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

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April 9, 2020

San Mateo County Planning Commission
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Subject: Comments on the MidPen Cypress Point Project, PLN2018-00264

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

We write regarding the proposed MidPen Cypress Point Project ("Project") located in Moss Beach, California. MidPen proposes to develop 71 housing units, a community building, and outdoor recreation areas on the 11-acre Project site. I am a California-licensed hydrogeologist and the former Senior Science Policy Advisor with the U.S. EPA. My CV is attached for reference as Exhibit A.

To prepare the comments below, we have reviewed the Project's Preliminary Environmental Evaluation Report (PEIR) dated April 2019, the Phase I Report dated November 10, 2015, the Additional Subsurface Investigation and Water Well Evaluation dated February 20, 2018, the Groundwater Sampling and Well Destruction Report dated April 9, 2018.

Our review of the above documents leads us to conclude that the PEIR fails to adequately evaluate the Project's impacts in the subject areas of Hazards and Hazardous Materials and Hydrology and Water Quality. Impacts associated with construction and operation of the proposed Project are undisclosed and inadequately mitigated. An Environmental Impact Report (EIR) should be prepared to assess and mitigate the potential impacts that the Project may have.

Hazards and Hazardous Materials

The PEIR fails to disclose residual soil contamination at the Project site. The Project site is a former World War II-era facility used for gunnery training. A November 10, 2015 Phase I Environmental Site Assessment (ESA), prepared for the Project, describes the Project site to have been used for barracks, offices, a mess hall, a library, a garage, a boiler room, and an incinerator.

On the basis of a Phase I recommendation, a Phase II ESA sampling investigation was completed. The Phase II ESA found two locations (Borings B-7 and B-21) where lead concentrations in soil exceeded the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL).

The concentrations of lead in those two samples, taken at the ground surface, was 230 mg/kg and 88 mg/kg, respectively. In contrast, the RWQCB ESL for lead in residential shallow soil is 32 mg/kg[1] based on terrestrial habitat exposure.

The lead contamination was attributed in the Phase I ESA to the use of lead paint. The Phase II ESA was followed by an additional investigation (the February 20, 2018 "Additional Subsurface Investigation & Water Well Evaluation") that conducted further sampling for lead in soil. The additional investigation found lead at one location at concentrations above the ESL. The concentration of lead in soil at boring CS-3 was found to be 290 mg/kg – nine times the ESL. Figure 2 from the additional investigation is attached and shows that the horizontal extent of the lead contamination has not been determined.

The additional investigation, without any regulatory input, prescribed mixing of Project site soils upon excavation as a solution to the lead contamination. None of these lead contamination results, nor the suggested soil mixing plan, were disclosed in the PEIR. The mixing plan also does not address the fact that the horizontal extent of the lead contamination is unknown and that additional elevated lead soil concentrations ("hot spots") may be found if further testing as conducted.

No documentation was provided in the PEIR, in the Phase I, the Phase II or the additional investigation to show that the results were shared with any regulatory agency. The Project site does not appear on the RWQCB Geotracker or the Department of Toxic Substances (DTSC) Control Envirostor websites and therefore the lead contamination that was found apparently has not been brought to the attention of the RWQCB or the DTSC.

The Phase I, the Phase II and the additional investigation basically self-certify that the sampling that was conducted and the analysis of the results do not pose a threat to human health with the soil mixing plan that is planned. The additional investigation concluded (p. 5):

> On the basis of the information, presented herein, no further investigation or remedial action is warranted at this time.

Without regulatory review, this conclusion of no further action or remediation and the basis for this conclusion (all which was not disclosed in the PEIR), should not be relied upon for decision making about the potential risk to human health and the adequacy of the Mitigation Measure HAZ-1, the sole mitigation measure proposed to address Hazards and Hazardous Waste impacts. Mitigation Measure HAZ-1 only commits to a management plan and is quoted in its entirely below:

> MidPen will prepare a Site Management Plan for the project site prior to submitting an application for a Coastal Development Permit for the proposed project, and will comply with all requirements and implement all BMPs contained in the plan during construction of the project.

Because of the lead contamination, the Phase I, the Phase II and the additional investigation should be submitted for regulatory review, to the San Mateo County Environmental Health Services, to the San

[1] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html (Table "Tier 1 ESLs")

Francisco Bay RWQCB, and to DTSC. A formal voluntary oversight agreement is recommended with the RWQCB to certify the reliability of the data for decision making and to ensure the protection of public health. Any determination by the regulatory agencies about the need for further action, to include sampling or soil excavation and off-site disposal, should be included in an EIR.

