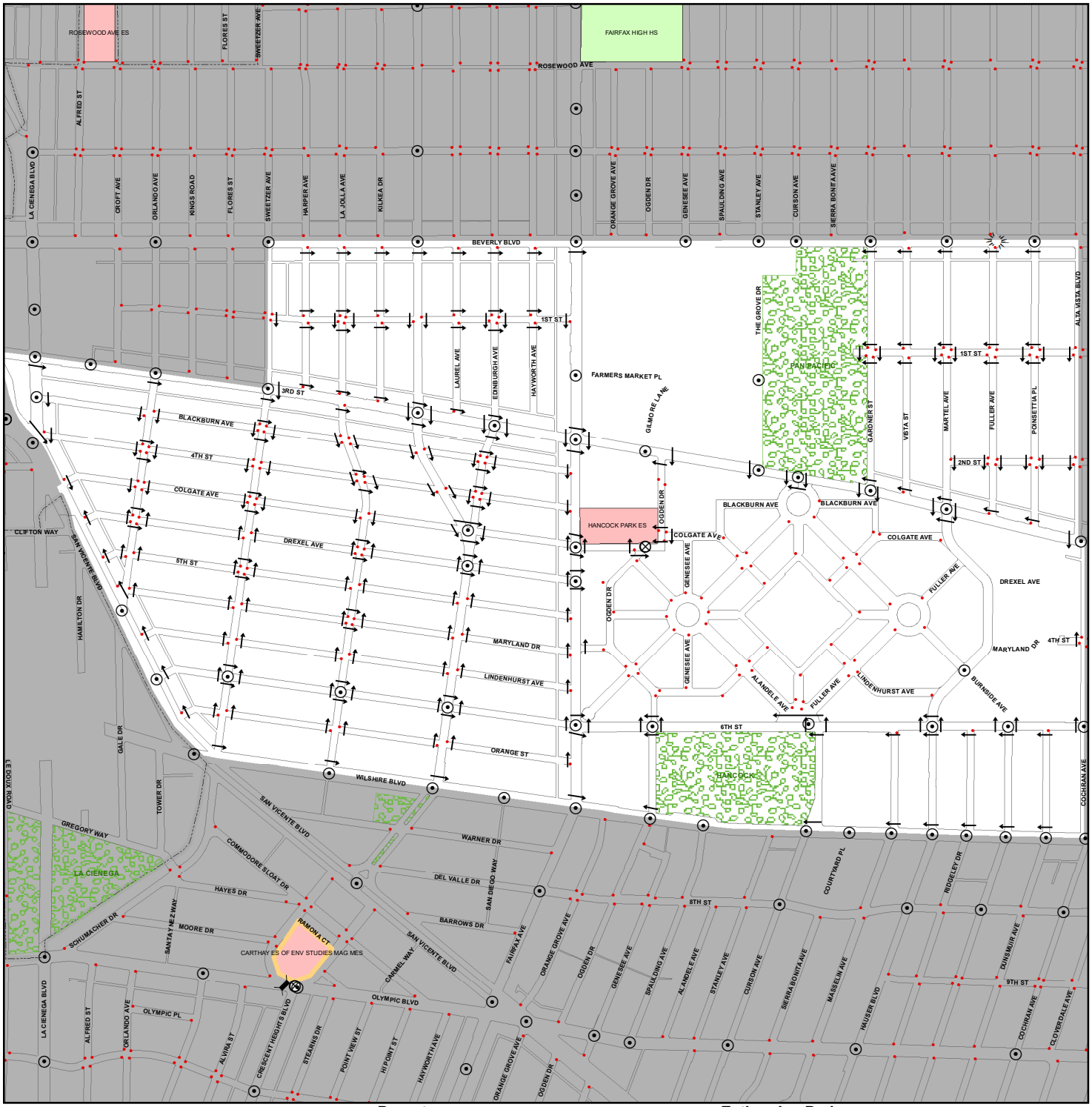
Attachment A
"Pedestrian Routes for Hancock Park Elementary School"

CITY OF LOS ANGELES - DEPARTMENT OF TRANSPORTATION

PEDESTRIAN ROUTES FOR HANCOCK PARK ELEMENTARY SCHOOL

September 2016

LADOT
Moving LA Forward



Legend

- Recommended Crossing
- Stop Sign
- Traffic Signal
- Crossing Guard
- Flashing Warning Light
- Stairs or Walkway
- Pedestrian Bridge
- Pedestrian Tunnel
- Parks

N
W E
S

0 400 800
Feet

Parents:

This map shows the recommended crossings to be used from each block in your school attendance area. Following the arrows, select the best route from your home to the school and mark it with a colored pencil or crayon. This is the route your child should take. Instruct your child to use this route and to cross streets only at locations shown. You and your child should become familiar with the route by walking it together. Obey marked crosswalks, stop signs, traffic signals and other traffic controls. Crossing points have been located at these controls wherever possible, even though a longer walk may be necessary. Instruct your child to always look both ways before crossing the street. If no sidewalk exists, your child should walk facing traffic.

Estimados Padres:

Este mapa muestra los cruzados recomendados para los peatones de cada cuadra en la area de su escuela. Siguiendo las flechas en el mapa, selecione la ruta mas segura de su casa a la Escuela y marquelo con un lapis o tiza de color. Esta es la ruta que su hijo (a) debe de usar. Digale a su hijo (a) que use esta ruta y que cruce las calles solamente en los lugares indicados. Usted y su hijo (a) deberian de familiarizarce con esta ruta. Obedezcan los rotulos de peatones, de altos, semaforos y todos los señales de trafico. Puntos para cruzar estan localizados en areas controladas, aunque sea necesario de alargar el tiempo para cruzar. Instruye a su hijo (a) que siempre se fije de los dos lados antes de cruzar la calle. El estudiante debe de siempre caminar en la direccion opuesta del trafico si no existe una banqueta.

NITHYA RAMAN | Los Angeles City Councilmember 4th District

COMMENT LETTER NO.3

March 29, 2021

Cesar Moreno, Major Projects Section
Department of City Planning
200 N. Spring St., Los Angeles, CA 90012

Re: 3rd and Fairfax Mixed-Use Project

Dear Mr. Moreno,

We are reaching out on behalf of Councilmember Nithya Raman and Council District 4 to provide our comments for the proposed 300-370 S. Fairfax Ave. Project, otherwise known as "Town & Country Shopping Center." In addition to 147,682 square feet of commercial uses, the proposed development seeks to construct 331 housing units in an area well served by transit and other neighborhood-serving amenities.

It is our understanding that there was an active and very involved working group convened by the previous administration, which included the Mid City West Community Council, Hancock Park Elementary School, residents, and the developer to discuss the specificities of this Project. In October 2018, the Mid City West Community Council produced a comprehensive Vision & Goals statement for the Project which uplifts the protection of legacy businesses, construction mitigation strategies, human scale design elements, better circulation than currently exists on this expansive site, and a vision for mixed-income housing that can serve the local workforce. **3.1**

In March 2021, the Mid City West Community Council Board of Directors solidified their exciting and important community-rooted vision through a benefits agreement and approved the Project with the following conditions: better frontage and open space design for an enhanced public realm, mobility and circulation improvements, and greening requirements where feasible, among several additional items. We deeply appreciate and would like to commend the high level of engagement by community stakeholders to help shape this development, most notably by the Mid City West Community Council.

Our office would also encourage the Project to include a meaningful affordable housing component, given the incredible need to provide affordable housing near transit and jobs.

We understand that we are stepping in as a new office at the end of a multi-year process. We also recognize that this request is outside the scope of the EIR for the project, but we would be remiss to ignore the responsibility of our stakeholders, developers included, from meeting our affordable housing goal at a time when the housing crisis remains unabated.

Regards,

Mashael Majid
Planning Director to Councilmember Nithya Raman
4th District

MID CITY WEST
COMMUNITY COUNCIL

COMMENT LETTER NO.4

March 24th, 2021

Cesar Moreno (via email cesar.moreno@lacity.org)
Planning Assistant
200 N Spring St
Los Angeles, CA 90012

Subject: **ENV-2018-2771-EIR**
300 S Fairfax Ave
Town & Country

Dear Cesar,

We appreciate the opportunity to comment on this application as the certified neighborhood council serving the area in which the project is located.

The Mid City West Community Council (MCW) Board of Directors **approved** the following motion (22 yeas, 4 nay, 1 abstention) at the Tuesday, March 9th, 2020 board meeting:

> Mid City West Community Council supports the project with the agreed-to commitments referred to in "Attachment A: ENV-2018-2771-EIR_Project Site and Community Benefits" as conditions for approval for construction. **4.1**
>
> (Those conditions are listed below for reference)
>
> **I. Form/Open Space/Design**
> A. The Project will be a Mid-rise structure of 8 stories;
> B. The applicant (Holland) is committed to continuing to pursue removal of existing ficus trees that impede visibility on Fairfax and 3rd and replacement at a 2:1 ratio with mature shade trees after the CEQA process is complete;

C. 15' sidewalks on Fairfax and 3rd Street where possible due to existing buildings and 12' sidewalks on Ogden;
D. New shade trees will be planted on Fairfax, 3rd, and Ogden;
E. Site greening and water capture where feasible per the required LID requirements of the City of Los Angeles;
F. Creation of public open space on the northwest corner of the new building, which will include shade trees, outdooring dining, and lounge opportunities and will be open for the general public;

II. Residential

. No short-term leases from operator and a condition of no short-term leases in residential leases

III. Circulation

. Pending final approval from the Los Angeles Dept. of Transportation (LADOT), the installation of missing marked crosswalk leg at intersection of 3rd/Ogden (west leg) and ancillary improvements required (signal heads, signal timing, etc);
A. Pending final approval from LADOT, the iInstallation of marked crosswalk with HAWK/PHB (Pedestrian activated beacon) control across Fairfax Ave anywhere at or between Blackburn Ave and 4th St;
B. A North-South pedestrian pathway on the site including landscaped open space between the new building and the existing Whole Foods building that will be accessible to the public;
C. Publicly accessible East-West pedestrian paseo to connect the existing shopping center (Whole Foods and CVS) to Ogden Dr;
D. Raised Crosswalks and or Intersections on Colgate Ave and Ogden Dr to slow traffic and make the streets safer for kids. Locations include:
1. A re-sited raised crosswalk across Colgate Ave or the improvement of the existing crosswalk across Colgate Ave to a raised crosswalk;
2. The improvement of the two crosswalks across Ogden at the intersection with the Palzzo access driveway into raised crosswalks or into a raised intersection;
E. The prohibition of Right Turns from the Project exiting on Ogden Dr to minimize traffic towards the Hancock Park Elementary School and Park La Brea;
F. Ride share pickup/drop off located in the ground floor garage of the new Project;
G. Cut back of facade at southwest corner of 3rd/Ogden to increase visibility of people on foot;
H. A location for scooter or dockless vehicle parking in the Project Area (not in the surface parking lot, for which a separate location for scooter or dockless vehicle parking is sought from the Ownership/Regency Centers);
I. An expanded-width raised crosswalk from the North-South pedestrian walkway to the East-West pedestrian paseo and pathway;
J. Short-term loading curb space on Ogden Dr to preclude double-parking;
K. Pending the approval of LADOT, the implementation of a Class III Bike Route on Ogden Dr/Colgate Ave with applicant installing:
1. Class III Bike Route signage;
2. In-pavement markings (sharrows).

4.1 cont.

IV. Construction

. Conduct most demolition activities on existing K-Mart building in summer if feasible;

A. Use intensive mitigation measures during construction to reduce dust, noise, and other externalities of construction;

B. A commitment to maintain a continuous and open path of pedestrian travel at all times around the site;

V. Hancock Park Elementary

. [The owner of the shopping center has built a permanent 10 foot CMU wall on the south side of 4th St Alley along the Hancock Park Elementary campus in response to input received during the working group meetings.] During construction, the applicant will install an additional five foot sound wall on top of the 10 foot permanent wall to add further acoustic barriers;

A. The applicant has voluntarily donated $65,000 to Hancock Park Elementary School to purchase and configure new computer hardware necessary to facilitate remote learning during the COVID crisis;

B. Site reconfiguration of campus according to "Option 3A" including the moving of a parking lot to the northeast corner of the school campus and the construction of new basketball courts and a new U-8 size soccer field in the southeast corner. Developer will also provide two new shade structures on the campus;

C. Methane monitoring and alarms on Hancock Park Elementary campus as feasible;

D. Modification of Colgate Ave striping plan to allow for an airport style drop off lane for parents and students to increase safety of pick up and drop off activities;

E. The above improvements are part of a community benefits package totaling $3.5 million that the applicant is negotiating with the Friends of Hancock Park School. Additional benefits are being discussed with board members from the Friends of Hancock Park School, which could expand the specific contributions that are part of this package within the applicant's $3.5 million commitment.

4.1 cont.

Thank you for your attention to this matter. Please feel free to contact me via email at mberker@midcitywest until April 1, 2021 or at mehmetikberker@gmail.com after April 1, 2021.

Sincerely,

Mehmet Berker
Mid City West Community Council

Cc:	Office of Council District No. 4, Hon. Nithya Raman	(via Email)
	Office of Council District No. 4, Mashael Majid	"
	Office of Council District No. 4, Megan Healy	"
	Office of Council District No. 4, Tabatha Yelós	"
	Eric Shabsis	"
	Tom Warren, Holland Partner Group	"
	John Mehigan, Regency Centers	"

COMMENT LETTER NO.5

GABRIELENO BAND OF MISSION INDIANS - KIZH NATION
Historically known as The Gabrielino Tribal Council - San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

February 12, 2021

Project Name: 300-370 South Fairfax Ave; 6300-6370 West 3rd St. and 347 South Odgen Drive Los Angeles CA

Dear Cesar Moreno,

Thank you for your letter dated February 11, 2020 regarding AB52 consultation. The above proposed project location is within our Ancestral Tribal Territory; therefore, our Tribal Government requests to schedule a consultation with you as the lead agency, to discuss the project and the surrounding location in further detail. **5.1**

Please contact us at your earliest convenience. ***Please Note:AB 52, "consultation" shall have the same meaning as provided in SB 18 (Govt. Code Section 65352.4).***

Thank you for your time,

Andrew Salas, Chairman
Gabrieleno Band of Mission Indians – Kizh Nation
1(844)390-0787

PO Box 393 Covina, CA 91723 admin@gabrielenoindians.org

HANCOCK PARK
ELEMENTARY SCHOOL

Friends of Hancock Park School
408 S. Fairfax Avenue
Los Angeles, CA 90036

COMMENT LETTER NO.6

March 29, 2021

VIA ELECTRONIC MAIL ONLY

William Lamborn
Senior City Planner
Los Angeles Department of City Planning
Major Projects Unit
221 North Figueroa Street, Suite 1350
Los Angeles, CA 90012

E-Mail: william.lamborn@lacity.org
cesar.moreno@lacity.org

Re: 3rd & Fairfax Mixed Use Project – Retracting Prior Comment Letters

Dear Mr. Lamborn,

On March 14, 2019, the Friends of Hancock Park School submitted a comment letter on the Initial Study/Notice of Preparation prepared by the City for the 3rd & Fairfax project located on a portion of the existing Town & County Shopping Center, adjacent to the Hancock Park Elementary School campus. That letter included: (1) a letter from Shanon Trygstad as President of the Friends of Hancock Park School; (2) a petition signed by teachers and staff from Hancock Park Elementary School listing their concerns; and (3) numerous comments from parents of children that attend the school.

Since our letter, the applicant has modified the project design to be more compatible with our campus. The applicant has engaged us in a meaningful way to ensure the project is constructed and operated in manner sensitive to our school and its children. In addition, the City prepared an Environmental Impact Report for the project, which we believe adequately analyzes the potential impacts of the project. And, the applicant has worked directly with us to resolve all of our concerns, and to fund improvements and/or programs that better our campus and improve the learning environment for our students and teachers. We appreciate these efforts by the applicant. **6.1**

Accordingly, on behalf of the Friends of Hancock Park School, we hereby retract all our prior comment letters on the project, including without limitation all the prior comments, petitions, letters, and any other correspondence submitted in connection with our initial comment letter.

Also, please note that we have communicated our support of the project to the local council district office.

Our concerns have been addressed. We support the 3rd & Fairfax project. We urge the City to approve the project. Please add this letter to the administrative record for the project.

6.1 cont.

Thank you,

Friends of Hancock Park ~~School~~

Shanon Dawn Trygstad
President, Friends of Hancock Park School

cc: Austin Beutner – LAUSD
Al Grazioli – LAUSD
Gwenn Godek – LAUSD
Ashley Parker – Hancock Park Elementary School
Councilmember Raman– Council District
Councilmember Koretz – Council District

HANCOCK PARK
ELEMENTARY SCHOOL

Friends of Hancock Park School
408 S. Fairfax Avenue
Los Angeles, CA 90036

COMMENT LETTER NO.6A

March 29, 2021

VIA ELECTRONIC MAIL ONLY

Honorable Nithya Raman
Councilmember, Council District 4
Hollywood District Office
6501 Fountain Avenue
Los Angeles CA 90028

Re: Letter of Support for the 3rd & Fairfax Project

Dear Councilmember Raman:

The Friends of the Hancock Park Elementary School are writing to express our strong support for the 3rd & Fairfax project. As you know, the project site located at 6330 W. 3rd Street, on a portion of the existing Town & County Shopping Center, adjacent to the Hancock Park Elementary School campus. We have worked collaboratively with the project applicant for many months. The applicant has resolved the concerns that we initially expressed. Thus, we now support the project without hesitation.

For background, we submitted a letter dated February 26, 2019 to the prior administration outlining our concerns with the project. We also submitted a letter dated March 13, 2019 to the prior administration, Councilmember Koretz, and several members of the Los Angeles Unified School District (LAUSD) Board of Directors. Similarly, we submitted a letter dated March 14, 2019 to the Department of City Planning. In addition, we coordinated petitions and letters on the project to submit during the initial study phase of environmental review. The applicant has worked with us to address all of the concerns we raised in these correspondences. **6A.1**

The applicant has modified the project design to be more compatible with our campus. The applicant has engaged us (and the community) in a meaningful way to ensure the project is constructed and operated in manner sensitive to our school and its children. In addition, the City prepared an Environmental Impact Report for the project, which we believe adequately analyzes the potential impacts of the project. Also, the applicant has worked with us, to resolve all of our concerns and fund improvements and/or programs that better our campus and improve the learning environment for our students and teachers. This is a strong commitment from the applicant and a major benefit to our school and the community.

Therefore, we now offer our support for the project. We hope that you also will support the project in its current form considering the applicant's meaningful efforts to address our concerns. This is a project that will improve the project site, improve the school and its programs, and generally improve the community. Our prior comments on the project's administrative record are retracted. And, going forward we will work with our stakeholders to further support the project as it completes the approval process. We urge the City to approve the project. **6A.1 cont.**

We look forward to the continuing collaboration with the applicant to conclude the administrative review process and make this project a reality.

Sincerely,

Shanon Dawn Trygstad
On Behalf of
Friends of Hancock Park Elementary School

COMMENT LETTER NO.7

502 S. Orange Grove Avenue
Los Angeles, CA 90036

March 29, 2021

Cesar Moreno
Major Projects Section
Department of City Planning
221 N. Figueroa Street Ste. 1350
Los Angeles, CA 90012
cesarmoreno@lacity.org

Re: **ENV-2018-2771-EIR**
3rd and Fairfax Mixed Use Project
Third Fairfax, LLC
6300-6370 W. 3rd Street and 347 S. Ogden Drive, Los Angeles, CA 90036

Dear Cesar:

I represented Park La Brea residents from the five blocks adjacent to the Proposed Project Site on the Town & Country "Working Group" panel. I was appointed to the Working Group by the former councilmember in the spring of 2019 after 220 verified Park La Brea tenants calling themselves the Park La Brea Impacted Residents Group ("PLBIRG") petitioned the former councilmember to correct his omission of Park La Brea residents from the panel. In March 2019 I submitted five pages of comments into the DEIR "Scoping" process on behalf of PLBIRG. **7.1**

I have reviewed the DEIR for the Town and Country "3rd and Fairfax Mixed Use" Project. My comments are below.

Sincerely,
Barbara Gallen

3RD AND FAIRFAX MIXED USE PROJECT

DEIR COMMENTS **7.2**

The DEIR is deficient in many respects and fails in numerous ways to address the Project's impacts and its compliance with the California Environmental Quality Act.

Air Quality

The analysis regarding diesel emissions, particulate matter and fugitive dust during the construction phase is deficient. The project is in close proximity to a school, and these pollutants are known to cause higher risk of cardiopulmonary disease in young people. The proposed mitigation measures are insufficient. **7.2 cont.**

Greenhouse Gas (GHG) Emissions

The Greenhouse Gas emissions analysis is deficient and doesn't adequately assess actual GHG emissions related to the construction and operational phases.

Among its many deficiencies: **7.3**

1. The analysis does not address the impacts of ride hailing which will be a significant factor in Vehicle Miles traveled (VMT) to and from the Proposed Project. Numerous published studies of "rideshare" impacts on VMT in urban cities as well as suburban communities have concluded that not only have such services **not** reduced VMT as was originally theorized, but has been seen to significantly **increase** VMT.

2. The DEIR also fails to acknowledge that the City of Los Angeles has performed no studies and published no data of its own regarding Vehicle Miles Traveled, and has published no data to contradict the findings of major research institutions that have documented that high income Angelenos like those the 3rd and Fairfax developer is targeting for the Project's well-above-market rental rates are **inversely correlated to transit use** in Los Angeles. **7.4**

3. The City has ignored published data from established research institutions that demonstrates the failure of its policies. See, for example, "Falling Transit Ridership," UCLA Institute of Transportation Studies, January 2018. **7.5**

4. The analysis cites a plethora of existing bus routes as if proximity to bus routes will result in its affluent occupants foregoing car ownership and ride hailing services to use the bus system. This reasoning is akin to "Wishcycling." **7.6**

5. As another example, the analysis cites 200 "long term" bike spaces in the Project but offers no data that the existence of any number of bike spaces in a luxury housing project has any impact on VMT or GHG. **7.7**

Hazards and Hazardous Materials

The analysis has not sufficiently addressed these risks and impacts to the community. While the EIR acknowledges the risks from sub-surface methane, its analysis is incomplete. **7.8**

Noise

Noise during construction will be considerable and will adversely impact instructional time at the school both during the school year and during on site programs contracted by the school to provide supervised activities for youth during school breaks. It will also impact the ability of adjacent residents to work from home. 7.9

Transportation

The analysis in this section is seriously deficient in a great many respects and understates and misstates the Proposed Project's impacts.

To mention just two of the myriad deficiencies, among many others:

1. **The Household VMT** calculations are deficient and fail to address the abundance of studies documenting the increase in vehicle trips associated with ride hailing. The analysis also ignores the explosion of vehicle trips associated with delivery of goods and services purchased online, particularly by higher income individuals, in a trend and new norm accelerated by COVID. 7.10

   The City has not provided any data or studies to show that the Proposed Mitigation Measures of Unbundling, Education about Alternative Transportation Options, and oversupply of Bike Parking Spaces will have any impact on Household VMTs. Saying it's so doesn't make it so.

2. **Emergency Response**.

   The analysis is deficient in addressing the Project's impact on emergency response times—both during construction and during operation-- to the school and to the Park La Brea and Palazzo residents whose homes are only accessible via Ogden due to the surrounding land masses. 7.11

   The analysis fails to take into account the City's intention to install a new crosswalk connecting the Project with Farmers Market and The Grove at Gilmore Lane. The existing "Ross crosswalk" on the east side of Ogden would no longer serve any useful purpose and the City's plan to retain it will promote dysfunction putting even more pressure on vehicles trying the clear the Third / Ogden intersection, including emergency vehicles. 7.12

   The Gilmore Lane and Ogden signals can't be synchronized because they won't have the same number of phases.

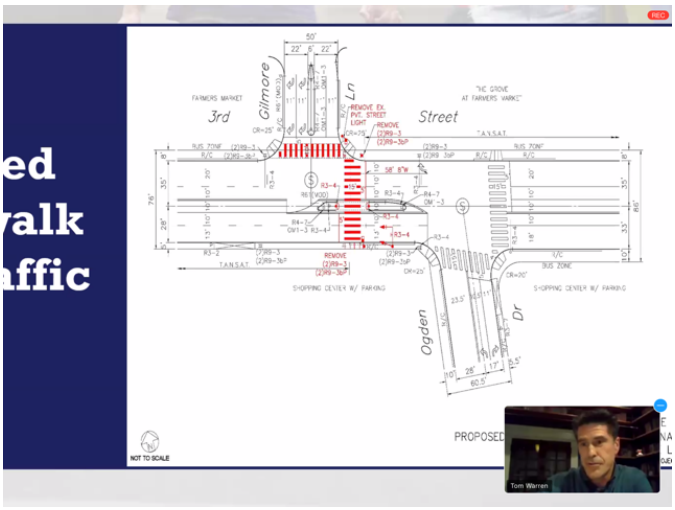
   The analysis also fails to account for the impacts of requiring all vehicles to stop to take a ticket to enter the Proposed Project, or the volume of traffic coming off Third onto Ogden (preCOVID) on weekends trying to turn into Ross's lot, or commercial vehicles and moving 7.13

trucks required to enter and exit the Project via Ogden, a local street with just 1 travel lane in each direction.

Nor does it take into account the presence of stopped DASH buses and Ross dumpsters on the east side of Ogden or the impact of 100 per cent of all vehicle traffic exiting the residential structure and the lion's share of those exiting the retail structure needing to traverse the Southbound lane to access the northbound lane to reach Third Street at the intersection.

These dynamics will all be happening at the same time, on a local street with just 1 lane in each direction. It would be disingenuous to claim emergency response will not be affected.

7.13 cont.



Cumulative Impacts

The analysis also fails to take into account the inevitable redevelopment of the eastern portion of the Town & Country shopping center to replace the outdated retail and commercial structures which the developer has described as an eyesore and a blight, yet at the same time they would have us believe the current retail / commercial tenants wouldn't agree to being provided with beautiful new facilities so the entire property could be redeveloped in a holistic manner that could allow it to be a harmonious neighbor for the surrounding community rather than the burden it is shaping up to be.

7.14

COMMENT LETTER NO.8

LOZEAU DRURY LLP

T 510.836.4200
F 510.836.4205

1939 Harrison Street, Ste. 150
Oakland, CA 94612

www.lozeaudrury.com
brian@lozeaudrury.com

Via Email

March 29, 2021

Cesar Moreno, Planning Assistant
Los Angeles City Planning
City of Los Angeles
221 N. Figueroa St., Suite 1350
Los Angeles, CA 90012
cesar.moreno@lacity.org

Lisa M. Webber, AICP Deputy Director
City Planning Department
City of Los Angeles
200 N. Spring Street, Room 525
Los Angeles, CA 90012
lisa.webber@lacity.org

Holly L. Wolcott, City Clerk
City Clerk's Office
City of Los Angeles
200 North Spring Street, Room 360
Los Angeles, CA 90012
cityclerk@lacity.org

Planning Commission Secretary
City Planning Department
City of Los Angeles
200 North Spring Street, Room 532
Los Angeles, CA 90012
cpc@lacity.org

Re: Comment on Draft Environmental Impact Report, 3rd & Fairfax Mixed Use Project

Dear Mr. Moreno, Ms. Webber, Ms. Wolcott, and Planning Commission Secretary:

I am writing on behalf of the Supporters Alliance For Environmental Responsibility ("SAFER") regarding the Draft Environmental Impact Report ("DEIR") prepared for the Project known as 3rd & Fairfax Mixed Use Project, including all actions related or referring to the proposed construction and operation of a new mixed-use development that would include demolition of 151,048 square feet of existing retail uses and construction of a mid-rise, eight-story mixed use structure with two levels of subterranean parking located at 300-370 South Fairfax Avenue; 6300-6370 West 3rd Street; and 347 South Ogden Drive in the City of Los Angeles ("Project"). **8.1**

After reviewing the DEIR, we conclude that the DEIR fails as an informational document and fails to impose all feasible mitigation measures to reduce the Project's impacts. SAFER request that the City Planning Department address these shortcomings in a revised draft environmental impact report ("RDEIR") and recirculate the RDEIR prior to considering approvals for the Project. We reserve the right to supplement these comments during review of the Final EIR for the Project and at public hearings concerning the Project. (*Galante Vineyards v. Monterey Peninsula Water Management Dist*. (1997) 60 Cal. App. 4th 1109, 1121.) **8.2**

Sincerely,

Brian Flynn

COMMENT LETTER NO.9

Connect Create Collaborate

Cesar Moreno <cesar.moreno@lacity.org>

Submittal of Comments - 3rd and Fairfax Mixed-Use Project

1 message

Peter Hayden <phayden@afgilmore.com> Mon, Mar 29, 2021 at 3:59 PM
To: cesar.moreno@lacity.org

Dear Mr. Moreno -

Thank you for the opportunity to comment upon the above-referenced Draft Environmental Impact Report (Case No. ENV-2018-2771-EIR). Our comments are as follows:

1. The EIR excluded detailed analyses for The Original Farmers Market's access points (i.e., the intersection of Gilmore Lane with 3rd Street, and the intersection of Farmers Market Place with S. Fairfax Avenue). The EIR's mitigation measures are geared towards the vehicle miles traveled (VMT) analysis results, which are area-wide measures and not targeted to any specific intersections. Please provide additional information that will help us to evaluate how the proposed development would impact access and operations for The Original Farmers Market. **9.1**
2. The EIR indicates that access to the existing surface parking areas within the western portion of the Project Site would continue to be provided via one driveway each along S. Fairfax Avenue and W. 3rd Street. However, the EIR does not provide specific information regarding how these driveways will operate or whether the surface parking lot will be paid and controlled parking. Please provide additional information regarding how these driveways will be operated and / or controlled to minimize congestion due to queuing of vehicles arriving and departing from the existing shopping center on the western half of the site, including location of ticket entry columns, location of ticket exit columns and/or booths, etc. **9.2**
3. Project-specific mitigation measures proposed in the EIR aim to minimize residential car ownership (through parking costs) and encourage alternate travel modes such as transit and bicycling (through education and bike parking). However, the EIR states that the development would be providing more parking supply than is required by zoning. This appears to be in conflict with the overall mitigation strategy to discourage residential car ownership through parking pricing. Please clarify. **9.3**
4. Please amend the EIR to include a requirement that construction activities must be coordinated in advance with adjacent property owners. Specifically, lane closures on 3rd Street must be prohibited during the peak retail season (Thanksgiving through early January), as well as summer holiday periods i.e. Memorial Day, July 4, Labor Day. **9.4**
5. Please describe pedestrian safety measures (i.e., protection from potential theft and similar issues), such as cameras, security staff, etc. that will be designed into the Pedestrian Portal proposed to be located on the ground level of the new parking structure. **9.5**
6. Please describe where the mechanical ventilation units for the proposed new retail and residential units will be located, how they will be screened from public view, and how potential noise impacts will be mitigated. **9.6**

Best regards,

Peter Hayden

Director/Construction & Development

A.F. Gilmore Company

6301 W. 3rd Street | Los Angeles, CA 90036

O 323.954.4232 **M** 949.519-6447 **F** 323.954.4229

phayden@afgilmore.com

COMMENT LETTER NO.10

Mr. William Lamborn
City Planner
Los Angeles City Planning
221 No. Figueroa Street, Suite 1350
Los Angeles, CA 90012

Re: Town & Country at 3rd and Fairfax

Dear Mr. Lamborn,

I support Town & Country project at 3rd and Fairfax. It is about time that property is redeveloped into something that is new, exciting, and up to date. I support the mixed use of housing units, new retail, and tiered parking in the new design. The City of Los Angeles desperately needs new housing units, and this project will create 331 new market rate units for our community. **10.1**

The Draft Environmental Impact Report (DEIR) has confirmed that no significant impacts under the California Environmental Quality Act are present in the project. I think this project is a win-win for the community, the City of Los Angeles and for the project developer. I support the Town and Country project and ask that the City of Los Angeles approve this project.

Best,

Mayra Bakes
569 S. Orange Grove Ave
Los Angeles, CA 90036
mayra_CJ05@yahoo.com

COMMENT LETTER NO.11

Mr. William Lamborn
City Planner
Los Angeles City Planning
221 No. Figueroa Street, Suite 1350
Los Angeles, CA 90012

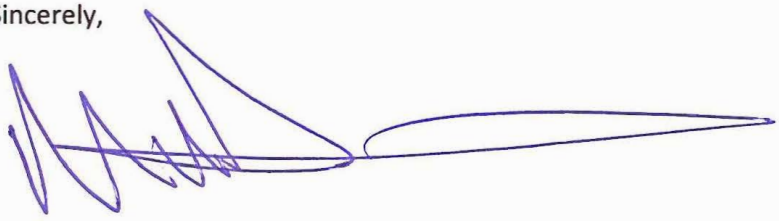
Re: Town & Country at 3rd and Fairfax

Dear Mr. Lamborn,

I am in full support of the Town and Country project at 3rd and Fairfax. Increased traffic and difficult access to the current shopping center have been troublesome and made it very difficult to enjoy the space. The redesigned project will improve the parking configuration and traffic circulation as well as enhance access and mobility throughout the property with new entrances and exits ensuring pedestrians, bikes and cars can better enjoy all it has to offer. **11.1**

The recently released Draft Environmental Impact Report also found that the redevelopment will have no significant impacts on the surrounding environment, giving us no reason to be in opposition of an improved project that will better serve our community. For these reasons I urge your support as well.

Sincerely,



Matt Dear
570 South Orange Grove Ln
90036
310-422-6016

COMMENT LETTER NO.12

Mr. William Lamborn
City Planner
Los Angeles City Planning
221 No. Figueroa Street, Suite 1350
Los Angeles, CA 90012

Re: Town & Country at 3rd and Fairfax

Dear Mr. Lamborn,

I'm reaching out to express my support for the re-envisioning of the Town & Country project at 3rd and Fairfax. The project recognizes the unique needs of the entire community – especially the nearby elementary school. The project team has worked with school leadership, teachers and parents to address concerns and meet all core school needs while creating a plan for voluntary investments that will provide long-term benefits to the students, campus and neighborhood. **12.1**

The recent Draft Environmental Impact Report (DEIR) also found no significant impacts on the surrounding area including any impact on air quality, traffic, hazardous materials or noise. With a strong collaboration within the community, and considering the results from the DEIR, I urge you to support and move this project forward.

Sincerely,

Ajani Bryant Gysi

560 S Orange Grove Ave 90036

ajanibryantgysi@gmail.com

COMMENT LETTER NO.13

Mr. William Lamborn
City Planner
Los Angeles City Planning
221 No. Figueroa Street, Suite 1350
Los Angeles, CA 90012

Re: Town & Country at 3rd and Fairfax

Dear Mr. Lamborn,

I am writing to express my support for the redevelopment of Town and Country at 3rd and Fairfax. The plans for Town & Country reflect input gained through a proactive outreach effort that included consistent meetings with local residents, business owners and the council office. This collaborative and transparent approach ensures the final project is reflective of our neighborhood's wants and needs. **13.1**

With strong and transparent partnerships throughout the community, I fully support this new development and urge you to do the same.

Sincerely,

Chris HOURS

575 S. Orange grove
LOS ANGELES CA 90036
NYCTMONACO@GMAIL.COM

COMMENT LETTER NO.14

Mr. William Lamborn
City Planner
Los Angeles City Planning
221 No. Figueroa Street, Suite 1350
Los Angeles, CA 90012

Re: Town & Country at 3rd and Fairfax

Dear Mr. Lamborn,

I would like to express my support of the Town and Country project at 3rd and Fairfax. The new design of the property is attractive, well planned, and much needed at the intersection. I believe the new parking configuration and traffic flow inside of the project will enhance the experience of shopping at the newly designed property. **14.1**

The Draft Environmental Impact Report also found virtually no impacts on the surrounding community and will not affect traffic in a negative manner. Please accept my letter of support for this wonderful project.

Sincerely,

415-250-3678
Carol Khadem
563 Sogden Dr
Los Angeles, CA 90036

COMMENT LETTER NO.15

Mr. William Lamborn
City Planner
Los Angeles City Planning
221 No. Figueroa Street, Suite 1350
Los Angeles, CA 90012

Re: Town & Country at 3rd and Fairfax

Dear Mr. Lamborn,

I am writing to express my support for the Town & Country project at 3rd and Fairfax, which will re-envision an outdated shopping center with new housing, retail and open public space, all designed around a community-oriented approach. As a local resident, I am excited to see the property redesigned to better fit our community.

Along with providing much-needed new housing and community-serving retail options, the reimagining of Town & Country will greatly improve the property, by creating open-air spaces with new landscaping, wider sidewalks and easier access for visitors and residents.

The plans for Town & Country reflect input gained through a proactive outreach effort that included consistent meetings with local community members, business owners and the council office. Throughout the planning process, Holland Partner Group and Regency Centers have taken a collaborative and transparent approach to engaging neighborhood stakeholders to ensure the final project is reflective of our community's priorities. 15.1

The recently released Draft Environmental Impact Report (DEIR) confirms no significant impacts under the California Environmental Quality Act. Nonetheless, the project will be investing in the community through a generous benefits package that was greatly informed by the development team's engagement with the local community.

With the opportunity to improve our community and modernize 3rd and Fairfax before us – and do so with no significant impacts reported from the DEIR – I fully support Town & Country.

Best,

Faizal Khan
555 S Ogden Ave
Los Angeles, CA 90036
ph: 310-367-4167

Faizal

COMMENT LETTER NO.16

Mr. William Lamborn
City Planner
Los Angeles City Planning
221 No. Figueroa Street, Suite 1350
Los Angeles, CA 90012

Re: Town & Country at 3rd and Fairfax

Dear Mr. Lamborn,

I am writing to express my full support for the re-envisioned Town & Country project at 3rd and Fairfax. The thoughtfully planned development will create a new mix of much-needed retail – bringing neighborhood-focused shops to the property that will better fit the needs and wants of our community. Improved walkways, open spaces and landscaping will also enhance the retail experience for residents and provide a new gathering space for the entire neighborhood. **16.1**

With recent findings from the Draft Environmental Impact Report showing no significant impacts to the surrounding area from the development, I urge you to advance this project.

Sincerely,

2/22/21

SHLOMO LEVY

589 S ORANGE GROVE AV

213 200 0002

COMMENT LETTER NO.17

Mr. William Lamborn
City Planner
Los Angeles City Planning
221 No. Figueroa Street, Suite 1350
Los Angeles, CA 90012

Re: Town & Country at 3rd and Fairfax

Dear Mr. Lamborn,

I am writing to express my support for the Town & Country project at 3rd and Fairfax, which will re-envision an outdated shopping center with new housing, retail and open public space, all designed around a community-oriented approach. As a local resident, I am excited to see the property redesigned to better fit our community. Throughout the project's planning process, Holland Partner Group and Regency Centers have taken a collaborative and transparent approach to ensure the final project is reflective of our priorities.

This project will provide much-needed new housing in the community, which is experiencing a significant increase in residential demand as new employers move into the region. The development also reflects community feedback, which prioritized market-rate housing and a mid-sized building that better fits with our neighborhood over a much larger structure with affordable units. We believe this is an important distinction that balances our community's needs by increasing the supply of housing while also improving the existing center to make the Third and Fairfax corridor a true hub for our neighborhood. 17.1

The plans for Town & Country reflect input gained through a proactive outreach effort that included consistent meetings with a project working group comprised of local residents, neighborhood council representatives, business owners and local elected officials/staff. Given the proximity, regular and ongoing meetings with Hancock Park Elementary School stakeholders, including LAUSD, parents and teachers also continue to guide the project's progress in an effort to proactively address concerns, meet the school's core needs, limit impacts to the school and plan for voluntary campus investments that will provide long-term benefits to the students, campus and surrounding community.

Furthermore, the recently released Draft Environmental Impact Report (DEIR) confirms no significant impacts under the California Environmental Quality Act. Nonetheless, the project will be investing in the community through a generous benefits package that was greatly informed by the development team's engagement with the local community.

With the opportunity to improve our community and modernize 3rd and Fairfax before us – and do so with no significant impacts reported from the DEIR – I fully support Town & Country.

Best,

P Pagma
511 S Ogden Dr LA CA 90036
213 263 8886

COMMENT LETTER NO.18

Mr. William Lamborn
City Planner
Los Angeles City Planning
221 No. Figueroa Street, Suite 1350
Los Angeles, CA 90012

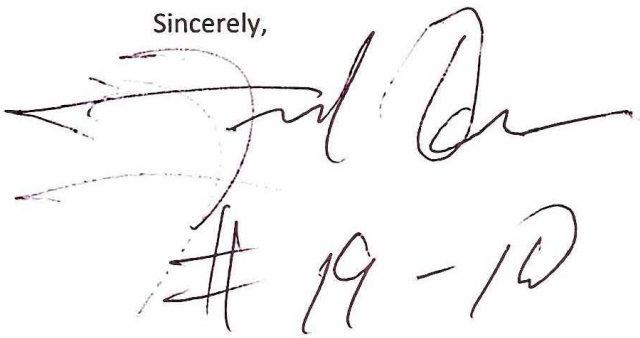
Re: Town & Country at 3rd and Fairfax

Dear Mr. Lamborn,

I am fully supportive of the Town and Country project at 3rd and Fairfax. The project creates a design for the future of our City. We need projects that have mixed use components of housing, retail, and open space. Currently, the property is a sea of asphalt with little landscaping and no open space for the community to use. The new design will allow members of the public to visit, shop and enjoy the open space at the site. More importantly, the project will create 331 new units of housing that is very much needed in our community. **18.1**

The Draft Environmental Impact Report also found that the redevelopment will have no significant impacts on the surrounding environment, thus creating a wonderful opportunity to get this project approved and built. Thank you for your time.

Sincerely,



(651)270-7977

#19-10

6039 Orange Grove
L.A. Ca 90036

COMMENT LETTER NO.19

Mr. William Lamborn
City Planner
Los Angeles City Planning
221 No. Figueroa Street, Suite 1350
Los Angeles, CA 90012

Re: Town & Country at 3rd and Fairfax

Dear Mr. Lamborn,

I am writing to express my support for the redevelopment of Town and Country at 3rd and Fairfax. The project team has worked closely with the local school to ensure that any potential impacts were discussed and remedied to the best of their ability. I find it admirable that the developer worked closely with school leaders and parents to address the needs of the school. This is a great example of planning a project with community input. **19.1**

I support the Town and Country project because it is a thoughtfully designed project that includes 331 units of housing, new retail, better traffic flow and parking configurations. As such, I ask the City of Los Angeles to accept my support for this project and please approve the Town and Country project.