Hydrology and Water Quality

The Project site is located approximately 750 feet from the coastline. A perennial stream (Montara Creek), located approximately 50 to 250 feet to the northeast of the project site, runs in parallel to the northern border of the site (prior to emptying into the Pacific Ocean).

The PEIR states (p. 18):

> Potential impacts to groundwater and surface water quality could occur both during construction and operation of the proposed project. Temporary increases in the erosion of exposed soils during construction of the project could result in minor on-or-off-site water quality impacts, particularly if rainfall events occur during an active construction phase.

The PEIR further states (p. 18):

> On-site soils are subject to severe water erosion hazards (NRCS 2018).

What the PEIR fails to disclose is that onsite soils are contaminated with lead at concentrations greater than the RWQCB ESL 32 mg/kg for the protection of terrestrial habitat.[2] The PEIR makes no specific provisions in Mitigation Measure GEO-2 for the protection of terrestrial habitat in the adjacent Montara Creek from the erosion of lead-contaminated soils upon soil disturbance during the Project's construction period or from any residual soil contamination that would be left in place after the mixing of site soils, as planned.

Note that the statistical analysis that was performed in the Additional Subsurface Investigation & Water Well Evaluation found the upper 95th percentile confidence limit for lead in soil to be 42 mg/kg. This value exceeds the ESL of 32 mg/kg for the protection of terrestrial habitat.

Best management practices (BMPs) that are specific to known lead contamination at concentrations above the terrestrial habitat protection ESL need to be implemented during the project construction period. The reference in the PEIR to compliance with the State Water Resources Control Board Construction General permit is insufficient mitigation without consideration of the lead contamination and specific BMPs that would be taken to control lead in stormwater runoff An EIR should be prepared to disclose lead contamination in the context of Hydrology and Water Quality impacts, along with effective mitigation measures and BMPs to control lead-contaminated soils from erosion and transportation to the adjacent Montara Creek.

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[2] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html (Table "Summary of Soil ESLs")

Sincerely,

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

Attachment A: CV, Matt Hagemann

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

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.

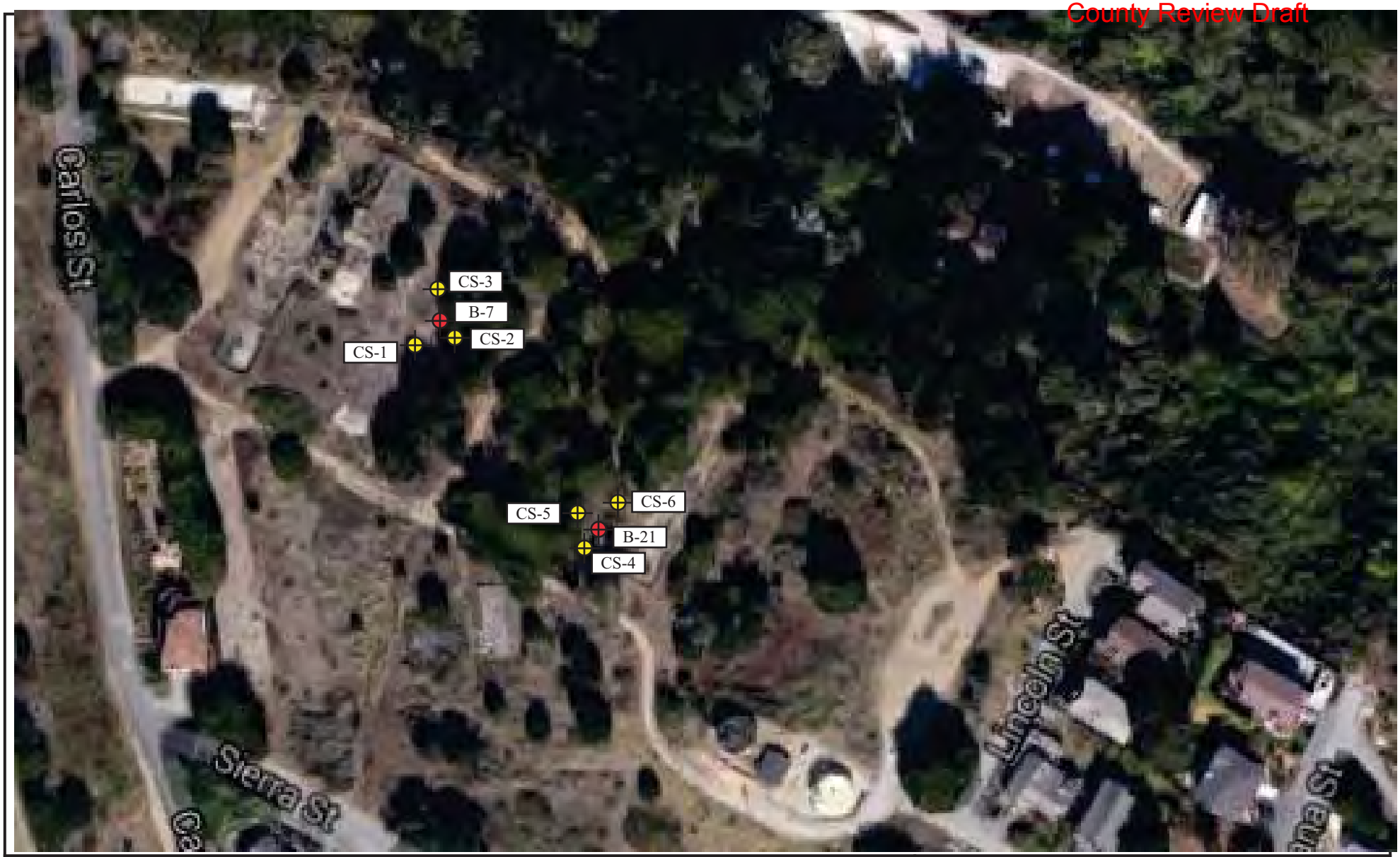
Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