.

Sincerely,

Annabella Williams
507 s ogden dr
310-994-6889

COMMENT LETTER NO. 20

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

April 19, 2021

Cesar Moreno
City of Los Angeles Department of City Planning
221 N. Figueroa St., Suite 1350
Los Angeles, CA 90012
Em: cesar.moreno@lacity.org

RE: 3rd and Fairfax Mixed-Use Project

Dear Mr. Moreno,

On behalf of the Southwest Regional Council of Carpenters ("**Commenter**" or "**Carpenter**"), my Office is submitting these comments on the City of Los Angeles' ("**City**" or "**Lead Agency**") Draft Environmental Impact Report ("**DEIR**") (SCH No. 2019029111) for the 3rd and Fairfax Mixed-Use Project which would involve the construction and operation of a new mixed-use development within the eastern portion of the existing Town & Country Shopping Center (Center or Project Site) that is currently developed with retail and commercial uses. ("**Project**").

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

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.

20.1

Commenters 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.

20.2

Commenters 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.

Commenters incorporates by reference all comments raising issues regarding the EIR 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). **20.2 cont.**

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.

The City should require the Applicant 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. **20.3**

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. 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.

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: **20.3 cont.**

> . . . 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]

The City should also require the Project to be built to standards exceeding the current 2019 California Green Building Code to mitigate the Project's environmental impacts and to advance progress towards the State of California's environmental goals. **20.4**

I. EXPERTS

This comment letter includes comments from air quality and greenhouse gas experts Matt Hagemann, P.G., C.Hg. and Paul Rosenfeld, Ph.D. concerning the DEIR. Their comments, attachments, and Curriculum Vitae ("CV") are attached hereto and are incorporated herein by reference. **20.5**

Matt Hagemann, P.G., C.Hg. ("Mr. Hagemann") has over 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA

[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

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, Mr. Hagemann also served as Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closer. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring.

For the past 15 years, Mr. Hagemann has worked as a founding partner with SWAPE (Soil/Water/Air Protection Enterprise). At SWAPE, Mr. Hagemann has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality, and greenhouse gas emissions.

Mr. Hagemann has a Bachelor of Arts degree in geology from Humboldt State University in California and a Masters in Science degree from California State University Los Angeles in California.

20.5 cont.

Paul Rosenfeld, Ph.D. ("Dr. Rosenfeld") is a principal environmental chemist at SWAPE. Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts on human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risks, 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, particular 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. **20.5 cont.**

Dr. Rosenfeld has a Ph.D. in soil chemistry from the University of Washington, M.S. in environmental science from U.C. Berkeley, and B.A. in environmental studies from U.C. Santa Barbara.

II. 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).[2] "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. **20.6**

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*

[2] The CEQA Guidelines, codified in Title 14 of the California Code of Regulations, section 15000 *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: **20.6 cont.**

> 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. CEQA Requires Revision and Recirculation of an Environmental Impact Report When Substantial Changes or New Information Comes to Light

Section 21092.1 of the California Public Resources Code requires that "[w]hen significant new information is added to an environmental impact report after notice has been given pursuant to Section 21092 … but prior to certification, the public agency shall give notice again pursuant to Section 21092, and consult again pursuant to Sections 21104 and 21153 before certifying the environmental impact report" in order to give the public a chance to review and comment upon the information. CEQA Guidelines § 15088.5.

Significant new information includes "changes in the project or environmental setting as well as additional data or other information" that "deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative)." CEQA Guidelines § 15088.5(a). Examples of significant new information requiring recirculation include "new significant environmental impacts from the project or from a new mitigation measure," "substantial increase in the severity of an environmental impact," "feasible project alternative or mitigation measure considerably different from others previously analyzed" as well as when "the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded." *Id.* **20.6 cont.**

An agency has an obligation to recirculate an environmental impact report for public notice and comment due to "significant new information" regardless of whether the agency opts to include it in a project's environmental impact report. *Cadiz Land Co. v. Rail Cycle* (2000) 83 Cal.App.4th 74, 95 [finding that in light of a new expert report disclosing potentially significant impacts to groundwater supply "the EIR should have been revised and recirculated for purposes of informing the public and governmental agencies of the volume of groundwater at risk and to allow the public and governmental agencies to respond to such information."]. If significant new information was brought to the attention of an agency prior to certification, an agency is required to revise and recirculate that information as part of the environmental impact report.

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.[3]

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. 20.7

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.

[3] 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.

20.7 cont.

- 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.[4]

20.7 cont.

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.

D. The DEIR's Mitigation Measures for Hazards and Hazardous Materials are Impermissibly Vague and Defer Critical Details

The DEIR improperly defers critical details of mitigation measures. Feasible mitigation measures for significant environmental effects must be set forth in an EIR for consideration by the lead agency's decision makers and the public before certification of the EIR and approval of a project. The formulation of mitigation measures

20.8

[4] *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.

generally cannot be deferred until after certification of the EIR and approval of a project. CEQA Guidelines § 15126.4(a)(1)(B) ("…[f]ormulation of mitigation measures should not be deferred until some future time.").

Deferring critical details of mitigation measures undermines CEQA's purpose as a public information and decision-making statute. "[R]eliance on tentative plans for future mitigation after completion of the CEQA process significantly undermines CEQA's goals of full disclosure and informed decisionmaking; and[,] consequently, these mitigation plans have been overturned on judicial review as constituting improper deferral of environmental assessment." *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal. App. 4th 70, 92 ("*Communities*"). As the Court noted in *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 307, "[a] study conducted after approval of a project will inevitably have a diminished influence on decision-making. Even if the study is subject to administrative approval, it is analogous to the sort of post hoc rationalization of agency actions that has been repeatedly condemned in decisions construing CEQA."

A lead agency's adoption of an EIR's proposed mitigation measure for a significant environmental effect that merely states a "generalized goal" to mitigate a significant effect without committing to any specific criteria or standard of performance violates CEQA by improperly deferring the formulation and adoption of enforceable mitigation measures. *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 670; *Communities*, 184 Cal.App.4th at 93 ("EIR merely proposes a generalized goal of no net increase in greenhouse gas emissions and then sets out a handful of cursorily described mitigation measures for future consideration that might serve to mitigate the [project's significant environmental effects."); cf. *Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1028-1029 (upheld EIR that set forth a range of mitigation measures to offset significant traffic impacts where performance criteria would have to be met, even though further study was needed and EIR did not specify which measures had to be adopted by city).].

20.8 cont.

The DEIR notes that Hancock Park Elementary School is located immediately south of the Project site at 408 S. Fairfax Ave., and "[t]here have been numerous technical reports prepared to analyze hazardous materials that are present in the existing structures and the soil conditions on the Development site." (DEIR, I-25.) Additionally, the proposed Project would demolish structures that contain asbestos and lead-based paints. (*Id.*) However, *MM-HAZ-1* is vague and defers crucial details

for that mitigation measures until after such time the Project has been approved. Specifically, *MM-HAZ-1* calls for the development of a Soil Management Plan (SMP) to address the aforementioned issues. The DEIR does not contain any such plan and only includes preliminary guidelines for a SMP and impacted soils mitigation. **20.8 cont.**

The DEIR needs to be revised and recirculated to include a SMP and detailed mitigation measures for addressing impacted soils in and around the Project site.

E. The DEIR Fails to Support Its Findings with Substantial Evidence

When new information is brought to light showing that an impact previously discussed in the DEIR but found to be insignificant with or without mitigation in the DEIR's analysis has the potential for a significant environmental impact supported by substantial evidence, the EIR must consider and resolve the conflict in the evidence. See *Visalia Retail, L.P. v. City of Visalia* (2018) 20 Cal. App. 5th 1, 13, 17; see also *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal. App. 4th 1099, 1109. While a lead agency has discretion to formulate standards for determining significance and the need for mitigation measures—the choice of any standards or thresholds of significance must be "based to the extent possible on scientific and factual data and an exercise of reasoned judgment based on substantial evidence. CEQA Guidelines § 15064(b); *Cleveland Nat'l Forest Found. v. San Diego Ass'n of Gov'ts* (2017) 3 Cal. App. 5th 497, 515; *Mission Bay Alliance v. Office of Community Inv. & Infrastructure* (2016) 6 Cal. App. 5th 160, 206. And when there is evidence that an impact could be significant, an EIR cannot adopt a contrary finding without providing an adequate explanation along with supporting evidence. *East Sacramento Partnership for a Livable City v. City of Sacramento* (2016) 5 Cal. App. 5th 281, 302. **20.9**

In addition, a determination that regulatory compliance will be sufficient to prevent significant adverse impacts must be based on a project-specific analysis of potential impacts and the effect of regulatory compliance. In *Californians for Alternatives to Toxics v. Department of Food & Agric.* (2005) 136 Cal. App. 4th 1, the court set aside an EIR for a statewide crop disease control plan because it did not include an evaluation of the risks to the environment and human health from the proposed program but simply presumed that no adverse impacts would occur from use of pesticides in accordance with the registration and labeling program of the California Department of Pesticide Regulation. *See also Ebbetts Pass Forest Watch v Department of Forestry & Fire Protection* (2008) 43 Cal. App. 4th 936, 956 (fact that Department of Pesticide Regulation had

assessed environmental effects of certain herbicides in general did not excuse failure to assess effects of their use for specific timber harvesting project). **20.9 cont.**

1. *The DEIR Fails to Support its Findings on Greenhouse Gas Impacts with Substantial Evidence.*

CEQA Guidelines § 15064.4 allow a lead agency to determine the significance of a project's GHG impact via a qualitative analysis (e.g., extent to which a project complies with regulations or requirements of state/regional/local GHG plans), and/or a quantitative analysis (e.g., using model or methodology to estimate project emissions and compare it to a numeric threshold). So too, CEQA Guidelines allow lead agencies to select what model or methodology to estimate GHG emissions so long as the selection is supported with substantial evidence, and the lead agency "should explain the limitations of the particular model or methodology selected for use." CEQA Guidelines § 15064.4(c).

CEQA Guidelines sections 15064.4(b)(3) and 15183.5(b) allow a lead agency to consider a project's consistency with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines §§ 15064.4(b)(3) and 15183.5(b)(1) make clear qualified GHG reduction plans or CAPs should include the following features: **20.10**

(1) **Inventory**: Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities (e.g., projects) within a defined geographic area (e.g., lead agency jurisdiction);

(2) **Establish GHG Reduction Goal**: Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;

(3) **Analyze Project Types**: Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;

(4) **Craft Performance Based Mitigation Measures**: Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-

by-project basis, would collectively achieve the specified emissions level;

(5) **Monitoring**: Establish a mechanism to monitor the CAP progress toward achieving said level and to require amendment if the plan is not achieving specified levels;

Collectively, the above-listed CAP features tie qualitative measures to quantitative results, which in turn become binding via proper monitoring and enforcement by the jurisdiction—all resulting in real GHG reductions for the jurisdiction as a whole, and the substantial evidence that the incremental contribution of an individual project is not cumulatively considerable. **20.10 cont.**

Here, the DEIR's analysis of greenhouse gas emissions impacts is not supported by substantial evidence for all of the reasons outlined in SWAPE's March 26, 2021 letter regarding their review of the DEIR[5]:

- The DEIR utilized an incorrect and unsubstantiated quantitative analysis of emissions; **20.11**
- The DEIR incorrect relied upon GHG reduction measures that are not binding and are only included as PDFs; **20.12**
- The DEIR failed to identify a potentially significant GHG impact when applying a 2.6 MT CO_2e/SP/year threshold per AEP guidance[6]; and **20.13**
- The DEIR failed to consider performance-based standards under CARB's 2017 Scoping Plan, incorrectly relied upon SCAG's Outdated RTP/SCS, and failed to consider performance-based standards under SCAG's latest RTP/SCS plan. **20.14**

(Exhibit D, 17-24.)

Additionally, the DEIR needs to consider and incorporate all of the feasible mitigation measures to reduce identified GHG impacts proposed by SWAPE. (Exhibit D, 24-31.) **20.15**

[5] March 21, 2021 SWAPE Letter to Greg Sonstein re Comments on 3rd and Fairfax Mixed-Use Project. Attached hereto as Exhibit D.

[6] "Beyond Newhall and 2020: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California." Association of Environmental Professionals (AEP), October 2016, available at: https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf, p. 40.

2. *The DEIR Fails to Support its Findings on Air Quality Impacts with Substantial Evidence.*

Second, the DEIR's Air Quality analysis is fundamentally flawed and not supported by substantial evidence for all the reasons outlined in SWAPE's comments, including: 20.16

- Use of unsubstantiated input parameters to estimate project emissions,
  - Unsubstantiated changes to area and architectural coating areas;
  - Failure to substantiate demolition; 20.17
  - Underestimation of vendor and worker trips; 20.18
  - Overestimation of existing operational vehicle trip rates; 20.19
  - Incorrect application of constriction-related mitigation measures; 20.20
  - Incorrect application of operational mitigation measures; and 20.21
  - Failing to adequately analyze diesel particulate matter health risk emissions and identify a potentially significant health risk impact. 20.22

(Exhibit D, 1-15.)

Additionally, as noted above, the DEIR fails to consider or include many feasible mitigation measures proposed by SWAPE to reduce significant air quality impacts. (DEIR, 24-31.) The DEIR needs to be revised and recirculated with a substantiated air quality analysis that includes all feasible mitigation measures to reduce impacts. 20.23

3. The DEIR Fails to Support its Findings on Energy with Substantial Evidence.

The DEIR concludes that the Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency based upon stated consistency with CALGreen code, Title 24 standards and the LA Green Building Code standards. (DEIR, IV.B-38-9.) However, the DEIR merely states it will be required to comply with the applicable and thus will not obstruct their implementation. The analysis is circular. The DEIR does not actually analyze or demonstrate consistency with these plans or standards. An impacts analysis and subsequent determination that is based upon compliance statements with appliable standards does not suffice for a reasoned analysis based upon substantial evidence. The DEIR needs to be revised and recirculated to include a consistency analysis with CALGreen code, Title 24 standards and the LA Green Building Code standards. 20.24

F. The DEIR Improperly Labels Mitigation Measures as "Project Design Features"

The DEIR improperly labels mitigation measures for "Project Design Features" or "PDFs" which the DEIR purports will "reduce the potential for environmental effects." (DEIR, I-146~149.)

Relying on the PDFs, the DEIR concludes in many instances that the Project's impacts are less than significant and that no mitigation is required.

However, it is established that "'[a]voidance, minimization and / or mitigation measure' . . . are not 'part of the project.' . . . compressing the analysis of impacts and mitigation measures into a single issue . . disregards the requirements of CEQA." *Lotus v. Department of Transportation* (2014) 223 Cal. App. 4th 645, 656.

When "an agency decides to incorporate mitigation measures into its significance determination, and relies on those mitigation measures to determine that no significant effects will occur, that agency must treat those measures as though there were adopted following a finding of significance." *Lotus, supra*, 223 Cal. App. 4th at 652 [citing CEQA Guidelines § 15091(a)(1) and Cal. Public Resources Code § 21081(a)(1). 20.25

By labeling mitigation measures as project design features, the City violates CEQA by failing to disclose "the analytic route that the agency took from the evidence to its findings." Cal. Public Resources Code § 21081.5; CEQA Guidelines § 15093; *Village Laguna of Laguna Beach, Inc. v. Board of Supervisors* (1982) 134 Cal. App. 3d 1022, 1035 (quoting *Topanga Assn for a Scenic Community v. County of Los Angeles* (1974) 11 Cal. 3d 506, 515).

The DEIR's use of "Project Design Features" further violates CEQA because such measures would not be included in the Project's Mitigation Monitoring and Reporting Program CEQA requires lead agencies to adopt mitigation measures that are fully enforceable and to adopt a monitoring and/or reporting program to ensure that the measures are implemented to reduce the Project's significant environmental effects to the extent feasible. PRC § 21081.6; CEQA Guidelines § 15091(d). Therefore, using Project Design Features in lieu of mitigation measures violates CEQA.

G. The Project Objectives are Unduly Narrow

Project objectives should not be so narrowly defined that they preclude consideration of reasonable alternatives for achieving the project's underlying purpose. *North Coast* 20.26

Rivers Alliance v Kawamura (2015) 243 Cal. App. 4th 647, 668. Inconsistency with only some project objectives may not be an appropriate basis to eliminate impact-reducing project alternatives from analysis in an EIR. See CEQA Guidelines § 15126.6(c), (f). The fact that a proposed alternative does not meet all of the Project Objectives is not an appropriate basis to eliminate impact-reducing alternatives from analysis in an EIR. CEQA Guidelines § 15126.6(c), (f). Objectives should be based on the underlying purpose of the project, rather than the specific nature of the proposed project. *Habitat & Watershed Caretakers v City of Santa Cruz* (2013) 213 Cal. App. 4th 1277, 1299 (holding that the project objective of implementing a settlement agreement relating to expansion of a University of California campus was too narrow and too focused on the nature of the Project).

Here, the EIR provides extremely narrow and specific objectives that essentially only describe the proposed Project, rather than the purpose of the project: **20.26 cont.**

- Objective 2 calls for "replacing a portion of the existing surface parking lot…" with a mixed-use development;
- Objective 3 calls for "replacing older commercial buildings with a modern mid-rise building"; and
- Objective 4 calls for "providing high-density multi-family housing."

(DEIR, II-17.)

Effectively, the above Project objectives so narrowly define the scope of the Project that it curtails any meaningful analysis or consideration of Project alternatives that could substantially reduce the Project's environmental impacts. A revised and recirculated DEIR should include amended Project objectives that do not circumscribe the EIR's Alternatives' analysis.

III. THE PROJECT VIOLATES THE STATE PLANNING AND ZONING LAW AS WELL AS THE CITY'S GENERAL PLAN

A. Background Regarding the State Planning and Zoning Law

Each California city and county must adopt a comprehensive, long-term general plan governing development. *Napa Citizens for Honest Gov. v. Napa County Bd. of Supervisors* (2001) 91 Cal. App.4th 342, 352, citing Gov. Code §§ 65030, 65300. The general plan sits at the top of the land use planning hierarchy (See *DeVita v. County of Napa* (1995) 9 Cal. App. 4th 763, 773), and serves as a "constitution" or "charter" for all future **20.27**

development. *Lesher Communications, Inc. v. City of Walnut Creek* (1990) 52 Cal. App. 3d 531, 540.

General plan consistency is "the linchpin of California's land use and development laws; it is the principle which infused the concept of planned growth with the force of law." See *Debottari v. Norco City Council* (1985) 171 Cal. App. 3d 1204, 1213.

State law mandates two levels of consistency. First, a general plan must be internally or "horizontally" consistent: its elements must "comprise an integrated, internally consistent and compatible statement of policies for the adopting agency." (See Gov. Code § 65300.5; *Sierra Club v. Bd. of Supervisors* (1981) 126 Cal. App. 3d 698, 704.) A general plan amendment thus may not be internally inconsistent, nor may it cause the general plan as a whole to become internally inconsistent. See *DeVita*, 9 Cal. App. 4th at 796 fn. 12.

Second, state law requires "vertical" consistency, meaning that zoning ordinances and other land use decisions also must be consistent with the general plan. (See Gov. Code § 65860(a)(2) [land uses authorized by zoning ordinance must be "compatible with the objectives, policies, general land uses, and programs specified in the [general] plan."]; see also *Neighborhood Action Group v. County of Calaveras* (1984) 156 Cal. App. 3d 1176, 1184.) A zoning ordinance that conflicts with the general plan or impedes achievement of its policies is invalid and cannot be given effect. See *Lesher*, 52 Cal. App. 3d at 544. **20.27 cont.**

State law requires that all subordinate land use decisions, including conditional use permits, be consistent with the general plan. See Gov. Code § 65860(a)(2); *Neighborhood Action Group*, 156 Cal. App. 3d at 1184.

A project cannot be found consistent with a general plan if it conflicts with a general plan policy that is "fundamental, mandatory, and clear," regardless of whether it is consistent with other general plan policies. See *Endangered Habitats League v. County of Orange* (2005) 131 Cal. App. 4th 777, 782-83; *Families Unafraid to Uphold Rural El Dorado County v. Bd. of Supervisors* (1998) 62 Cal. App. 4th 1332, 1341-42 ("*FUTURE*").

Moreover, even in the absence of such a direct conflict, an ordinance or development project may not be approved if it interferes with or frustrates the general plan's policies and objectives. See *Napa Citizens*, 91 Cal. App. 4th at 378-79; see also *Lesher*, 52 Cal. App. 3d at 544 (zoning ordinance restricting development conflicted with growth-oriented policies of general plan).

B. The DEIR Fails to Demonstrate Consistency with SCAG's RTP/SCS Plan

While the EIR conducts a consistency analysis between the Project and SCAG's 2016 RTP/SCS Plan, it fails to consider *many* of that plan's other goals and policies which apply at the project level, specifically those addressing the reduction of greenhouse gas emissions. The Southern California Association of Government's ("SCAG") 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy ("2016 RTP/SCS") and the California Air Resources Board ("CARB") 2017 Climate Change Scoping Plan ("2017 Scoping Plan") outline numerous measures for reducing Project GHG emissions which the EIR fails to consider.[7]

In September 2008, SB 375 (Gov. Code § 65080(b) et seq.) was instituted to help achieve AB 32 goals through strategies including requiring regional agencies to prepare a Sustainable Communities Strategy ("SCS") to be incorporated into their Regional Transportation Plan ("RTP"). The RTP links land use planning with the regional transportation system so that the region can grow smartly and sustainably, while also demonstrating how the region will meet targets set by CARB that reduce the per capita GHG emission from passenger vehicles in the region. **20.28**

In April 2012, SCAG adopted its 2012-2035 RTP/ SCS ("2012 RTP/SCS"), which proposed specific land use policies and transportation strategies for local governments to implement that will help the region achieve GHG emission reductions of 9 percent per capita in 2020 and 16 percent per capita in 2035. In April 2016, SCAG adopted the 2016-2040 RTP/SCS ("2016 RTP/SCS")[8], which incorporates and builds upon the policies and strategies in the 2012 RTP/SCS[9],that will help the region achieve GHG emission reductions that would reduce the region's per capita transportation emissions by eight percent by 2020 and 18 percent by 2035.[10]

For both the 2012 and 2016 RTP/SCS, SCAG prepared Program Environmental Impact Reports ("PEIR") that include Mitigation Monitoring and Reporting Programs ("MMRP") that list project-level environmental mitigation measures that directly and/or indirectly relate to a project's GHG impacts and contribution to the region's

[9] SCAG (Apr. 2016) 2016 RTP/SCS, p. 69, 75-115, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf (attached as Exhibit B).
[10] *Id.*, p. 8, 15, 153, 166.

GHG emissions.[11] These environmental mitigation measures serve to help local municipalities when identifying mitigation to reduce impacts on a project-specific basis that can and should be implemented when they identify and mitigate project-specific environmental impacts.[12]

20.28 cont.

The sections below outline applicable land use policies, transportation strategies, and project-level GHG measures identified in the 2012 and 2016 RTP/SCS and PEIRs which the EIR should consider in a revised consistency analysis (note that this is not an exhaustive list):

Land Use and Transportation

- Providing transit fare discounts[13];
- Implementing transit integration strategies[14]; and
- Anticipating shared mobility platforms, car-to-car communications, and automated vehicle technologies.[15]

20.29

GHG Emissions Goals[16]

- Reduction in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F of the State CEQA Guidelines,[17] such as:
  - Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal. The discussion should explain why certain measures were

[11] *Id.*, p. 116-124; see also SCAG 2012 RTP/SCS, supra fn. 38, p. 77-86.
[12] SCAG 2012 RTP/SCS, supra fn. 38, p. 77; see also SCAG 2016 RTP/SCS, supra fn. 41, p. 115.
[13] SCAG 2012 RTP/SCS, supra fn. 38, Tbls. 4.3 – 4.7; see also SCAG 2016 RTP/SCS, supra fn. 41, p. 75-114.
[14] *Id.*
[15] *Id.*
[16] SCAG 2012 RTP/SCS (Mar. 2012) Final PEIR MMRP, p. 6-2—6-14 (including mitigation measures ("MM") AQ3, BIO/OS3, CUL2, GEO3, GHG15, HM3, LU14, NO1, POP4, PS12, TR23, W9 [stating "[l]ocal agencies can and should comply with the requirements of CEQA to mitigate impacts to [the environmental] as applicable and feasible …[and] may refer to Appendix G of this PEIR for examples of potential mitigation to consider when appropriate in reducing environmental impacts of future projects." (Emphasis added)]), http://rtpscs.scag.ca.gov/Documents/peir/2012/final/Final2012PEIR.pdf; see also id., Final PEIR Appendix G (including MMs AQ1-23, GHG1-8, PS1-104, TR1-83, W1-62), http://rtpscs.scag.ca.gov/Documents/peir/2012/final/2012fPEIR_AppendixG_ExampleMeasures.pdf; SCAG 2016 RTP/SCS (Mar. 2016) Final PEIR MMRP, p. 11–63 (including MMs AIR-2(b), AIR-4(b), EN- 2(b), GHG-3(b), HYD-1(b), HYD-2(b), HYD-8(b), TRA-1(b), TRA-2(b), USS-4(b), USS-6(b)), http://scagrtpscs.net/Documents/2016/peir/final/2016fPEIR_ExhibitB_MMRP.pdf.
[17] CEQA Guidelines, Appendix F-Energy Conservation, http://resources.ca.gov/ceqa/guidelines/Appendix_F.html.

incorporated in the project and why other measures were dismissed.

- o The potential siting, orientation, and design to minimize energy consumption, including transportation energy.
- o The potential for reducing peak energy demand.
- o Alternate fuels (particularly renewable ones) or energy systems.
- o Energy conservation which could result from recycling efforts.

- Off-site measures to mitigate a project's emissions.
- Measures that consider incorporation of Best Available Control Technology (BACT) during design, construction and operation of projects to minimize GHG emissions, including but not limited to:
  - o Use energy and fuel-efficient vehicles and equipment;
  - o Deployment of zero- and/or near zero emission technologies;
  - o Use cement blended with the maximum feasible amount of flash or other materials that reduce GHG emissions from cement production;
  - o Incorporate design measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse;
  - o Incorporate design measures to reduce energy consumption and increase use of renewable energy;
  - o Incorporate design measures to reduce water consumption;
  - o Use lighter-colored pavement where feasible;
  - o Recycle construction debris to maximum extent feasible;
- Adopting employer trip reduction measures to reduce employee trips such as vanpool and carpool programs, providing end-of-trip facilities, and telecommuting programs.
- Designate a percentage of parking spaces for ride-sharing vehicles or high-occupancy vehicles, and provide adequate passenger loading and unloading for those vehicles;
- Land use siting and design measures that reduce GHG emissions, including:

20.29 cont.

- o Measures that increase vehicle efficiency, encourage use of zero and low emissions vehicles, or reduce the carbon content of fuels, including constructing or encouraging construction of electric vehicle charging stations or neighborhood electric vehicle networks, or charging for electric bicycles; and
- o Measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse.

Hydrology & Water Quality Goals

- Incorporate measures consistent in a manner that conforms to the standards set by regulatory agencies responsible for regulating water quality/supply requirements, such as:
  - o Reduce exterior consumptive uses of water in public areas, and should promote reductions in private homes and businesses, by shifting to drought-tolerant native landscape plantings(xeriscaping), using weather-based irrigation systems, educating other public agencies about water use, and installing related water pricing incentives.
  - o Promote the availability of drought-resistant landscaping options and provide information on where these can be purchased. Use of reclaimed water especially in median landscaping and hillside landscaping can and should be implemented where feasible.
  - o Implement water conservation best practices such as low-flow toilets, water-efficient clothes washers, water system audits, and leak detection and repair.
  - o Ensure that projects requiring continual dewatering facilities implement monitoring systems and long-term administrative procedures to ensure proper water management that prevents degrading of surface water and minimizes, to the greatest extent possible, adverse impacts on groundwater for the life of the project. Comply with appropriate building codes and standard practices including the Uniform Building Code.
  - o Maximize, where practical and feasible, permeable surface area in existing urbanized areas to protect water quality, reduce flooding, allow for groundwater recharge, and preserve wildlife habitat. Minimized new impervious surfaces to the greatest extent possible, including the use of in-lieu fees and off-site mitigation.

20.29 cont.

- o Avoid designs that require continual dewatering where feasible.
- o Where feasible, do not site transportation facilities in groundwater recharge areas, to prevent conversion of those areas to impervious surface.

- Incorporate measures consistent in a manner that conforms to the standards set by regulatory agencies responsible for regulating and enforcing water quality and waste discharge requirements, such as:
  - o Complete, and have approved, a Stormwater Pollution Prevention Plan ("SWPPP") before initiation of construction.
  - o Implement Best Management Practices to reduce the peak stormwater runoff from the project site to the maximum extent practicable.
  - o Comply with the Caltrans stormwater discharge permit as applicable; and identify and implement Best Management Practices to manage site erosion, wash water runoff, and spill control.
  - o Complete, and have approved, a Standard Urban Stormwater Management Plan, prior to occupancy of residential or commercial structures.
  - o Ensure adequate capacity of the surrounding stormwater system to support stormwater runoff from new or rehabilitated structures or buildings.
  - o Prior to construction within an area subject to Section 404 of the Clean Water Act, obtain all required permit approvals and certifications for construction within the vicinity of a watercourse (e.g., Army Corps § 404 permit, Regional Waterboard § 401 permit, Fish & Wildlife § 401 permit).
  - o Where feasible, restore or expand riparian areas such that there is no net loss of impervious surface as a result of the project.
  - o Install structural water quality control features, such as drainage channels, detention basins, oil and grease traps, filter systems, and vegetated buffers to prevent pollution of adjacent water resources by polluted runoff where required by applicable urban stormwater runoff discharge permits, on new facilities.
  - o Provide structural stormwater runoff treatment consistent with the applicable urban stormwater runoff permit where Caltrans is the operator, the statewide permit applies.

20.29 cont.

- o Provide operational best management practices for street cleaning, litter control, and catch basin cleaning are implemented to prevent water quality degradation in compliance with applicable stormwater runoff discharge permits; and ensure treatment controls are in place as early as possible, such as during the acquisition process for rights-of-way, not just later during the facilities design and construction phase.
- o Comply with applicable municipal separate storm sewer system discharge permits as well as Caltrans' stormwater discharge permit including long-term sediment control and drainage of roadway runoff.
- o Incorporate as appropriate treatment and control features such as detention basins, infiltration strips, and porous paving, other features to control surface runoff and facilitate groundwater recharge into the design of new transportation projects early on in the process to ensure that adequate acreage and elevation contours are provided during the right-of-way acquisition process.
- o Design projects to maintain volume of runoff, where any downstream receiving water body has not been designed and maintained to accommodate the increase in flow velocity, rate, and volume without impacting the water's beneficial uses. Pre-project flow velocities, rates, volumes must not be exceeded. This applies not only to increases in stormwater runoff from the project site, but also to hydrologic changes induced by flood plain encroachment. Projects should not cause or contribute to conditions that degrade the physical integrity or ecological function of any downstream receiving waters.

20.29 cont.

- o Provide culverts and facilities that do not increase the flow velocity, rate, or volume and/or acquiring sufficient storm drain easements that accommodate an appropriately vegetated earthen drainage channel.
- o Upgrade stormwater drainage facilities to accommodate any increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce flow velocities, including expansion and restoration of wetlands and riparian buffer areas. System designs shall be completed to eliminate increases in peak flow rates from current levels.

o Encourage Low Impact Development ("LID") and incorporation of natural spaces that reduce, treat, infiltrate and manage stormwater runoff flows in all new developments, where practical and feasible.

- Incorporate measures consistent with the provisions of the Groundwater Management Act and implementing regulations, such as:

  o For projects requiring continual dewatering facilities, implement monitoring systems and long-term administrative procedures to ensure proper water management that prevents degrading of surface water and minimizes, to the greatest extent possible, adverse impacts on groundwater for the life of the project, Construction designs shall comply with appropriate building codes and standard practices including the Uniform Building Code.

  o Maximize, where practical and feasible, permeable surface area in existing urbanized areas to protect water quality, reduce flooding, allow for groundwater recharge, and preserve wildlife habitat. Minimize to the greatest extent possible, new impervious surfaces, including the use of in-lieu fees and off-site mitigation.

  o Avoid designs that require continual dewatering where feasible.

  o Avoid construction and siting on groundwater recharge areas, to prevent conversion of those areas to impervious surface.

  o Reduce hardscape to the extent feasible to facilitate groundwater recharge as appropriate.

- Incorporate mitigation measures to ensure compliance with all federal, state, and local floodplain regulations, consistent with the provisions of the National Flood Insurance Program, such as:

  o Comply with Executive Order 11988 on Floodplain Management, which requires avoidance of incompatible floodplain development, restoration and preservation of the natural and beneficial floodplain values, and maintenance of consistency with the standards and criteria of the National Flood Insurance Program.

  o Ensure that all roadbeds for new highway and rail facilities be elevated at least one foot above the 100-year base flood elevation. Since alluvial fan flooding is not often identified on FEMA flood maps, the risk of alluvial fan flooding

20.29 cont.

should be evaluated and projects should be sited to avoid alluvial fan flooding. Delineation of floodplains and alluvial fan boundaries should attempt to account for future hydrologic changes caused by global climate change.

Transportation, Traffic, and Safety

- Institute teleconferencing, telecommute and/or flexible work hour programs to reduce unnecessary employee transportation.
- Create a ride-sharing program by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading for ride sharing vehicles, and providing a web site or message board for coordinating rides.
- Provide a vanpool for employees.
- Provide a Transportation Demand Management (TDM) plan containing strategies to reduce on-site parking demand and single occupancy vehicle travel. The TDM shall include strategies to increase bicycle, pedestrian, transit, and carpools/vanpool use, including:
  - o Inclusion of additional bicycle parking, shower, and locker facilities that exceed the requirement.
  - o Direct transit sales or subsidized transit passes.
  - o Guaranteed ride home program.
  - o Pre-tax commuter benefits (checks).
  - o On-site car-sharing program (such as City Car Share, Zip Car, etc.).
  - o On-site carpooling program.
  - o Distribution of information concerning alternative transportation options.
  - o Parking spaces sold/leased separately.
  - o Parking management strategies; including attendant/valet parking and shared parking spaces.
- Promote ride sharing programs e.g., by designating a certain percentage of parking spaces for high-occupancy vehicles, providing larger parking spaces to accommodate vans used for ride-sharing, and designating adequate passenger

20.29 cont.

loading and unloading and waiting areas.

- Encourage the use of public transit systems by enhancing safety and cleanliness on vehicles and in and around stations, providing shuttle service to public transit, offering public transit incentives and providing public education and publicity about public transportation services.
- Build or fund a major transit stop within or near transit development upon consultation with applicable CTCs.
- Work with the school districts to improve pedestrian and bike access to schools and to restore or expand school bus service using lower-emitting vehicles.
- Purchase, or create incentives for purchasing, low or zero-emission vehicles.
- Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles.
- Promote ride sharing programs, if determined feasible and applicable by the Lead Agency, including:
  - o Designate a certain percentage of parking spaces for ride-sharing vehicles.
  - o Designate adequate passenger loading, unloading, and waiting areas for ride-sharing vehicles.
  - o Provide a web site or message board for coordinating shared rides.
  - o Encourage private, for-profit community car-sharing, including parking spaces for car share vehicles at convenient locations accessible by public transit.
  - o Hire or designate a rideshare coordinator to develop and implement ridesharing programs.
- Support voluntary, employer-based trip reduction programs, if determined feasible and applicable by the Lead Agency, including:
  - o Provide assistance to regional and local ridesharing organizations.
  - o Advocate for legislation to maintain and expand incentives for employer ridesharing programs.
  - o Require the development of Transportation Management Associations for large employers and commercial/ industrial complexes.

20.29 cont.

o Provide public recognition of effective programs through awards, top ten lists, and other mechanisms.

- Implement a "guaranteed ride home" program for those who commute by public transit, ridesharing, or other modes of transportation, and encourage employers to subscribe to or support the program.
- Encourage and utilize shuttles to serve neighborhoods, employment centers and major destinations.
- Create a free or low-cost local area shuttle system that includes a fixed route to popular tourist destinations or shopping and business centers.
- Work with existing shuttle service providers to coordinate their services.
- Facilitate employment opportunities that minimize the need for private vehicle trips, such as encourage telecommuting options with new and existing employers, through project review and incentives, as appropriate.
- Organize events and workshops to promote GHG-reducing activities.
- Implement a Parking Management Program to discourage private vehicle use, including:

  o Encouraging carpools and vanpools with preferential parking and a reduced parking fee.
  o Institute a parking cash-out program or establish a parking fee for all single-occupant vehicles.

20.29 cont.

Utilities & Service Systems

- Integrate green building measures consistent with CALGreen (Title 24, part 11), U.S. Green Building Council's Leadership in Energy and Environmental Design, energy Star Homes, Green Point Rated Homes, and the California Green Builder Program into project design including, but not limited to the following:

  o Reuse and minimization of construction and demolition (C&D) debris and diversion of C&D waste from landfills to recycling facilities.

  o Inclusion of a waste management plan that promotes maximum C&D diversion.

- o Development of indoor recycling program and space.
- o Discourage exporting of locally generated waste outside of the SCAG region during the construction and implementation of a project. Encourage disposal within the county where the waste originates as much as possible. Promote green technologies for long-distance transport of waste (e.g., clean engines and clean locomotives or electric rail for waste-by-rail disposal systems) and consistency with SCAQMD and 2016 RTP/SCS policies can and should be required.
- o Develop ordinances that promote waste prevention and recycling activities such as: requiring waste prevention and recycling efforts at all large events and venues; implementing recycled content procurement programs; and developing opportunities to divert food waste away from landfills and toward food banks and composting facilities.
- o Develop alternative waste management strategies such as composting, recycling, and conversion technologies.
- o Develop and site composting, recycling, and conversion technology facilities that have minimum environmental and health impacts.
- o Require the reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).
- o Integrate reuse and recycling into residential industrial, institutional and commercial projects.
- o Provide recycling opportunities for residents, the public, and tenant businesses.
- o Provide education and publicity about reducing waste and available recycling services.
- o Implement or expand city or county-wide recycling and composting programs for residents and businesses. This could include extending the types of recycling services offered (e.g., to include food and green waste recycling) and providing public education and publicity about recycling services.

20.29 cont.

As the above tables indicate, the EIR fails to mention or demonstrate consistency with all the above listed measures and strategies of the SCAG RTP/SCS Plan. Thus, the EIR fails to demonstrate the Project is actually consistent with the applicable

RTP/SCS plan.

An amended and recirculated DEIR needs to include a consistency analysis with not only with general goals and planning level policies of the RTP plan, but all goals and policies which apply to this Project, at a project level. **20.29 cont.**

C. The DEIR Fails to Demonstrate Consistency with the State Housing Law's Regional Housing Needs Assessment Requirements and the City's Obligations to Fulfill those Requirements in its Housing Element

State law requires that jurisdictions provide their fair share of regional housing needs and adopt a general plan for future growth (California Government Code Section 65300). The California Department of Housing and Community Development (HCD) is mandated to determine state-wide housing needs by income category for each Council of Governments (COG) throughout the state. The housing need is determined based on four broad household income categories: very low (households making less than 50 percent of median family income), low (50 to 80 percent of median family income), moderate (80 to 120 percent of median family income), and above moderate (more than 120 percent of median family income). The intent of the future needs allocation by income groups is to relieve the undue concentration of very low and low-income households in a single jurisdiction and to help allocate resources in a fair and equitable manner. **20.30**

CEQA requires the DEIR analyze the Project's consistency with the State's housing goals. CEQA requires that an environmental document identify and discuss the significant effects of a Project, alternatives and how those significant effects can be mitigated or avoided. CEQA Guidelines § 15126.2; PRC §§ 21100(b)(1), 21002.1(a). A Court "[w]hen reviewing whether a discussion is sufficient to satisfy CEQA, . . . the EIR (1) includes sufficient detail to enable those who did not participate in its preparation to understand and to consider meaningfully the issues the proposed project raises [citation omitted], and (2) makes a reasonable effort to substantively connect a project's air quality impacts to likely health consequences." (*Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502, 510 [citing *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 405.]; see also PRC §§ 21002.1(e), 21003(b).) The Court may determine whether a CEQA environmental document sufficiently discloses information required by CEQA de novo as "noncompliance with the information disclosure provisions" of CEQA is a failure to proceed in a manner

required by law. (PRC § 21005(a); see also *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502, 515.)

SCAG is the COG for Los Angeles County and has determined that the City's RHNA for the 1/1/2014 - 10/1/2021 planning period is 82,002 housing units including 10,213 units for extremely-low income residents, 10,213 units for very-low income residents, 12,435 units for low-income residents, and 13,728 units for moderate income residents. (DEIR, IV.G-7.) According to the California Dept. of Housing and Community Development's latest available reporting data,[18] the City has yet to build thousands of allocated affordable units under the *only the fifth cycle* RHNA numbers. The Project must incorporate an adequate number of affordable housing units across all income categories if the City has any hope in meeting its RHNA obligations under state housing law. **20.30 cont.**

The DEIR postulates that the 331 additional units the Project adds to the City's housing stock will help the City meet its RHNA allocation—yet the Project fails to demonstrate that *any* of the units it will provide will be affordable to City residents in extremely low income, very low income, low income, or even moderate income categories. The average market rate for even a studio apartment in the Project area is nearly $2,000/month.[19] RHNA requires the City to meet the housing needs of all City residents—not just those residents in the above moderate income category.

The DEIR should be revised and recirculated with an affordable housing component.

IV. **CONCLUSION**

Commenters request that the City deny the Project's proposed Site Plan Review and any other discretionary approvals the City finds necessary and order the revision and recirculation of the Project's environmental impact report to address the aforementioned concerns. **20.31**

[18] California Dept. of Housing and Community Development, Regional Housing Needs Allocation and Housing Elements, Annual Progress Reports (APR), Dec. 9, 2020 APR. Available at https://www.hcd.ca.gov/community-development/housing-element/index.shtml.

[19] See, e.g., https://www.apartments.com/malls/ca/los-angeles/the-grove-at-farmers-market/19ns3e7/3/?bb=qu35mo82mNh_05N.

Please contact my Office if you have any questions or concerns. **20.31 cont.**

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);

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

March 26, 2021 SWAPE Letter to Greg Sonstein re Comments on the 3rd and Fairfax Mixed-Use Project (Exhibit D).

EXHIBIT A

COMMENT LETTER NO. 20A

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

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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. **20A.1**

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] **20A.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]

20A.2 cont.

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

20A.3

[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]

20A.3 cont.

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.

20A.3 cont.