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

Attachment B: Additional Subsurface Investigation & Water Well Evaluation – Figure 2

County Review Draft



LEGEND

- Soil Boring (AEI, 2017)
- Exploratory Boring (AEI, 2015)

0 50 100
APPROXIMATE SCALE (Feet)

N

AEI CONSULTANTS

3880 S. BASCOM AVENUE, SAN JOSE, CALIFONIA

CONFIRMATION BORING LOCATIONS

Carlos Street at Sierra Street
Moss Beach, California

FIGURE 2
Project No. 350248

Attachment C: Environmental Screening Level Tables

Tier 1 ESLs [1]

2019 (Rev. 2)

Based on a generic conceptual site model designed for use at most sites[2]

Chemicals	CAS No.	Groundwater (µg/L)	Soil (mg/kg)	Subslab / Soil Gas (µg/m^3)	Indoor Air (µg/m^3)
1,2-Dichloropropane	78-87-5	2.3E+00	6.5E-02	9.4E+00	2.8E-01
1,3-Dichloropropene	542-75-6	5.0E-01	1.7E-02	5.8E+00	1.8E-01
Dieldrin	60-57-1	1.4E-04	4.6E-04	2.0E-02	6.1E-04
Diethyl phthalate	84-66-2	1.5E+00	2.5E-02	--	--
Dimethyl phthalate	131-11-3	1.5E+00	3.5E-02	--	--
2,4-Dimethylphenol	105-67-9	1.0E+02	8.1E+00	3.3E+01	1.0E+00
2,4-Dinitrophenol	51-28-5	3.9E+01	3.0E+00	--	--
2,4-Dinitrotoluene	121-14-2	2.4E-01	2.3E-02	--	--
1,4-Dioxane	123-91-1	3.8E-01	1.7E-04	1.2E+01	3.6E-01
Dioxin (2,3,7,8-TCDD)	1746-01-6	1.4E-08	4.8E-06	2.5E-06	7.4E-08
Endosulfan	115-29-7	8.7E-03	9.8E-03	--	--
Endrin	72-20-8	2.3E-03	1.1E-03	--	--
Ethylbenzene	100-41-4	3.5E+00	4.3E-01	3.7E+01	1.1E+00
Fluoranthene [PAH]	206-44-0	8.0E+00	6.9E-01	--	--
Fluorene [PAH]	86-73-7	3.9E+00	6.0E+00	--	--
Heptachlor	76-44-8	2.1E-04	1.2E-01	7.2E-02	2.2E-03
Heptachlor epoxide	1024-57-3	1.1E-04	1.8E-04	3.6E-02	1.1E-03
Hexachlorobenzene	118-74-1	7.7E-04	8.0E-04	1.8E-01	5.5E-03
Hexachlorobutadiene	87-68-3	1.4E-01	2.8E-02	4.3E+00	1.3E-01
g-Hexachlorocyclohexane (Lindane)	58-89-9	1.6E-02	7.4E-03	--	--
Hexachloroethane	67-72-1	3.3E-01	1.9E-02	8.5E+00	2.6E-01
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	4.9E-02	4.8E-01	--	--
Lead	7439-92-1	2.5E+00	3.2E+01	--	--