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%***

20A.4

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.

20A.5

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

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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:

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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.

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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.

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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.

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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.

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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.

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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

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Santa Monica, California 90401
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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.

EXHIBIT D

COMMENT LETTER NO. 20B

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

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March 26, 2021

Greg Sonstein, Esq.
Mitchell M. Tsai, Attorney at Law
155 South El Molino Avenue Suite 104
Pasadena, CA 91101

Subject: Comments on 3rd and Fairfax Mixed-Use Project (SCH No. 2019029111)

Dear Mr. Sonstein,

We have reviewed the February 2021 Draft Environmental Impact Report ("DEIR") for the 3rd and Fairfax Mixed-Use Project ("Project") located in the City of Los Angeles ("City"). The Project proposes to demolish of 151,048-SF of existing retail space and 70,000-SF of asphalt debris, as well as construct 331 multi-family dwelling units, 83,994-SF of commercial space, 37,225-SF of open space, and 996 parking spaces on the 7.51-acre site. **20B.1**

Our review concludes that the DEIR fails to adequately evaluate the Project's air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated EIR should be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the project may have on the surrounding environment. **20B.2**

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DEIR's air quality analysis relies on emissions calculated with CalEEMod.2016.3.2 (p. IV.A-38).[1] 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 **20B.3**

[1] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4.

be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters are utilized in calculating the Project's air pollutant emissions and make known which default values are changed as well as provide justification for the values selected.

When reviewing the Project's CalEEMod output files, provided in the Air Quality Modeling Worksheets ("AQ Modeling Worksheets") as Appendix C.1 and the Greenhouse Gas Emissions ("GHG Analysis") as Appendix E to the DEIR, we found that several model inputs were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions may be underestimated.

20B.3 cont.

Unsubstantiated Changes to Area and Architectural Coating Areas

Review of the CalEEMod output files demonstrates that the "3rd and Fairfax Mixed-Use Project" and "3rd and Fairfax Mixed-Use Project – Without GHG Reduction Feature and Mitigation Measures" models include several reductions to the default architectural and area coating areas for the proposed parking land use (see excerpt below) (Appendix C.1, pp. 37-38, 73-74; Appendix E, pp. 27-28).

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	23,904.00	22,872.00
tblAreaCoating	Area_Parking	23904	22872

Furthermore, review of the CalEEMod output files demonstrates that the "3rd and Fairfax Mixed-Use Project-2023 With Mitigation" model includes a reduction to the default area coating area for the proposed parking land use (see excerpt below) (Appendix C.1, pp. 109; Appendix E, pp. 74).

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	23904	22872

20B.4

As you can see in the excerpts above, the architectural and area coating areas for the proposed parking land use were each reduced from the default value of 23,904- to 22,872-SF. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[2] However, no justification is provided by the "User Entered Comments and Non-Default Data" table. Furthermore, regarding the Project's area-source emissions, the DEIR states:

> "Area sources include emissions from consumer products, landscape equipment and architectural coatings. *No changes were made to the default area source emissions*" (see excerpt below) (p. IV.C-43).

As the excerpt above demonstrates, the DEIR claims that no changes were made to the default area-source emissions. As such, the changes to the default architectural and area coating areas are incorrect.

[2] CalEEMod User Guide, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 2, 9.

These inconsistencies present an issue, as CalEEMod uses architectural and area coating areas to calculate ROG emissions associated with painting and reapplication.[3] By including unsubstantiated reductions to the default architectural and area coating areas, the models underestimate the Project's area-source emissions and should not be relied upon to determine Project significance.

20B.4 cont.

Failure to Substantiate Demolition

According to the CalEEMod User's Guide, "[h]aul trips are based on the amount of material that is demolished, imported or exported assuming a truck can handle 16 cubic yards of material."[4] Therefore, the air model calculates a default number of hauling trips based upon the amount of demolition material inputted into the model. According to the DEIR, the Project proposes to demolish 151,048-SF of existing retail uses and 70,000-SF of asphalt debris (p. II-41). However, the DEIR fails to provide the tons of demolition resulting from the removal of the existing retail uses and asphalt. As such, the models should have included at least 221,048-SF of demolition.[5] When correctly inputting 221,048-SF of building demolition, the model calculates a default demolition hauling trip number of 1,005 trips. However, review of the CalEEMod output files demonstrates that the "3rd and Fairfax Mixed-Use Project" and "3rd and Fairfax Mixed-Use Project – Without GHG Reduction Feature and Mitigation Measures" models calculated a ***default*** value of 841 demolition hauling trips, which was artificially increased to 2,008 trips (see excerpts below) (Appendix C.1, pp. 39, 47, 75, 83; Appendix E, pp. 29, 39).

20B.5

Table Name	Column Name	Default Value	New Value
tblTripsAndVMT	HaulingTripNumber	841.00	2,008.00

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number
Pre-Demolition Abatement	3	8.00	0.00	10.00
Demolition	6	15.00	0.00	2,008.00
Grading	11	60.00	0.00	13,750.00
Building Construction	11	150.00	112.00	0.00
Architectural Coating	6	87.00	0.00	0.00
Paving	8	20.00	0.00	0.00

[3] CalEEMod User Guide, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 35, 42.
[4] http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14
[5] Calculated: (151,048-SF of retail demolition) + (70,000-SF of asphalt demolition) = 221,048-SF of demolition.

As you can see in the excerpts above, the ***default*** number of demolition hauling trips was underestimated by 164 trips.[6] As such, we know that the model fails to include the total amount of demolition required for the Project (p. II-41).

This underestimation presents an issue, as the total amount of demolition material is used by CalEEMod to determine emissions associated with this phase of construction; the three primary operations that generate dust emission during the demolition phase are mechanical or explosive dismemberment, site removal of debris, and on-site truck traffic on paved and unpaved road.[7] By failing to include the total amount of required demolition, the models underestimate emissions associated with fugitive dust and site removal and should not be relied upon to determine Project significance.

20B.5 cont.

Underestimated Number of Vendor and Worker Trips

According to the DEIR:

> "During peak construction activity, it is estimated that approximately 150 construction worker round-trips per day would be generated (150 inbound and 150 outbound)" (p. II-45).

As the excerpt above demonstrates, the building construction phase would generate 300 one-way trips. As such, the model should have included 300 building construction worker trips.

Regarding the Project's demolition worker trips, the DEIR states: "it is estimated that 15 trips per day would [be] generated by construction workers" (p. II-41). Furthermore, regarding the Project's architectural coating and paving worker trips, the DEIR states: "[t]he architectural phase would generate approximately 87 worker trips per day, while the paving phase would generate 20 worker trips per day" (p. II-45). Finally, the DEIR indicates that "112 trips by miscellaneous delivery trucks" would be required for building construction (p. II-45). However, the DEIR fails to specify whether these worker and vendor trip numbers represent one-way trips or roundtrips. As such, assuming the trip numbers represent roundtrips in order to conduct the most conservative analysis, the model should have included 30 demolition worker trips, 174 architectural coating worker trips, and 40 paving worker trips, as well as 224 building construction vendor trips.

20B.6

However, review of the CalEEMod output files demonstrates that the "3rd and Fairfax Mixed-Use Project" and "3rd and Fairfax Mixed-Use Project – Without GHG Reduction Feature and Mitigation Measures" models include only 15 demolition worker trips, 150 building construction worker trips, 87 architectural coating worker trips, 20 paving worker trips, and 112 building construction vendor trips (see excerpt below) (Appendix C.1, pp. 47, 83; Appendix E, pp. 39).

[6] Calculated: (1,005 demolition hauling trips) – (841 trips demolition hauling trips) = 164 demolition hauling trips.
[7] CalEEMod User Guide, Appendix A, p. 11, *available at:* http://www.caleemod.com/

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number
Pre-Demolition Abatement	3	8.00	0.00	10.00
Demolition	6	15.00	0.00	2,008.00
Grading	11	60.00	0.00	13,750.00
Building Construction	11	150.00	112.00	0.00
Architectural Coating	6	87.00	0.00	0.00
Paving	8	20.00	0.00	0.00

20B.6 cont.

As you can see in the excerpt above, worker trips during the building construction phase are underestimated by 150 trips. Furthermore, worker trips during the demolition phase, architectural coating phase, and paving phase, as well as vendor trips during the building construction phase, are potentially underestimated by 15, 87, 20, and 112 trips, respectively. As the DEIR fails to specify whether the provided worker and vendor trips represent one-way or two-way trips, the worker and vendor trip numbers inputted into the model are potentially underestimated. By including underestimated worker and vendor trip numbers, the models underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

Overestimated Existing Operational Vehicle Trip Rates

According to the CEQA Transportation Analysis ("Transportation Analysis"), provided by Appendix H.1 to the DEIR, the existing land uses generate approximately 5,232 daily vehicle trips (see excerpt below) (Appendix H.1, p. 34).

Table 7-1
PROJECT TRIP GENERATION [1]

12-Jun-19

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL
Existing Site								
Commercial Retail [4]	(144,963) GLSF	(5,472)	(84)	(52)	(136)	(265)	(287)	(552)
Restaurant [5]	(6,085) GSF	(683)	(33)	(27)	(60)	(37)	(22)	(59)
Subtotal		(6,155)	(117)	(79)	(196)	(302)	(309)	(611)
Existing Transit Trips [6]								
Commercial Retail (15%)		821	13	8	21	40	43	83
Restaurant (15%)		102	5	4	9	6	3	9
Subtotal		923	18	12	30	46	46	92
Subtotal Existing Driveway Trips		**(5,232)**	**(99)**	**(67)**	**(166)**	**(256)**	**(263)**	**(519)**

20B.7

As such, the Project's emissions modeling should have included trip rates that reflect the estimated number of average existing daily vehicle trips. However, review of the CalEEMod output files demonstrates that the "3rd and Fairfax Mixed-Use Project - Existing Conditions" model includes 6,207 weekday trips and 7,501 Saturday trips (see excerpt below) (Appendix C.1, pp. 13; Appendix E, pp. 13).

	Average Daily Trip Rate		
Land Use	Weekday	Saturday	Sunday
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00
Regional Shopping Center	0.00	0.00	0.00
User Defined Commercial	4,696.00	5,669.00	2996.00
User Defined Parking	1,511.00	1,832.00	928.00
Total	6,207.00	7,501.00	3,924.00

20B.7 cont.

As you can see in the excerpt above, the average weekday and Saturday vehicle trip numbers for the existing land uses were overestimated by approximately 975- and 2,269-trips, respectively. As such, the trip rates inputted into the model are overestimated and inconsistent with the information provided in the Transportation Analysis.

These inconsistencies present an issue, as CalEEMod uses the operational vehicle trip rates to calculate the emissions associated with the operational on-road vehicles.[8] By including overestimated operational vehicle trip rates, the model overestimates the mobile-source operational emissions associated with the existing land uses, resulting in an *underestimation of the net change in emissions associated with the proposed Project*. As a result, the model should not be relied upon to determine Project significance.

Incorrect Application of Construction-Related Mitigation Measures

Review of the CalEEMod output files demonstrates that the "3rd and Fairfax Mixed-Use Project," "3rd and Fairfax Mixed-Use Project – Without GHG Reduction Feature and Mitigation Measures," and "3rd and Fairfax Mixed-Use Project-2023 With Mitigation" models include the following construction-related mitigation measure (see excerpt below) (Appendix C.1, pp. 47, 83, 117, 137; Appendix H, pp. 39, 83):

3.1 Mitigation Measures Construction

Water Exposed Area

20B.8

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[9] According to the "User Entered Comments and Non-Default Data" table, the justification provided for the inclusion of this measure is:

[8] "CalEEMod User Guide." CAPCOA, November 2017, *available at:* http://www.caleemod.com/, p. 35.
[9] CalEEMod User Guide, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 2, 9.

> "Mitigation assumes compliance with AQMD Rule 403 (dust suppression) with a watering frequency of 3x a day (=61% reduction in fugitive dust)" (Appendix C.1, pp. 37, 73, 109; Appendix E, pp. 27, 74).

Furthermore, the DEIR states:

> "[T]the Proposed Project would comply with the applicable dust control measures contained in SCAQMD Rule 403 regarding fugitive dust during each phase of development. Rule 403 requirements include, but are not limited to, the following:
>
> - Water shall be applied to disturbed soil in sufficient quantities to prevent the generation of visible dust plumes…" (p. IV.A-60 – IV.A-61).

However, the inclusion of the above-mentioned construction-related mitigation measure remains unsubstantiated for two reasons.

First, simply because the DEIR states that the Project would comply with SCAQMD Rule 403 does not justify the inclusion of the above-mentioned construction-related mitigation measure in the model. According to the Association of Environmental Professionals' ("AEP") *CEQA Portal Topic Paper* on mitigation measures:

> "By definition, *mitigation measures are not part of the original project design*. Rather, mitigation measures are actions taken by the lead agency to reduce impacts to the environment resulting from the original project design. Mitigation measures are identified by the lead agency after the project has undergone environmental review and are *above-and-beyond existing laws, regulations, and requirements* that would reduce environmental impacts" (emphasis added).[10]

20B.8 cont.

As you can see in the excerpt above, mitigation measures "are not part of the original project design" and are intended to go "above-and-beyond" existing regulatory requirements. Thus, the inclusion of the above-mentioned construction-related mitigation measure remains unsupported, despite the Project's purported compliance with SCAQMD Rule 403.

Second, regarding the Project's construction-related air quality impacts, the DEIR states:

> "Project-level and cumulative construction-related impacts with regard to air quality would be less than significant with adherence to all applicable SCAQMD rules and regulations. Therefore, *no mitigation measures are required*" (emphasis added) (p. IV.A-68).

As demonstrated above, the DEIR claims that no mitigation measures are required. However, while the DEIR concludes that *no* mitigation measures are required to reduce emissions to less-than-significant levels, the DEIR's modeling incorporates a mitigation measure to reduce emissions to less-than-significant levels. If the DEIR's conclusion was correct, the above-mentioned construction-related

[10] "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 5.

mitigation measure should not have been included in the model. By incorrectly including a construction-related mitigation measure, the model underestimates the Project's construction-related emissions and should not be relied upon to determine Project significance.

20B.8 cont.

Incorrect Application of Operational Mitigation Measures

Review of the CalEEMod output files demonstrates that the "3rd and Fairfax Mixed-Use Project," "3rd and Fairfax Mixed-Use Project – Without GHG Reduction Feature and Mitigation Measures," and "3rd and Fairfax Mixed-Use Project-2023 With Mitigation" models include the following energy-, area-, water-, and waste-related operational mitigation measures (see excerpt below) (Appendix C.1, pp. 47, 83, 117, 137; Appendix H, pp. 39, 83):

Energy-Related Mitigation Measures:

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

Area-Related Mitigation Measures:

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior
Use Low VOC Paint - Residential Exterior
Use Low VOC Paint - Non-Residential Interior
Use Low VOC Paint - Non-Residential Exterior
No Hearths Installed

Water-Related Mitigation Measure:

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Waste-Related Mitigation Measure:

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

20B.9

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[11] According to the "User Entered Comments and Non-Default Data" table, the justifications provided for the inclusion of the energy-, area-, water-, and waste-related operational mitigation measures are: "Energy Star Rated appliances required per LA Green Building Code," "Application of low-

[11] CalEEMod User Guide, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 2, 9.

VOC architectural coatings per LA Green Building Code," "Water conservation measures are mandatory per compliance with the LA Green Building Code," and "Solid waste recycling program is mandatory under the LA Green Building Code," respectively (Appendix C.1, pp. 37, 73, 109; Appendix E, pp. 27, 74).

However, the inclusion of the above-mentioned operational mitigation measures remains unsubstantiated for two reasons.

First, simply because the DEIR states that the Project would comply with LA Green Building Code does not justify the inclusion of the above-mentioned operational mitigation measures in the model. According to the Association of Environmental Professionals' ("AEP") *CEQA Portal Topic Paper* on mitigation measures:

> "By definition, *mitigation measures are not part of the original project design*. Rather, mitigation measures are actions taken by the lead agency to reduce impacts to the environment resulting from the original project design. Mitigation measures are identified by the lead agency after the project has undergone environmental review and are *above-and-beyond existing laws, regulations, and requirements* that would reduce environmental impacts" (emphasis added).[12]

20B.9 cont.

As you can see in the excerpt above, mitigation measures "are not part of the original project design" and are intended to go "above-and-beyond" existing regulatory requirements. Thus, the inclusion of the above-mentioned operational mitigation measure remains unsupported, despite the Project's purported compliance with the LA Green Building Code.

Second, regarding the Project's operational air quality impacts, the DEIR states:

> "Project-level and cumulative construction-related impacts with regard to air quality would be less than significant with adherence to all applicable SCAQMD rules and regulations. Therefore, no mitigation measures are required" (p. IV.A-68).

As demonstrated above, the DEIR claims that *no* mitigation measures would be required. However, while the DEIR concludes that *no* mitigation measures would be required to reduce emissions to less-than-significant levels, the DEIR's modeling incorporates mitigation measures to reduce emissions to less-than-significant levels. If the DEIR's conclusion was correct, the above-mentioned operational mitigation measures should not have been included in the model. By incorrectly including several energy-, area-, water-, and waste-related operational mitigation measures without properly committing to their implementation, the model may underestimate the Project's operational emissions and should not be relied upon to determine Project significance.

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

20B.10

The DEIR concludes that the proposed Project would have a less-than-significant health risk impact, based on a localized significance threshold ("LST") analysis, without conducting a quantified construction

[12] "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 5.

or operational health risk analysis ("HRA") (p. IV.A-64 – IV.A-65, IV.A-67 – IV.A-68). Specifically, regarding potential health risk impacts associated with Project construction, the DEIR states:

> "Given the short-term construction schedule of approximately 32 months, the Proposed Project would not result in a long-term (i.e., 70-year) source of TAC emissions. Additionally, the SCAQMD CEQA guidance does not require a health risk assessment (HRA) for short-term construction emissions. It is, therefore, not necessary to evaluate long-term cancer impacts from construction activities which occurs over a relatively short duration. In addition, there would be no residual emissions or corresponding individual cancer risk after construction. ***As such, Project-related TAC impacts during construction would be less than significant***" (p. IV.A-64 - IV.A-65).

As demonstrated above, the DEIR concludes that the Project would result in a less-than-significant impact with respect to construction-related toxic air contaminants ("TACs"), because construction activities occur over a short duration and would not result in a long-term source of TAC emissions. Furthermore, regarding potential health risk impacts associated with Project operation, the DEIR states:

> "The Proposed Project consists of a mixed-use development containing multi-family residential units and commercial uses that would not support any land uses or activities that would involve the use, storage, or processing of carcinogenic or non-carcinogenic TACs. The primary sources of potential air toxics associated with project operations include diesel particulate matter from delivery trucks (e.g., truck traffic on local streets and idling on adjacent streets) and, to a lesser extent, facility operations (e.g., natural gas fired boilers). However, these activities, and the land uses associated with the Proposed Project, are not considered land uses that generate substantial TAC emissions. Therefore, no significant toxic airborne emissions would result from the operation of the Proposed Project. Based on AQMD guidance, an HRA is not recommended for the Proposed Project since its operational land uses are not considered a substantial source of diesel particulate matter" (p. IV.A-67 - IV.A-68).

20B.10 cont.

As demonstrated above, the DEIR concludes that the Project would result in a less-than-significant impact with respect to operational toxic air contaminants ("TACs"), because the proposed land uses would not generate substantial TAC emissions. Finally, the DEIR concludes:

> "***[O]n-site localized emissions from the Proposed Project's construction and operational would not exceed the established SCAQMD localized thresholds. Therefore, localized construction and operational related air quality impacts would be considered less than significant without mitigation. Additionally, potential air toxic impacts to sensitive receptors from Project TAC emissions would also be less than significant. Therefore, the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant***" (p. IV.A-68).

However, the DEIR's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for four reasons.

First, the use of an LST analysis to determine the health risk impacts posed to nearby, existing sensitive receptors as a result of the Project's construction-related and operational TAC emissions is incorrect. While the LST method assesses the impact of pollutants at a local level, it only evaluates impacts from criteria air pollutants. According to the *Final Localized Significance Threshold Methodology* document prepared by the SCAQMD, the LST analysis is only applicable to NO_x, CO, PM_{10}, and $PM_{2.5}$ emissions, which are collectively referred to as criteria air pollutants.[13] Because the LST method can only be applied to criteria air pollutants, this method cannot be used to determine whether emissions from TACs, specifically diesel particulate matter ("DPM"), a known human carcinogen, would result in a significant health risk impact to nearby sensitive receptors. As a result, health impacts from exposure to TACs, such as DPM, were not analyzed, thus leaving a gap in the DEIR's analysis.

Second, despite the DEIR's qualitative claims that construction-related TAC emissions would be less than significant, construction of the proposed Project will produce emissions of DPM through the exhaust stacks of construction equipment over a potential construction period of approximately 32 months (p. II-40). Furthermore, despite the DEIR's qualitative claim that the proposed land uses would not generate TACs, the Transportation Analysis indicates that the proposed land uses are expected to generate approximately 7,714 average daily vehicle trips, which will generate additional exhaust emissions and continue to expose nearby sensitive receptors to DPM emissions (Appendix H.1, p. 34). However, the DEIR's vague discussion of potential Project-generated TACs fails to indicate the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a reasonable effort to connect the Project's construction-related and operational TAC emissions to the potential health risks posed to nearby receptors, the DEIR is inconsistent with CEQA's requirement to correlate the increase in emissions generated by the Project with the potential adverse impacts on human health.