Mercury (elemental)	7439-97-6	2.5E-02	1.3E+01	1.0E+00	3.1E-02
Methoxychlor	72-43-5	3.0E-03	1.3E-02	--	--
Methylene chloride	75-09-2	5.0E+00	1.2E-01	3.4E+01	1.0E+00
Methyl ethyl ketone	78-93-3	5.6E+03	6.1E+00	1.7E+05	5.2E+03
Methyl isobutyl ketone	108-10-1	1.2E+02	3.6E-01	1.4E+04	4.2E+02
Methyl mercury	22967-92-6	3.0E-03	3.4E-02	--	--
2-Methylnaphthalene	91-57-6	2.1E+00	8.8E-01	2.3E+03	6.8E+01
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.0E+00	2.8E-02	3.6E+02	1.1E+01
Molybdenum	7439-98-7	1.0E+02	6.9E+00	--	--
Naphthalene [PAH]	91-20-3	1.7E-01	4.2E-02	2.8E+00	8.3E-02
Nickel	7440-02-0	8.2E+00	8.6E+01	--	--
Pentachlorophenol	87-86-5	1.0E+00	1.3E-02	--	--
Perchlorate	7790-98-9	6.0E+00	5.5E+01	--	--
Petroleum - Gasoline	--	1.0E+02	1.0E+02	3.3E+03	1.0E+02
Petroleum - Stoddard Solvent	--	1.0E+02	1.0E+02	1.1E+04	3.3E+02
Petroleum - Jet Fuel	--	1.0E+02	1.0E+02	1.1E+04	3.3E+02
Petroleum - Diesel	--	1.0E+02	2.6E+02	8.9E+03	2.7E+02
Petroleum - HOPs	--	1.0E+02	--	--	--
Petroleum - Motor Oil	--	--	1.6E+03	--	--
Phenanthrene [PAH]	85-01-8	4.6E+00	7.8E+00	1.8E+03	5.5E+01
Phenol	108-95-2	5.0E+00	1.6E-01	5.2E+03	1.6E+02
Polychlorinated biphenyls (PCBs)	1336-36-3	1.7E-04	2.3E-01	1.6E-01	4.9E-03
Pyrene [PAH]	129-00-0	2.0E+00	4.5E+01	--	--
Selenium	7782-49-2	5.0E-01	2.4E+00	--	--
Silver	7440-22-4	1.9E-01	2.5E+01	--	--
Styrene	100-42-5	1.0E+01	9.2E-01	3.1E+04	9.4E+02
tert-Butyl alcohol	75-65-0	1.2E+01	7.5E-02	--	--
1,1,1,2-Tetrachloroethane	630-20-6	5.7E-01	1.7E-02	1.3E+01	3.8E-01
1,1,2,2-Tetrachloroethane	79-34-5	1.0E+00	1.8E-02	1.6E+00	4.8E-02
Tetrachloroethene	127-18-4	6.4E-01	8.0E-02	1.5E+01	4.6E-01
Thallium	7440-28-0	2.0E+00	7.8E-01	--	--
Toluene	108-88-3	4.0E+01	3.2E+00	1.0E+04	3.1E+02
Toxaphene	8001-35-2	2.0E-04	5.1E-01	--	--
1,2,4-Trichlorobenzene	120-82-1	5.0E+00	1.2E+00	7.0E+01	2.1E+00

Tier 1 ESLs [1]

2019 (Rev. 2)

Based on a generic conceptual site model designed for use at most sites[2]