20B.10 cont.

Third, the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* in February 2015, as referenced by the Air Quality and Health Effects ("AQ & Health Effects Analysis"), provided as Appendix C.2 to the DEIR (Appendix C.2, pp. 114).[14] The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors.[15] As the Project's proposed 32-month construction duration vastly exceeds the 2-month requirement set forth by OEHHA, it is clear that the Project meets the threshold warranting a quantified HRA under OEHHA guidance (p. II-40). Furthermore, the OEHHA document recommends that exposure from projects lasting more than 6 months be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual

[13] "Final Localized Significance Threshold Methodology." SCAQMD, Revised July 2008, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf.

[14] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/hotspots2015.html

[15] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf, p. 8-18

resident ("MEIR").[16] Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, we recommend that health risk impacts from Project operation also be evaluated, as a 30-year exposure duration vastly exceeds the 6-month requirement set forth by OEHHA. These recommendations reflect the most recent state health risk policies, and as such, we recommend that an analysis of health risk impacts posed to nearby sensitive receptors from Project operation be included in an EIR for the Project.

20B.10 cont.

Fourth, by claiming a less than significant impact without conducting a quantified construction or operational HRA for nearby, existing sensitive receptors, the DEIR fails to compare the Project's cumulative excess cancer risk to the applicable SCAQMD numeric threshold of 10 in one million, and lacks evidence to support its conclusion that the health risk would be under the threshold.[17] Thus, pursuant to CEQA and SCAQMD guidance, an analysis of the health risk posed to nearby, existing receptors from Project construction and operation should have been conducted.

Screening-Level Analysis Indicates a Potentially Significant Health Risk Impact

In order to conduct our screening-level risk analysis we relied upon AERSCREEN, which is a screening level air quality dispersion model.[18] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA[19] and the California Air Pollution Control Officers Associated ("CAPCOA")[20] guidance as the appropriate air dispersion model for Level 2 health risk screening analyses ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

20B.11

In order to estimate the health risk impacts posed to residential sensitive receptors as a result of the Project's construction-related and operational TAC emissions, we prepared a preliminary HRA using the annual PM_{10} exhaust estimates from the DEIR's CalEEMod output files. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life. The DEIR's CalEEMod model indicates that construction activities will generate approximately 627 pounds of DPM over the 987-day construction period (Appendix E, pp. 32). The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in

[16] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf, p. 8-6, 8-15
[17] "South Coast AQMD Air Quality Significance Thresholds." SCAQMD, April 2019, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.
[18] U.S. EPA (April 2011) AERSCREEN Released as the EPA Recommended Screening Model, http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf
[19] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf
[20] CAPCOA (July 2009) Health Risk Assessments for Proposed Land Use Projects, http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.

equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{627.2\ lbs}{987\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.00334\ g/s}$$

Using this equation, we estimated a construction emission rate of 0.00334 grams per second ("g/s"). Subtracting the 987-day construction period from the total residential duration of 30 years, we assumed that after Project construction, the sensitive receptor would be exposed to the Project's operational DPM for an additional 27.3 years, approximately. The DEIR's operational CalEEMod emissions indicate that operational activities will generate approximately 895 pounds of DPM per year throughout operation (Appendix E, pp. 35). Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{895.2\ lbs}{365\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.0129\ g/s}$$

Using this equation, we estimated an operational emission rate of 0.0129 g/s. Construction and operational activity was simulated as a 7.51-acre rectangular area source in AERSCREEN with dimensions of 298 by 102 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

20B.11 cont.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.[21] According to the DEIR, the nearest sensitive receptors are located directly south of the Project Site (p. IV.A-42, Figure IV.A-3). However, review of the AERSCREEN output files demonstrates that the *maximally exposed* individual resident ("MEIR") is located approximately 150 meters from the Project site. Thus, the single-hour concentration estimated by AERSCREEN for Project construction is approximately 3.596 µg/m^3 DPM at approximately 150 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.3596 µg/m^3 for Project construction at the MEIR. For Project operation, the single-hour concentration estimated by AERSCREEN is 13.87 µg/m^3 DPM at approximately 150 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 1.387 µg/m^3 for Project operation at the MEIR.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA. Consistent with the 987-day construction schedule included in the Project's CalEEMod output files, the annualized average concentration for Project construction was used for the entire third

[21] "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." EPA, 1992, *available at*: http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf; *see also* "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 4-36.

trimester of pregnancy (0.25 years), infantile stage of life (0 – 2 years), and the first 0.45 year of the child stage of life (2 – 16 years); and the annualized averaged concentration for operation was used for the remainder of the 30-year exposure period, which makes up the remaining 13.55 years of the child stage of life and the entire the adult stage of life (16 – 30 years).

Consistent with OEHHA guidance and recommended by the SCAQMD, BAAQMD, and SJVAPCD guidance, we used Age Sensitivity Factors ("ASF") to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.[22, 23, 24] According to this guidance, the quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant), as well as multiplied by a factor of three during the child stage of life (2 – 16 years). We also included the quantified cancer risk without adjusting for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution in accordance with older OEHHA guidance from 2003. This guidance utilizes a less health protective scenario than what is currently recommended by SCAQMD, the air quality district with jurisdiction over the City, and several other air districts in the state. Furthermore, in accordance with the guidance set forth by OEHHA, we used the 95th percentile breathing rates for infants.[25] Finally, according to SCAQMD guidance, we used a Fraction of Time At Home ("FAH") Value of 1 for the 3rd trimester and infant receptors.[26] We used a cancer potency factor of 1.1 (mg/kg-day)$^{-1}$ and an averaging time of 25,550 days. The results of our calculations are shown below.

20B.11 cont.

[22] "Draft Environmental Impact Report (DEIR) for the Proposed The Exchange (SCH No. 2018071058)." SCAQMD, March 2019, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/march/RVC190115-03.pdf?sfvrsn=8, p. 4.

[23] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 56; see also "Recommended Methods for Screening and Modeling Local Risks and Hazards." BAAQMD, May 2011, *available at:* http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx, p. 65, 86.

[24] "Update to District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document." SJVAPCD, May 2015, *available at:* https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf, p. 8, 20, 24.

[25] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act," July 2018, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588supplementalguidelines.pdf, p. 16.
"Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[26] "Risk Assessment Procedures for Rules 1401, 1401.1, and 212." SCAQMD, August 2017, *available at:* http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7.

The Maximum Exposed Individual at an Existing Residential Receptor (MEIR)

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk without ASFs*	ASF	Cancer Risk with ASFs*
Construction	0.25	0.3596	361	4.9E-07	10	4.9E-06
3rd Trimester Duration	***0.25***			***4.9E-07***	***3rd Trimester Exposure***	***4.9E-06***
Construction	2.00	0.3596	1090	1.2E-05	10	1.2E-04
Infant Exposure Duration	***2.00***			***1.2E-05***	***Infant Exposure***	***1.2E-04***
Construction	0.45	0.3596	572	1.4E-06	3	4.2E-06
Operation	13.55	1.387	572	1.6E-04	3	4.9E-04
Child Exposure Duration	***14.00***			***1.6E-04***	***Child Exposure***	***4.9E-04***
Operation	14.00	1.387	261	5.6E-05	1	5.6E-05
Adult Exposure Duration	***14.00***			***5.6E-05***	***Adult Exposure***	***5.6E-05***
Lifetime Exposure Duration	**30.00**			**2.3E-04**	**Lifetime Exposure**	**6.7E-04**

20B.11 cont.

* We, along with CARB and SCAQMD, recommend using the more updated and health protective 2015 OEHHA guidance, which includes ASFs.

As demonstrated in the table above, the excess cancer risk to adults, children, infants, and during the 3rd trimester of pregnancy at the MEIR located approximately 150 meters away, over the course of Project construction and operation, utilizing ASFs, is approximately 56, 490, 120, and 4.9 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years), utilizing ASFs, is approximately 670 in one million. The infant, child, adult, and lifetime cancer risks exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the DEIR.

Utilizing ASFs is the most conservative, health-protective analysis according to the most recent guidance by OEHHA and reflects recommendations from the air district. Results without ASFs are presented in the table above, although we **do not** recommend utilizing these values for health risk analysis. Regardless, the excess cancer risk to adults, children, infants, and during the 3rd trimester of pregnancy at the MEIR located approximately 150 meters away, over the course of Project construction and operation, without ASFs, are approximately 56, 160, 12, and 0.49 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years), without ASFs, is approximately 230 in one million. The infant and lifetime cancer risk, without ASFs, exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the DEIR. While we recommend the use of ASFs, the Project's cancer risk without ASFs, as estimated by SWAPE, nonetheless exceeds the SCAQMD threshold, resulting in a potentially significant health risk impact that the DEIR fails to disclose.

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. [27] The purpose of the screening-level construction and operational HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our screening-level HRA indicates a potentially significant impact, the City should prepare a Project-specific EIR with an HRA which makes a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, the City should prepare an updated, quantified air pollution model as well as an updated, quantified refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

20B.11 cont.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The DEIR estimates that the Project would generate net annual greenhouse gas ("GHG") emissions of 3,384 metric tons of carbon dioxide equivalents per year ("MT CO_2e/year"), including GHG reduction measures (see excerpt below) (p. IV.C-59, Table IV.C-8).

20B.12

[27] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 1-5

Table IV.C-8
Annual Operational Greenhouse Gas Emissions

Emissions Source	Project Generated CO_2e Emissions (Metric Tons per Year)	Project-Generated CO_2e Emissions with GHG Reduction Measures (Metric Tons per Year)	Percent Reduction
Area	112	6	95
Energy	3,967	3,158	20
Mobile (Motor Vehicles)	11,056	7,146	35
Stationary	9	9	0
Waste	307	77	75
Water	371	297	20
Construction Emissions [a]	89	89	0
Subtotal:	**15,911**	**10,782**	**32**
Less Existing Development Site Uses:	*-7,398*	*-7,398*	
Project NET TOTAL:	**8,513**	**3,384**	**60**

Notes:
[a] *The total construction GHG emissions were amortized over 30 years and added to the operation of the Proposed Project.*
[b] *The Proposed Project's CalEEMod worksheets were based on the default 2016 Title 24 Energy Use Standards. Therefore the Proposed Project's Energy Use emissions were reduced by 20 % to account for compliance with the 2019 Title 24 Energy Conservation Standards.*
Source: CalEEMod Version 2016.3.2. Calculation data and results provided in Appendix E, Greenhouse Gas Emissions Calculations Worksheets, Parker Environmental Consultants, 2020.

20B.12 cont.

However, the DEIR elects not to apply a quantitative GHG threshold, stating:

> "[T]he SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold 10,000 MTCO2e per year for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects)" (p. IV.C-32).

Instead, the DEIR relies upon the Project's consistency with CARB's 2017 Climate Change Scoping Plan, SCAG's 2016-2040 RTP/SCS, and the Sustainable City pLAn / L.A.'s Green New Deal in order to conclude that the Project would result in a less-than-significant GHG impact (p. IV.C-40). However, the DEIR's GHG analysis, as well as the subsequent less-than-significant impact conclusion, is incorrect for six reasons.

(1) The DEIR's quantitative GHG analysis relies upon an incorrect and unsubstantiated air model;
(2) The DEIR incorrectly relies upon unsubstantiated GHG reduction measures;
(3) The DEIR's unsubstantiated air model indicates a potentially significant impact;
(4) The DEIR fails to consider the performance-based standards under CARB's *Scoping Plan*;
(5) The DEIR incorrectly relies upon SCAG's outdated *RTP/SCS*; and
(6) The DEIR fails to consider the performance-based standards under SCAG's *RTP/SCS.*

1) Incorrect and Unsubstantiated Quantitative Analysis of Emissions

As previously stated, DEIR estimates that the Project would generate net annual GHG emissions of MT CO_2e/year (p. IV.C-59, Table IV.C-8). However, the DEIR's quantitative GHG analysis is unsubstantiated. As previously discussed, when we reviewed the Project's CalEEMod output files, provided in the AQ Modeling Worksheets as Appendix C.1 and the GHG Analysis as Appendix E to the DEIR, we found that several of the values inputted into the model are not consistent with information disclosed in the DEIR. As a result, the model underestimates the Project's emissions, and the DEIR's quantitative GHG analysis should not be relied upon to determine Project significance. An updated EIR should be prepared that adequately assesses the potential GHG impacts that construction and operation of the proposed Project may have on the surrounding environment.

20B.13

2) Incorrect Reliance on GHG Reduction Measures

As previously discussed, the DEIR estimates that the Project would generate net annual GHG emissions of 3,384 MT CO_2e/year, after the inclusion of GHG reduction measures (p. IV.C-59, Table IV.C-8). Specifically, the DEIR estimates that the area-, energy-, mobile-, water-, and waste-related measures would result in GHG emissions reductions of 95%, 20%, 35%, 75% and 20%, respectively (see excerpt below) (p. IV.C-59, Table IV.C-8).

Table IV.C-8
Annual Operational Greenhouse Gas Emissions

Emissions Source	Project Generated CO_2e Emissions (Metric Tons per Year)	Project-Generated CO_2e Emissions with GHG Reduction Measures (Metric Tons per Year)	Percent Reduction
Area	112	6	95
Energy	3,967	3,158	20
Mobile (Motor Vehicles)	11,056	7,146	35
Stationary	9	9	0
Waste	307	77	75
Water	371	297	20

20B.14

Furthermore, regarding the implementation of GHG reduction measures, the DEIR states:

> "[T]his Draft EIR quantifies the Proposed Project's total annual GHG emissions, taking into account the GHG emission reduction features that would be incorporated into the Project's design. Consistent with evolving scientific knowledge, approaches to GHG quantification may continue to evolve in the future. For purposes of quantifying the efficacy of the Proposed Project's compliance with the various regulations, plans and policies identified above, the Proposed Project's site-specific conditions, project design features, or code compliance measures are reflected under the 'mitigated' scenario in the CalEEMod worksheets…

> Compliance with these regulations can only be calculated under the 'mitigation' screen in CalEEMod" (p. IV.C-41 – IV.C-42).

However, as discussed above, the Project's compliance with various regulations, plans and policies does not justify the inclusion of mitigation measures in the model. As these PDFs are not formally included as mitigation measures, we cannot verify that they would be implemented, monitored, and enforced on the Project site.

Furthermore, regarding the use of mitigation measures, the DEIR states: **20B.14 cont.**

> "The Proposed Project's impacts would be less than significant. Therefore, no mitigation measures are warranted" (p. IV.C-65).

As you the excerpt above demonstrates, the DEIR claims that *no* mitigation measures would be required. As such, the DEIR should not rely on reduction measures to artificially decrease the Project's estimated GHG emissions. Rather, in order to claim that the Project would result in a less-than-significant GHG impact, the DEIR should demonstrate that the Project's GHG emissions are less-than-significant *without* the inclusion of reduction measures.

3) Failure to Identify a Potentially Significant GHG Impact

The DEIR's incorrect and unsubstantiated air model indicates a potentially significant GHG impact when applying the "2030 Land Use Efficiency Threshold" of 2.6 MT CO_2e/SP/year. In support of this threshold for projects with a horizon year beyond 2020, AEP's guidance *states*:

> "Once the state has a full plan for 2030 (which is expected in 2017), and then *a project with a horizon between 2021 and 2030 should be evaluated based on a threshold using the 2030 target*. A more conservative approach would be to apply a 2030 threshold *based on SB 32* for any project with a horizon between 2021 and 2030 regardless of the status of the Scoping Plan Update" (emphasis added).[28]

20B.15

As the California Air Resources Board ("CARB") adopted *California's 2017 Climate Change Scoping Plan* in November of 2017, the proposed Project "should be evaluated based on a threshold using the 2030 target," according to the relevant guidance referenced above. Thus, in an effort to evaluate the Project's GHG emissions quantitatively, we compared the Project's GHG emissions, as estimated by the DEIR, to the AEP's "2030 Land Use Efficiency Threshold" of 2.6 MT CO_2e/SP/year.

As previously stated, the DEIR estimates that the Project would generate net annual GHG emissions of 3,384 MT CO_2e/year, after the inclusion of GHG reduction measures (p. IV.C-59, Table IV.C-8). Furthermore, according to CAPCOA's *CEQA & Climate Change* report, service population is defined as

[28] "Beyond Newhall and 2020: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California." Association of Environmental Professionals (AEP), October 2016, *available at:* https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf, p. 40.

"the sum of the number of residents and the number of jobs supported by the project."[29] The DEIR estimates that the Project would house and employ approximately 801 residents and 319 employees, respectively, resulting in a service population of 1,120 people (p. IV.G-17, Table IV.G-4; IV.G-19, Table IV.G-5).[30] When dividing the Project's GHG emissions, as estimated by the DEIR, by a service population of 1,120 people, we find that the Project would emit approximately 3.0 MT CO_2e/SP/year (see table below).[31]

DEIR Service Population Efficiency	
Project Phase	**Proposed Project (MT CO_2e/year)**
Total	**3,384**
Service Population	1,120
Service Population Efficiency	**3.0**
Threshold	2.6
Exceed?	***Yes***

20B.15 cont.

As demonstrated above, when we compare the Project's per service population GHG emissions to the AEP's "2030 Land Use Efficiency Threshold" of 2.6 MT CO_2e/SP/year, we find that the Project would result in a potentially significant GHG impact not previously identified or addressed by the DEIR. Therefore, an updated EIR should be prepared and recirculated for the Project, and mitigation should be implemented where necessary.

4) Failure to Consider Performance-based Standards Under CARB's 2017 Scoping Plan

As previously discussed, the DEIR relies upon the Project's consistency with CARB's 2017 *Scoping Plan* to determine Project GHG significance (p. IV.C-40). However, this is incorrect, as the DEIR fails to consider performance-based measures proposed by CARB.

i. Passenger & Light Duty VMT Per Capita Benchmarks per SB 375

In reaching the State's long-term GHG emission reduction goals, CARB's 2017 *Scoping Plan* explicitly cites to SB 375 and the VMT reductions anticipated under the implementation of Sustainable Community Strategies.[32] CARB has identified the population and daily VMT from passenger autos and light-duty vehicles at the state and county level for each year between 2010 to 2050 under a "baseline scenario" that includes "current projections of VMT included in the existing Regional Transportation Plans/Sustainable Communities Strategies (RTP/SCSs) adopted by the State's 18 Metropolitan Planning

20B.16

[29] CAPCOA *(*Jan. 2008) CEQA & Climate Change, p. 71-72, http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf.
[30] Calculated: 801 residents + 319 employees = 1,120 service population.
[31] Calculated: (3,384 MT CO_2e/year) / (1,120 service population) = (3.0 MT CO_2e/SP/year).
[32] "California's 2017 Climate Change Scoping Plan." CARB, November 2017, *available at*: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, p. 25, 98, 101-103.

Organizations (MPOs) pursuant to SB 375 as of 2015."[33] By dividing the projected daily VMT by the population, we calculated the daily VMT per capita for each year at the state and county level for 2010 (baseline year), 2023 (Project operational year), and 2030 (target years under SB 32) (see table below and Attachment A).

2017 Scoping Plan Daily VMT Per Capita						
	Los Angeles County			State		
Year	Population	LDV VMT Baseline	VMT Per Capita	Population	LDV VMT Baseline	VMT Per Capita
2010	9,838,771	216,979,221.64	22.05	37,335,085	836,463,980.46	22.40
2023	10,581,976	221,156,313.83	20.90	41,659,526	924,184,228.61	22.18
2030	10,868,614	215,539,586.12	19.83	43,939,250	957,178,153.19	21.78

The below table compares the 2017 *Scoping Plan* daily VMT per capita values against the daily VMT per capita values for the Project based on the DEIR's modeling (see table below and Attachment A).

Daily VMT Per Capita from Passenger & Light-Duty Trucks, Exceedances under 2017 Scoping Plan Performance-Based SB 375 Benchmarks	
Sources	Project
	DEIR Modeling
Annual VMT from Auto & Light-Duty Vehicles	15,209,308
Daily VMT from Auto & Light-Duty Vehicles	41,669
Service Population	1,120
Daily VMT Per Capita	37.20
2017 Scoping Plan Benchmarks, Statewide	
22.40 VMT (2010 Baseline) Exceed?	**Yes**
22.18 VMT (2023 Projected) Exceed?	**Yes**
21.78 VMT (2030 Projected) Exceed?	**Yes**
2017 Scoping Plan Benchmarks, Los Angeles County Specific	
22.05 VMT (2010 Baseline) Exceed?	**Yes**
20.90 VMT (2023 Projected) Exceed?	**Yes**
19.83 VMT (2030 Projected) Exceed?	**Yes**

20B.16 cont.

As shown above, the DEIR's modeling shows that the Project exceeds the CARB 2017 *Scoping Plan* projections for 2010, 2023, and 2030. Because the exceeds the CARB 2017 *Scoping Plan* performance-based daily VMT per capita projections, the Project conflicts with the CARB 2017 *Scoping Plan* and SB 375. As such, the DEIR's claim that the proposed Project would not conflict with the CARB 2017 *Scoping*

[33] "Supporting Calculations for 2017 Scoping Plan-Identified VMT Reductions," Excel Sheet "Readme." CARB, January 2019, *available at*: https://ww2.arb.ca.gov/sites/default/files/2019-01/sp_mss_vmt_calculations_jan19_0.xlsx.

Plan is unsupported. Project-specific EIR should be prepared for the proposed Project to provide additional information and analysis to conclude less than significant GHG impacts. **20B.16 cont.**

5) Incorrect Reliance Upon SCAG's Outdated RTP/SCS

As previously discussed, the DEIR concludes that the Project would be consistent with SCAG's 2016-2040 *RTP/SCS*. However, in September 2020 SCAG adopted the more recent 2020-2045 *RTP/SCS*.[34] Thus, the DEIR should have relied upon the current 2020-2045 *RTP/SCS*, and the DEIR's less-than-significant impact conclusion regarding the outdated 2016-2040 *RTP/SCS* should not be relied upon. **20B.17**

6) Failure to Consider Performance-based Standards under SCAG's RTP/SCS

Here, as discussed above, the DEIR concludes that the Project would be consistent with SCAG's *RTP/SCS*. However, the DEIR fails to consider whether or not the Project meets any of the specific performance-based goals underlying SCAG's *RTP/SCS* and SB 375, such as: i) per capita GHG emission targets, or ii) daily vehicles miles traveled ("VMT") per capita benchmarks.

i. SB 375 Per Capita GHG Emission Goals

SB 375 was signed into law in September 2008 to enhance the state's ability to reach AB 32 goals by directing CARB to develop regional 2020 and 2035 GHG emission reduction targets for passenger vehicles (autos and light-duty trucks). In March 2018, CARB adopted updated regional targets requiring a 19 percent decrease in VMT for the SCAG region by 2035. This goal is reflected in SCAG's 2020 RTP/SCS Program Environmental Impact Report ("PEIR"),[35] in which the 2020 RTP/SCS PEIR updates the per capita emissions to 21.3 lbs/day in 2020 and 18.8 lbs/day in 2035 (*see* excerpt below). [36] **20B.18**

Table 3.8-10
SB 375 Analysis

	2005 (Baseline)	2020 (Plan)	2035 (Plan)
Resident population (per 1,000)	17,161	19,194	21,110
CO2 emissions (per 1,000 tons)	204.0/a/	204.5/b/	198.6/b/
Per capita emissions (pounds/day)	23.8	21.3	18.8
% difference from Plan (2020) to Baseline (2005)			–8%
% difference from Plan (2035) to Baseline (2005)			–19%/c/

Note:
/a/ Based on EMFAC2007
/b/Based on EMFAC2014 and SCAG modeling, 2019.
/c/ Includes off-model adjustments for 2035 and 2045
Source: SCAG modeling, 2019.
http://www.scag.ca.gov/committees/CommitteeDocLibrary/jointRCPC110515fullagn.pdf

[34] "ADOPTED FINAL CONNECT SOCAL." SCAG, *available at:* https://scag.ca.gov/read-plan-adopted-final-plan.
[35] "Connect SoCal Certified Final Program Environmental Impact Report." SCAG, May 2020, *available at*: https://scag.ca.gov/sites/main/files/file-attachments/fpeir_connectsocal_complete.pdf?1607981618.
[36] "Connect SoCal Certified Final Program Environmental Impact Report." SCAG, May 2020, *available at*: https://scag.ca.gov/sites/main/files/file-attachments/fpeir_connectsocal_complete.pdf?1607981618, p. 3.8-74.

In order to evaluate consistency with this SB 375 objective and SCAG's *RTP/SCS* performance-based goals, SWAPE calculated the Project's per-capita CO_2 emissions from passenger and light duty vehicles (calculations attached hereto as Attachment A). First, total annual GHG mobile emissions were multiplied by the percentage of auto and light-duty truck fleet mix, then converted into total pounds per day, then divided by the estimated service population of 1,120. The below table shows the per capita emissions for the Project based on the DEIR's modeling (see table below and Attachment A).

CO_2e Per Capita Emissions from Passenger & Light-Duty Trucks,	
Exceedances under RTP/SCS Performance-Based SB 375 Goals	
Sources	**Project**
	DEIR Modeling
Annual Mobile Emissions (MT CO_2e/year)	7,146.40
Passenger & Light-Duty Fleet Mix (%)	91.21%
Daily CO_2e Emissions (lbs/day)	39,372.58
Service Population	1,120
Per Capita Emissions (lbs/day)	**35.15**
21.3 lbs/day/SP (2020 Goal) Exceeded?	**Yes**
18.8 lbs/day/SP (2035 Goal) Exceeded?	**Yes**

20B.18 cont.

As shown in the above table, when utilizing the DEIR's modeling, the Project would result in 35.15 pounds per day per service population ("lbs/day/SP") emissions. This exceeds both SCAG's 2020 and 2035 targets of 21.3- and 18.8-lbs/day/SP, respectively, indicating that the Project is inconsistent with SB 375 and SCAG's *RTP/SCS*.

i. SB 375 RTP/SCS Daily VMT Per Capita Target

Under the SCAG's 2020 *RTP/SCS*, daily VMT per capita in the SCAG region should decrease from 23.2 VMT in 2016 to 20.7 VMT by 2045.[37] Daily VMT per capita in Los Angeles County should decrease from 22.2 to 19.2 VMT during that same period.[38]

Here, however, the DEIR fails to consider any of the above-mentioned performance-based VMT targets. In order to evaluate consistency with the *RTP/SCS*'s performance-based VMT reduction targets, SWAPE calculated the Project's VMT from passenger and light duty vehicles (calculations attached hereto as Attachment A). First, annual VMTs from passenger automobile and light-duty vehicle were calculated based on the CalEEMod default fleet mix, converted into daily VMT, and divided by the estimated

20B.19

[37] "Connect SoCal." SCAG, September 2020, *available at*: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176, pp. 138.
[38] "Connect SoCal." SCAG, September 2020, *available at*: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176, pp. 138.

service population of 1,120. The below table shows the daily VMT per capita for the Project based on the DEIR's modeling (see table below and Attachment A).

Daily VMT Per Capita from Passenger & Light-Duty Trucks, Exceedances under RTP/SCS Performance-Based SB 375 Target	
Sources	**Project**
	DEIR Modeling
Annual VMT from Auto & Light-Duty Vehicles	15,209,308
Daily VMT from Auto & Light-Duty Vehicles	41,669
Service Population	1,120
Daily VMT Per Capita	37.20
2020 RTP/SCS Benchmarks, SCAG-Wide	
23.2 VMT (2016 Baseline) Exceed?	**Yes**
20.7 VMT (2045 Target) Exceed?	**Yes**
2020 RTP/SCS Benchmarks, Los Angeles County	
22.2 VMT (2016 Baseline) Exceed?	**Yes**
19.2 VMT (2045 Target) Exceed?	**Yes**

20B.19 cont.

As shown in the above table, based on a service population of 1,120, the Project would result in 37.2 VMT per capita from passenger auto and light-duty truck vehicles. This exceeds all SCAG-wide and Los Angeles County specific benchmarks and targets under SCAG's 2020 *RTP/SCS*. Thus, based on the DEIR's modeling, the Project would exceed the 2016 baseline and 2045 target VMT per capita values for both Los Angeles County and the SCAG region as a whole, indicating that the Project conflicts with the SCAG's *RTP/SCS* and SB 375.

Feasible Mitigation Measures Available to Reduce Emissions

Our analysis demonstrates that the Project would result in potentially significant health risk and GHG impacts that should be mitigated further. In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. Feasible mitigation measures can be found in CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*.[39] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

20B.20

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*[40]
Measures – Energy
Building Energy Use

[39] http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

[40] "Quantifying Greenhouse Gas Mitigation Measures." California Air Pollution Control Officers Association (CAPCOA), August 2010, *available at:* http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf, p.

Install Programmable Thermostat Timers	**20B.20 cont.**
Obtain Third-party HVAC Commissioning and Verification of Energy Savings	
Install Energy Efficient Appliances	
Install Energy Efficient Boilers	
Lighting	
Install Higher Efficacy Public Street and Area Lighting	
Limit Outdoor Lighting Requirements	
Replace Traffic Lights with LED Traffic Lights	
Alternative Energy Generation	
Establish Onsite Renewable or Carbon-Neutral Energy Systems	
Establish Onsite Renewable Energy System – Solar Power	
Utilize a Combined Heat and Power System	
Measures – Transportation	
Land Use/Location	
Increase Density	
Increase Location Efficiency	
Increase Destination Accessibility	
Increase Transit Accessibility	
Orient Project Toward Non-Auto Corridor	
Locate Project near Bike Path/Bike Lane	
Neighborhood/Site Enhancements	
Provide Pedestrian Network Improvements, such as: • Compact, mixed-use communities • Interconnected street network • Narrower roadways and shorter block lengths • Sidewalks • Accessibility to transit and transit shelters • Traffic calming measures and street trees • Parks and public spaces • Minimize pedestrian barriers	
Provide Traffic Calming Measures, such as: • Marked crosswalks • Count-down signal timers • Curb extensions • Speed tables • Raised crosswalks • Raised intersections • Median islands • Tight corner radii • Roundabouts or mini-circles • On-street parking	

• Planter strips with trees • Chicanes/chokers	
Implement a Neighborhood Electric Vehicle (NEV) Network.	
Create Urban Non-Motorized Zones	
Incorporate Bike Lane Street Design (on-site)	
Provide Bike Parking with Multi-Unit Residential Projects	
Provide Electric Vehicle Parking	
Dedicate Land for Bike Trails	
Parking Policy/Pricing	
Limit Parking Supply through: • Elimination (or reduction) of minimum parking requirements • Creation of maximum parking requirements • Provision of shared parking	
Unbundle Parking Costs from Property Cost	
Implement Market Price Public Parking (On-Street)	
Require Residential Area Parking Permits	
Commute Trip Reduction Programs	**20B.20 cont.**
Implement Commute Trip Reduction (CTR) Program – Voluntary • Carpooling encouragement • Ride-matching assistance • Preferential carpool parking • Flexible work schedules for carpools • Half time transportation coordinator • Vanpool assistance • Bicycle end-trip facilities (parking, showers and lockers) • New employee orientation of trip reduction and alternative mode options • Event promotions and publications • Flexible work schedule for employees • Transit subsidies • Parking cash-out or priced parking • Shuttles • Emergency ride home	
Implement Commute Trip Reduction (CTR) Program – Required Implementation/Monitoring • Established performance standards (e.g. trip reduction requirements) • Required implementation • Regular monitoring and reporting	
Provide Ride-Sharing Programs • Designate a certain percentage of parking spaces for ride sharing vehicles • Designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles • Providing a web site or messaging board for coordinating rides • Permanent transportation management association membership and funding requirement.	

Implement Subsidized or Discounted Transit Program	**20B.20 cont.**
Provide Ent of Trip Facilities, including: • Showers • Secure bicycle lockers • Changing spaces	
Encourage Telecommuting and Alternative Work Schedules, such as: • Staggered starting times • Flexible schedules • Compressed work weeks	
Implement Commute Trip Reduction Marketing, such as: • New employee orientation of trip reduction and alternative mode options • Event promotions • Publications	
Implement Preferential Parking Permit Program	
Implement Car-Sharing Program	
Implement School Pool Program	
Provide Employer-Sponsored Vanpool/Shuttle	
Implement Bike-Sharing Programs	
Implement School Bus Program	
Price Workplace Parking, such as: • Explicitly charging for parking for its employees; • Implementing above market rate pricing; • Validating parking only for invited guests; • Not providing employee parking and transportation allowances; and • Educating employees about available alternatives.	
Implement Employee Parking "Cash-Out"	
Transit System Improvements	
Transit System Improvements, including: • Grade-separated right-of-way, including bus only lanes (for buses, emergency vehicles, and sometimes taxis), and other Transit Priority measures. Some systems use guideways which automatically steer the bus on portions of the route. • Frequent, high-capacity service • High-quality vehicles that are easy to board, quiet, clean, and comfortable to ride. • Pre-paid fare collection to minimize boarding delays. • Integrated fare systems, allowing free or discounted transfers between routes and modes. • Convenient user information and marketing programs. • High quality bus stations with Transit Oriented Development in nearby areas. • Modal integration, with BRT service coordinated with walking and cycling facilities, taxi services, intercity bus, rail transit, and other transportation services.	
Implement Transit Access Improvements, such as: • Sidewalk/crosswalk safety enhancements	

• Bus shelter improvements	**20B.20 cont.**
Expand Transit Network	
Increase Transit Service Frequency/Speed	
Provide Bike Parking Near Transit	
Provide Local Shuttles	
Road Pricing/Management	
Improve Traffic Flow, such as: • Signalization improvements to reduce delay; • Incident management to increase response time to breakdowns and collisions; • Intelligent Transportation Systems (ITS) to provide real-time information regarding road conditions and directions; and • Speed management to reduce high free-flow speeds.	
Required Project Contributions to Transportation Infrastructure Improvement Projects	
Vehicles	
Utilize Alternative Fueled Vehicles, such as: • Biodiesel (B20) • Liquefied Natural Gas (LNG) • Compressed Natural Gas (CNG)	
Utilize Electric or Hybrid Vehicles	
Measures – Water	
Water Supply	
Use Reclaimed Water	
Use Gray Water	
Use Locally Sourced Water Supply	
Water Use	
Install Low-Flow Water Fixtures	
Adopt a Water Conservation strategy	
Design Water-Efficient Landscapes (see California Department of Water Resources Model Water Efficient Landscape Ordinance), such as: • Reducing lawn sizes; • Planting vegetation with minimal water needs, such as native species; • Choosing vegetation appropriate for the climate of the project site; • Choosing complimentary plants with similar water needs or which can provide each other with shade and/or water.	
Use Water-Efficient Landscape Irrigation Systems (“Smart” irrigation control systems)	
Reduce Turf in Landscapes and Lawns	
Plant Native or Drought-Resistant Trees and Vegetation	
Measures – Area Landscaping	

Landscaping Equipment	**20B.20 cont.**
Prohibit Gas Powered Landscape Equipment	
Implement Lawnmower Exchange Program	
Electric Yard Equipment Compatibility	
Measures – Solid Waste	
Solid Waste	
Institute Recycling and Composting Services	
Recycle Demolished Construction Material	
Measures – Vegetation	
Vegetation	
Urban Tree Planting	
Create New Vegetated Open Space	
Measures – Construction	
Construction	
Use Alternative Fuels for Construction Equipment	
Urban Tree Planting	
Use Electric and Hybrid Construction Equipment	
Limit Construction Equipment Idling Beyond Regulation Requirements	
Institute a Heavy-Duty Off-Road Vehicle Plan, including: • Construction vehicle inventory tracking system; • Requiring hour meters on equipment; • Document the serial number, horsepower, manufacture age, fuel, etc. of all onsite equipment; and • Daily logging of the operating hours of the equipment.	
Implement a Construction Vehicle Inventory Tracking System	
Measures – Miscellaneous	
Miscellaneous	
Establish a Carbon Sequestration Project, such as: • Geologic sequestration or carbon capture and storage techniques, in which CO_2 from point sources is captured and injected underground; • Terrestrial sequestration in which ecosystems are established or preserved to serve as CO_2 sinks; • Novel techniques involving advanced chemical or biological pathways; or • Technologies yet to be discovered.	
Establish Off-Site Mitigation	
Use Local and Sustainable Building Materials	
Require Environmentally Responsible Purchasing, such as: • Purchasing products with sustainable packaging; • Purchasing post-consumer recycled copier paper, paper towels, and stationary; • Purchasing and stocking communal kitchens with reusable dishes and utensils;	

- Choosing sustainable cleaning supplies;
- Leasing equipment from manufacturers who will recycle the components at their end of life;
- Choosing ENERGY STAR appliances and Water Sense-certified water fixtures;
- Choosing electronic appliances with built in sleep-mode timers;
- Purchasing 'green power' (e.g. electricity generated from renewable or hydropower) from the utility; and
- Choosing locally-made and distributed products.

Furthermore, in an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project from NEDC's *Diesel Emission Controls in Construction Projects.*[41] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

NEDC's *Diesel Emission Controls in Construction Projects*[42]
Measures – Diesel Emission Control Technology
a. Diesel Onroad Vehicles All diesel nonroad vehicles on site for more than 10 total days must have either (1) engines that meet EPA onroad emissions standards or (2) emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.
b. Diesel Generators All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.
c. Diesel Nonroad Construction Equipment i. All nonroad diesel engines on site must be Tier 2 or higher. Tier 0 and Tier 1 engines are not allowed on site ii. All diesel nonroad construction equipment on site for more than 10 total days must have either (1) engines meeting EPA Tier 4 nonroad emission standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85% for engines 50hp and greater and by a minimum of 20% for engines less than 50hp.
d. Upon confirming that the diesel vehicle, construction equipment, or generator has either an engine meeting Tier 4 non road emission standards or emission control technology, as specified above, installed and functioning, the developer will issue a compliance sticker. All diesel vehicles, construction equipment, and generators on site shall display the compliance sticker in a visible, external location as designated by the developer.
e. Emission control technology shall be operated, maintained, and serviced as recommended by the emission control technology manufacturer.
Measures – Additional Diesel Requirements
a. Construction shall not proceed until the contractor submits a certified list of all diesel vehicles, construction equipment, and generators to be used on site. The list shall include the following:

20B.20 cont.

[41] "Diesel Emission Controls in Construction Projects." Northeast Diesel Collaborative (NEDC), December 2010, *available at:* https://www.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf.

[42] "Diesel Emission Controls in Construction Projects." Northeast Diesel Collaborative (NEDC), December 2010, *available at:* https://www.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf.

i. Contractor and subcontractor name and address, plus contact person responsible for the vehicles or equipment. ii. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. iii. For the emission control technology installed: technology type, serial number, make, model, manufacturer, EPA/CARB verification number/level, and installation date and hour-meter reading on installation date.
b. If the contractor subsequently needs to bring on site equipment not on the list, the contractor shall submit written notification within 24 hours that attests the equipment complies with all contract conditions and provide information.
c. All diesel equipment shall comply with all pertinent local, state, and federal regulations relative to exhaust emission controls and safety.
d. The contractor shall establish generator sites and truck-staging zones for vehicles waiting to load or unload material on site. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.
Reporting
a. For each onroad diesel vehicle, nonroad construction equipment, or generator, the contractor shall submit to the developer's representative a report prior to bringing said equipment on site that includes: i. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, and engine serial number. ii. The type of emission control technology installed, serial number, make, model, manufacturer, and EPA/CARB verification number/level. iii. The Certification Statement signed and printed on the contractor's letterhead.
b. The contractor shall submit to the developer's representative a monthly report that, for each onroad diesel vehicle, nonroad construction equipment, or generator onsite, includes: i. Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date. ii. Any problems with the equipment or emission controls. iii. Certified copies of fuel deliveries for the time period that identify: 1. Source of supply 2. Quantity of fuel 3. Quality of fuel, including sulfur content (percent by weight)

20B.20 cont.

These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation. An updated EIR should be prepared to include all feasible mitigation measures, as well as include an updated health risk and GHG analysis to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

Disclaimer

SWAPE has received limited discovery regarding this project. 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

20B.21

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.

20B.21 cont.

Sincerely,

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

Paul E. Rosenfeld, Ph.D.

Attachment A:	SWAPE GHG and VMT Calculations
Attachment B:	SWAPE Health Risk Calculations
Attachment C	SWAPE Project AERSCREEN Modeling
Attachment D:	Paul Rosenfeld CV
Attachment E:	Matt Hagemann CV

Attachment A

GHG CALCULATIONS: DEIR Modeling

Line (L)	Value	Unit
Total Emissions From Passenger and Light Duty Vehicles		
1	7,146.40	Mobile Emissions (MT CO2e/year)
2	91.21%	Passenger and Light-Duty VMT Fleet Mix
3	6,518.57	Passenger and Light Duty Vehicle Emissions (MT CO2e/year) [Calc: (L1*L2)]
4	39,372.58	Passenger and Light-Duty Vehicle Emissions (Total lbs CO2e/day) [Calc: (L3 converted into lbs) / (365 days)]
5	1120	Service Population [801 residents + 319 long-term jobs]
6	35.15	Per Service Population Emissions (lbs CO2e/day/SP) [Calc: (L4/L5)]
Daily VMT Per Capita From Passenger and Light Duty Vehicles		
7	16,674,185	Project Total VMT (CalEEMod Annual Output, Tbl. 4.2 Trip Summary)
8	91.21%	Passenger and Light-Duty VMT Fleet Mix (see L2)
9	15,209,308	VMT from Passenger & Light-Duty Vehicles
10	41,669	Daily VMT from Passenger & Light-Duty Vehicles [Calc: (L9/365)]
11	1120	Service Population [801 residents + 319 long-term jobs]
12	37.20	Daily VMT Per Capita [(Calc: L10/L11)]

CO_2e Per Capita Emissions from Passenger & Light-Duty Trucks,	
Exceedances under RTP/SCS Performance-Based SB 375 Goals	
Sources	**Project**
	DEIR Modeling
Annual Mobile Emissions (MT CO_2e/year)	7,146.40
Passenger & Light-Duty Fleet Mix (%)	91.21%
Daily CO_2e Emissions (lbs/day)	39,372.58
Service Population	1,120
Per Capita Emissions (lbs/day)	**35.15**
21.3 lbs/day/SP (2020 Goal) Exceeded?	**Yes**
18.8 lbs/day/SP (2035 Goal) Exceeded?	**Yes**

Daily VMT Per Capita from Passenger & Light-Duty Trucks, Exceedances under RTP/SCS Performance-Based SB 375 Target	
Sources	**Project DEIR Modeling**
Annual VMT from Auto & Light-Duty Vehicles	15,209,308
Daily VMT from Auto & Light-Duty Vehicles	41,669
Service Population	1,120
Daily VMT Per Capita	37.20
2020 RTP/SCS Benchmarks, SCAG-Wide	
23.2 VMT (2016 Baseline) Exceed?	**Yes**
20.7 VMT (2045 Target) Exceed?	**Yes**
2020 RTP/SCS Benchmarks, Los Angeles County	
22.2 VMT (2016 Baseline) Exceed?	**Yes**
19.2 VMT (2045 Target) Exceed?	**Yes**

2017 Scoping Plan Daily VMT Per Capita						
	Los Angeles County			State		
Year	Population	LDV VMT Baseline	VMT Per Capita	Population	LDV VMT Baseline	VMT Per Capita
2010	9,838,771	216,979,221.64	22.05	37,335,085	836,463,980.46	22.40
2023	10,581,976	221,156,313.83	20.90	41,659,526	924,184,228.61	22.18
2030	10,868,614	215,539,586.12	19.83	43,939,250	957,178,153.19	21.78

Daily VMT Per Capita from Passenger & Light-Duty Trucks, Exceedances under 2017 Scoping Plan Performance-Based SB 375 Benchmarks	
Sources	**Project** **DEIR Modeling**
Annual VMT from Auto & Light-Duty Vehicles	15,209,308
Daily VMT from Auto & Light-Duty Vehicles	41,669
Service Population	1,120
Daily VMT Per Capita	37.20
2017 Scoping Plan Benchmarks, Statewide	
22.40 VMT (2010 Baseline) Exceed?	**Yes**
22.18 VMT (2023 Projected) Exceed?	**Yes**
21.78 VMT (2030 Projected) Exceed?	**Yes**
2017 Scoping Plan Benchmarks, Los Angeles County Specific	
22.05 VMT (2010 Baseline) Exceed?	**Yes**
20.90 VMT (2023 Projected) Exceed?	**Yes**
19.83 VMT (2030 Projected) Exceed?	**Yes**

Attachment B

Construction	
2021	
Annual Emissions (tons/year)	0.1572
Daily Emissions (lbs/day)	0.861369863
Construction Duration (days)	319
Total DPM (lbs)	274.7769863
Total DPM (g)	124638.841
Start Date	2/15/2021
End Date	12/31/2021
Construction Days	319
2022	
Annual Emissions (tons/year)	0.1255
Daily Emissions (lbs/day)	0.687671233
Construction Duration (days)	364
Total DPM (lbs)	250.3123288
Total DPM (g)	113541.6723
Start Date	1/1/2022
End Date	12/31/2022
Construction Days	364
2023	
Annual Emissions (tons/year)	0.0617
Daily Emissions (lbs/day)	0.338082192
Construction Duration (days)	302
Total DPM (lbs)	102.1008219
Total DPM (g)	46312.93282
Start Date	1/1/2023
End Date	10/30/2023
Construction Days	302

Total	
Total DPM (lbs)	627.190137
Total DPM (g)	284493.4461
Total Construction Days	987
Emission Rate (g/s)	0.003336118
Release Height (meters)	3
Initial Vertical Dimension (meters)	1.5
Max Horizontal (meters)	298.0
Min Horizontal (meters)	102.0
Total Acreage	7.511008535
Setting	Urban
Population	3,967,000
Start Date	2/15/2021
End Date	10/30/2023
Total Construction Days	987
Total Years of Operation	27.30

Operation	
Emission Rate	
Annual Emissions (tons/year)	0.4476
Daily Emissions (lbs/day)	2.45260274
Emission Rate (g/s)	0.012876164
Release Height (meters)	3
Initial Vertical Dimension (meters)	1.5
Max Horizontal (meters)	298.0
Min Horizontal (meters)	102.0
Total Acreage	7.511008535
Setting	Urban
Population	3,967,000
Total Pounds of DPM	
Total DPM (lbs)	895.2

The Maximum Exposed Individual at an Existing Residential Receptor (MEIR)

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk without ASFs*	ASF	Cancer Risk with ASFs*
Construction	0.25	0.3596	361	4.9E-07	10	4.9E-06
3rd Trimester Duration	***0.25***			***4.9E-07***	***3rd Trimester Exposure***	***4.9E-06***
Construction	2.00	0.3596	1090	1.2E-05	10	1.2E-04
Infant Exposure Duration	***2.00***			***1.2E-05***	***Infant Exposure***	***1.2E-04***
Construction	0.45	0.3596	572	1.4E-06	3	4.2E-06
Operation	13.55	1.387	572	1.6E-04	3	4.9E-04
Child Exposure Duration	***14.00***			***1.6E-04***	***Child Exposure***	***4.9E-04***
Operation	14.00	1.387	261	5.6E-05	1	5.6E-05
Adult Exposure Duration	***14.00***			***5.6E-05***	***Adult Exposure***	***5.6E-05***
Lifetime Exposure Duration	**30.00**			**2.3E-04**	**Lifetime Exposure**	**6.7E-04**

* We, along with CARB and SCAQMD, recommend using the more updated and health protective 2015 OEHHA guidance, which includes ASFs.

Start date and time 03/26/21 14:45:02

AERSCREEN 16216

3rd and Fairfax Construction

3rd and Fairfax Construction

---------- DATA ENTRY VALIDATION ----------

** AREADATA **	METRIC	ENGLISH
Emission Rate:	0.334E-02 g/s	0.265E-01 lb/hr
Area Height:	3.00 meters	9.84 feet
Area Source Length:	298.00 meters	977.69 feet
Area Source Width:	102.00 meters	334.65 feet
Vertical Dimension:	1.50 meters	4.92 feet
Model Mode:	URBAN	
Population:	3967000	
Dist to Ambient Air:	1.0 meters	3. feet

** BUILDING DATA **

No Building Downwash Parameters

** TERRAIN DATA **

No Terrain Elevations

Source Base Elevation: 0.0 meters 0.0 feet

Probe distance: 5000. meters 16404. feet

No flagpole receptors

No discrete receptors used

** FUMIGATION DATA **

No fumigation requested

** METEOROLOGY DATA **

Min/Max Temperature: 250.0 / 310.0 K -9.7 / 98.3 Deg F

Minimum Wind Speed: 0.5 m/s

Anemometer Height: 10.000 meters

Dominant Surface Profile: Urban

Dominant Climate Type: Average Moisture

Surface friction velocity (u*): not adjusted

DEBUG OPTION ON

AERSCREEN output file:

2021.03.26_3rdandFairfax_Construction.out

*** AERSCREEN Run is Ready to Begin

No terrain used, AERMAP will not be run

****

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...

Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season	Albedo	Bo	zo
Winter	0.35	1.50	1.000
Spring	0.14	1.00	1.000
Summer	0.16	2.00	1.000
Autumn	0.18	2.00	1.000

Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl

Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl

Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl

Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl

Buildings and/or terrain present or rectangular area source, skipping probe

FLOWSECTOR started 03/26/21 14:57:25

****

Running AERMOD

Processing Winter

Processing surface roughness sector 1

```
**************************************************
Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
```

```
**************************************************
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
 ****************************************

  Running AERMOD
 Processing Spring

Processing surface roughness sector  1

**************************************************
Processing wind flow sector   1
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ****************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1


**************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***
```

```
**************************************************
Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
```

```
**************************************************

Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ****************************************

  Running AERMOD

 Processing Autumn

Processing surface roughness sector  1

**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************
Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************
Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20
```

```
    ********   WARNING MESSAGES   ********
                ***  NONE  ***

FLOWSECTOR   ended 03/26/21 14:57:36

REFINE       started 03/26/21 14:57:36

 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0

    ********   WARNING MESSAGES   ********
                ***  NONE  ***

REFINE       ended 03/26/21 14:57:38

 *********************************************
 AERSCREEN Finished Successfully
 With no errors or warnings
 Check log file for details
 *********************************************

 Ending date and time  03/26/21 14:57:40
```

```
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
 H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.29591E+01         1.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31057E+01        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32350E+01        50.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33461E+01        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34433E+01       100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35226E+01       125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
*  0.35961E+01       150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24647E+01       175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18875E+01       200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14822E+01       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12512E+01       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10773E+01       275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.94205E+00       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.83454E+00       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.74768E+00       350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.67491E+00       375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

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310.0    2.0
   0.61418E+00       400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.56271E+00       425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.51801E+00       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.47943E+00       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44582E+00       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41606E+00       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38935E+00       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36558E+00       575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34431E+00       600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32516E+00       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30784E+00       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29212E+00       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27763E+00       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26433E+00       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25212E+00       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24088E+00       775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23051E+00       800.00      0.00   0.0        Winter       0-360   10011001
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-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.22087E+00   825.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.21191E+00   850.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20356E+00   875.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19579E+00   900.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.18852E+00   925.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.18171E+00   950.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.17533E+00   975.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.16930E+00   1000.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.16362E+00   1025.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.15825E+00   1050.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.15319E+00   1075.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.14841E+00   1100.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.14389E+00   1125.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.13960E+00   1150.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.13553E+00   1175.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.13166E+00   1200.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0

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   0.12798E+00      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12448E+00      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12115E+00      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11796E+00      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11493E+00      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11202E+00      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10924E+00      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10659E+00      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10404E+00      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10159E+00      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.99251E-01      1475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.97000E-01      1500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.94833E-01      1525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.92743E-01      1550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.90732E-01      1575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.88796E-01      1600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.86931E-01      1625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.85134E-01      1650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.83400E-01      1675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.81721E-01      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.80095E-01      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.78525E-01      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.77008E-01      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.75540E-01      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.74121E-01      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.72748E-01      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.71418E-01      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.70130E-01      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.68881E-01      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.67671E-01      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.66497E-01      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.65359E-01      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.64254E-01      2025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.63343E-01      2050.00      0.00   0.0        Winter       0-360   10011001
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-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.62300E-01   2075.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.61286E-01   2100.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.60300E-01   2125.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.59342E-01   2150.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.58410E-01   2175.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.57503E-01   2200.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.56620E-01   2225.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.55761E-01   2250.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.54924E-01   2275.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.54108E-01   2300.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.53314E-01   2325.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.52539E-01   2350.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.51784E-01   2375.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.51047E-01   2400.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.50329E-01   2425.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.49627E-01   2450.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0

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   0.48942E-01      2475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.48273E-01      2500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.47620E-01      2525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.46981E-01      2550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.46358E-01      2575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.45748E-01      2600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.45153E-01      2625.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44571E-01      2650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44001E-01      2675.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43444E-01      2700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.42900E-01      2725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.42366E-01      2750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41845E-01      2775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41334E-01      2800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40834E-01      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40344E-01      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39865E-01      2875.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.39395E-01      2900.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38935E-01      2925.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38484E-01      2950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38042E-01      2975.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37608E-01      3000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37184E-01      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36767E-01      3050.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36358E-01      3075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35958E-01      3100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35564E-01      3125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35179E-01      3150.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34800E-01      3174.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34428E-01      3199.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34063E-01      3225.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33705E-01      3250.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33354E-01      3275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33008E-01      3300.00      0.00   0.0        Winter       0-360   10011001
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-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.32669E-01   3325.00   0.00 15.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.32336E-01   3350.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.32008E-01   3375.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.31687E-01   3400.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.31370E-01   3425.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.31060E-01   3450.00   0.00 15.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.30754E-01   3475.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.30454E-01   3500.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.30159E-01   3525.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.29869E-01   3550.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.29583E-01   3575.00   0.00 15.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.29302E-01   3600.00   0.00 20.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.29026E-01   3625.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.28754E-01   3650.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.28487E-01   3675.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.28224E-01   3700.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0

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   0.27965E-01      3725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27710E-01      3750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27459E-01      3775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27212E-01      3800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26969E-01      3825.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26730E-01      3849.99      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26494E-01      3875.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26262E-01      3900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26033E-01      3925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25808E-01      3950.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25586E-01      3975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25368E-01      4000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25152E-01      4025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24940E-01      4050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24731E-01      4075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24525E-01      4100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24322E-01      4125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.24122E-01      4150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23924E-01      4175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23729E-01      4200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23537E-01      4225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23348E-01      4250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23162E-01      4275.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22978E-01      4300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22796E-01      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22617E-01      4350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22440E-01      4375.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22266E-01      4400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22094E-01      4425.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21924E-01      4450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21757E-01      4475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21592E-01      4500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21429E-01      4525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21268E-01      4550.00      0.00   0.0        Winter       0-360   10011001
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-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.21109E-01   4575.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20952E-01   4600.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20798E-01   4625.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20645E-01   4650.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20494E-01   4675.00   0.00 15.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20345E-01   4700.00   0.00 15.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20198E-01   4725.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20052E-01   4750.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19909E-01   4775.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19767E-01   4800.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19627E-01   4825.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19489E-01   4850.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19352E-01   4875.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19217E-01   4900.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19084E-01   4925.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.18952E-01   4950.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0

```
   0.18822E-01      4975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18693E-01      5000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
```

Start date and time 03/26/21 14:57:47

AERSCREEN 16216

3rd and Fairfax Operation

3rd and Fairfax Operation

---------- DATA ENTRY VALIDATION ----------

	METRIC	ENGLISH
** AREADATA **	---	---
Emission Rate:	0.0129 g/s	0.102 lb/hr
Area Height:	3.00 meters	9.84 feet
Area Source Length:	298.00 meters	977.69 feet
Area Source Width:	102.00 meters	334.65 feet
Vertical Dimension:	1.50 meters	4.92 feet
Model Mode:	URBAN	
Population:	3967000	
Dist to Ambient Air:	1.0 meters	3. feet

** BUILDING DATA **

No Building Downwash Parameters

** TERRAIN DATA **

No Terrain Elevations

Source Base Elevation: 0.0 meters 0.0 feet

Probe distance: 5000. meters 16404. feet

No flagpole receptors

No discrete receptors used

** FUMIGATION DATA **

No fumigation requested

** METEOROLOGY DATA **

Min/Max Temperature: 250.0 / 310.0 K -9.7 / 98.3 Deg F

Minimum Wind Speed: 0.5 m/s

Anemometer Height: 10.000 meters

Dominant Surface Profile: Urban

Dominant Climate Type: Average Moisture

Surface friction velocity (u*): not adjusted

DEBUG OPTION ON

AERSCREEN output file:

2021.03.26_3rdandFairfax_Operation.out

*** AERSCREEN Run is Ready to Begin

No terrain used, AERMAP will not be run

****

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...

Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season	Albedo	Bo	zo
Winter	0.35	1.50	1.000
Spring	0.14	1.00	1.000
Summer	0.16	2.00	1.000
Autumn	0.18	2.00	1.000

Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl

Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl

Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl

Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl

Buildings and/or terrain present or rectangular area source, skipping probe

FLOWSECTOR started 03/26/21 14:58:51

****

Running AERMOD

Processing Winter

Processing surface roughness sector 1

```
**************************************************
Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
```

```
**************************************************
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
 ****************************************

  Running AERMOD
 Processing Spring

Processing surface roughness sector  1

**************************************************
Processing wind flow sector   1
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ****************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1


**************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***
```

```
**************************************************
Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
```

```
**************************************************

Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ****************************************

  Running AERMOD

 Processing Autumn

Processing surface roughness sector  1

**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************
Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************
Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


FLOWSECTOR   ended 03/26/21 14:59:03


REFINE       started 03/26/21 14:59:03

 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***


REFINE       ended 03/26/21 14:59:05

 ********************************************
 AERSCREEN Finished Successfully
 With no errors or warnings
 Check log file for details
 ********************************************


 Ending date and time  03/26/21 14:59:09
```

```
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
 H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.11416E+02         1.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11982E+02        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12480E+02        50.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12909E+02        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13284E+02       100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13590E+02       125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
*  0.13873E+02       150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.95088E+01       175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.72818E+01       200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.57182E+01       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.48271E+01       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41561E+01       275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36344E+01       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32196E+01       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28845E+01       350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26037E+01       375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

```
310.0    2.0
   0.23695E+01       400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21709E+01       425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19984E+01       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18496E+01       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17199E+01       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16051E+01       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15021E+01       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14104E+01       575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13283E+01       600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12544E+01       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11876E+01       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11270E+01       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10711E+01       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10198E+01       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.97267E+00       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.92931E+00       775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.88927E+00       800.00      0.00   0.0        Winter       0-360   10011001
```

-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.85210E+00   825.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.81751E+00   850.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.78533E+00   875.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.75533E+00   900.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.72729E+00   925.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.70104E+00   950.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.67642E+00   975.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.65316E+00   1000.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.63121E+00   1025.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.61053E+00   1050.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.59101E+00   1075.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.57256E+00   1100.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.55510E+00   1125.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.53855E+00   1150.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.52286E+00   1175.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.50793E+00   1200.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0

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   0.49375E+00      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.48024E+00      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.46737E+00      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.45510E+00      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44337E+00      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43217E+00      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.42145E+00      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41120E+00      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40137E+00      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39195E+00      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38290E+00      1475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37422E+00      1500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36586E+00      1525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35780E+00      1550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35004E+00      1575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34257E+00      1600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33537E+00      1625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

```
310.0    2.0
   0.32844E+00      1650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32175E+00      1675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31527E+00      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30900E+00      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30294E+00      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29709E+00      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29143E+00      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28595E+00      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28065E+00      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27553E+00      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27055E+00      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26574E+00      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26107E+00      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25654E+00      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25215E+00      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24789E+00      2025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24437E+00      2050.00      0.00   0.0        Winter       0-360   10011001
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-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.24035E+00   2075.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.23644E+00   2100.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.23264E+00   2125.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.22894E+00   2150.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.22534E+00   2175.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.22184E+00   2200.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.21844E+00   2225.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.21512E+00   2250.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.21189E+00   2275.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20875E+00   2300.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20568E+00   2325.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.20269E+00   2350.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19978E+00   2375.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19694E+00   2400.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19417E+00   2425.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.19146E+00   2450.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0

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   0.18881E+00      2475.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18623E+00      2500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18371E+00      2525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18125E+00      2550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17885E+00      2575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17649E+00      2600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17420E+00      2625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17195E+00      2650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16975E+00      2675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16760E+00      2700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16550E+00      2725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16345E+00      2750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16143E+00      2775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15946E+00      2800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15753E+00      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15564E+00      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15380E+00      2875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.15198E+00      2900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15021E+00      2925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14847E+00      2950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14676E+00      2975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14509E+00      3000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14345E+00      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14184E+00      3050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14027E+00      3075.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13872E+00      3100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13720E+00      3125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13572E+00      3150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13426E+00      3175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13282E+00      3200.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13141E+00      3225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13003E+00      3250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12867E+00      3275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12734E+00      3300.00      0.00   0.0        Winter       0-360   10011001
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-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.12603E+00   3325.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.12475E+00   3350.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.12349E+00   3375.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.12224E+00   3400.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.12103E+00   3425.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.11983E+00   3450.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.11865E+00   3475.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.11749E+00   3500.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.11635E+00   3525.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.11523E+00   3550.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.11413E+00   3575.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.11305E+00   3600.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.11198E+00   3625.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.11093E+00   3650.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.10990E+00   3675.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.10888E+00   3700.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0

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   0.10789E+00      3725.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10690E+00      3750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10594E+00      3775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10498E+00      3800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10405E+00      3825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10312E+00      3850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10221E+00      3875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10132E+00      3900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10044E+00      3925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.99566E-01      3950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.98710E-01      3975.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.97867E-01      4000.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.97036E-01      4025.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.96217E-01      4050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.95411E-01      4075.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.94615E-01      4100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.93832E-01      4125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

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310.0    2.0
   0.93059E-01      4149.99      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.92297E-01      4175.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.91546E-01      4200.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.90806E-01      4225.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.90076E-01      4250.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.89356E-01      4275.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.88646E-01      4300.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.87945E-01      4325.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.87255E-01      4350.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.86573E-01      4375.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.85901E-01      4400.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.85238E-01      4425.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.84583E-01      4449.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.83937E-01      4475.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.83300E-01      4500.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.82671E-01      4525.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.82050E-01      4550.00      0.00  20.0        Winter       0-360   10011001
```

-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.81437E-01   4575.00   0.00 20.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.80832E-01   4600.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.80235E-01   4625.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.79645E-01   4650.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.79063E-01   4675.00   0.00 20.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.78488E-01   4700.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.77921E-01   4725.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.77361E-01   4750.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.76807E-01   4775.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.76260E-01   4800.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.75720E-01   4825.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.75187E-01   4850.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.74659E-01   4875.00   0.00   0.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.74139E-01   4900.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.73625E-01   4924.99   0.00 15.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0
   0.73116E-01   4950.00   0.00   5.0   Winter   0-360   10011001
-1.30 0.043 -9.000 0.020 -999.   21.   6.0 1.000   1.50   0.35   0.50   10.0
310.0   2.0

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   0.72614E-01      4975.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.72118E-01      5000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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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

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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 Southern District of Illinois
Duarte et al, *Plaintiffs,* vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 3:19-cv-00302-SMY-GCS
Rosenfeld Deposition. 2-19-2020

In the Circuit Court of Jackson County, Missouri
Karen Cornwell, *Plaintiff,* vs. Marathon Petroleum, LP, *Defendant.*
Case No.: 1716-CV10006
Rosenfeld Deposition. 8-30-2019

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 United States District Court For The Southern District of Mississippi
Guy Manuel vs. The BP Exploration et al., Defendants
Case: No 1:19-cv-00315-RHW
Rosenfeld Deposition, 4-22-2020

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

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

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Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
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 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. 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) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- 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 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, 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 more than 150 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- 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.

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 is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

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 examinations, 2009-2011.