Chemicals	CAS No.	Groundwater (µg/L)	Soil (mg/kg)	Subslab / Soil Gas (µg/m^3)	Indoor Air (µg/m^3)
1,1,1-Trichloroethane	71-55-6	6.2E+01	7.0E+00	3.5E+04	1.0E+03
1,1,2-Trichloroethane	79-00-5	5.0E+00	7.6E-02	5.8E+00	1.8E-01
Trichloroethene	79-01-6	1.2E+00	8.5E-02	1.6E+01	4.8E-01
2,4,5-Trichlorophenol	95-95-4	1.1E+01	2.9E+00	--	--
2,4,6-Trichlorophenol	88-06-2	6.3E-01	4.0E-02	1.0E+01	3.0E-01
1,2,3-Trichloropropane	96-18-4	5.0E-03	1.1E-04	1.0E+01	3.1E-01
Vanadium	7440-62-2	1.9E+01	1.8E+01	--	--
Vinyl chloride	75-01-4	8.6E-03	1.5E-03	3.2E-01	9.5E-03
Xylenes	1330-20-7	2.0E+01	2.1E+00	3.5E+03	1.0E+02
Zinc	7440-66-6	8.1E+01	3.4E+02	--	--

Notes:

1 - ESLs are developed based on methodologies discussed in the User's Guide. Evaluation of laboratory detection limits and naturally occurring background or ambient concentrations should be independently conducted. See User's Guide Chapter 12 (Additional Considerations) for further information.

2 - Generic Conceptual Site Model - See User's Guide Chapter 2. Input settings are:
Land Use = Residential
Groundwater Use = Drinking Water Resource
MCL Priority over Risk-Based Levels = Yes
Discharge to Surface Water = Saltwater & Freshwater
Vegetation Level = Substantial
Soil Exposure Depth = Shallow

Abbreviations:

DDD - Dichlorodiphenyldichloroethane
DDE - Dichlorodiphenyldichloroethene
DDT - Dichlorodiphenyltrichloroethane
HOPs - Hydrocarbon Oxidation Products (biodegradation metabolites and photo-oxidation products of petroleum hydrocarbons). See User's Guide Chapter 4 for further information.
PAH - Polycyclic aromatic hydrocarbon
TCDD - Tetrachlorodibenzodioxin

2019 (Rev. 2)		Summary of Groundwater ESLs (µg/L)														
Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table GW-1)			Aquatic Habitat Goal Levels (Table GW-2)			Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3)				Gross Contam-ination Levels (GW-4)	Odor Nuisance Levels (Table GW-5)		GW Tier 1 ESL	Basis
								Residential		Commercial/Industrial						
		MCL Priority[1]	Tapwater Cancer Risk	Tapwater Non-cancer Hazard	Fresh Water Ecotox	Saltwater Ecotox	Seafood Ingestion Human Health	Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard		Drinking Water	Non-Drinking Water		
Heptachlor	76-44-8	1.0E-02	1.4E-03	1.3E+00	3.8E-03	3.6E-03	2.1E-04	1.8E-01	--	7.9E-01	--	9.0E+01	2.0E+01	2.0E+02	2.1E-04	Aquatic Habitat
Heptachlor epoxide	1024-57-3	1.0E-02	1.4E-03	1.2E-01	3.8E-03	3.6E-03	1.1E-04	1.3E+00	--	5.5E+00	--	1.0E+02	--	--	1.1E-04	Aquatic Habitat
Hexachlorobenzene	118-74-1	1.0E+00	8.8E-03	1.6E+01	3.7E+00	6.5E+01	7.7E-04	7.9E-02	--	3.4E-01	--	3.1E+00	3.0E+03	3.0E+04	7.7E-04	Aquatic Habitat
Hexachlorobutadiene	87-68-3	1.4E-01	1.4E-01	6.5E+00	4.7E+00	3.2E+00	5.0E+01	3.0E-01	--	1.3E+00	--	1.6E+03	6.0E+00	6.0E+01	1.4E-01	Tap Canc-Risk
g-Hexachlorocyclohexane (Lindane)	58-89-9	2.0E-01	3.2E-02	3.6E+00	8.0E-02	1.6E-02	6.3E-02	--	--	--	--	3.7E+03	1.2E+04	1.2E+05	1.6E-02	Aquatic Habitat
Hexachloroethane	67-72-1	3.3E-01	3.3E-01	6.2E+00	1.2E+01	9.4E+01	8.9E+00	1.6E+00	2.0E+02	7.0E+00	8.2E+02	2.5E+04	1.0E+01	1.0E+02	3.3E-01	Tap Canc-Risk
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	2.5E-01	2.5E-01	--	--	1.5E+01	4.9E-02	--	--	--	--	9.5E-02	--	--	4.9E-02	Aquatic Habitat
Lead	7439-92-1	1.5E+01	9.2E+00	2.0E-01	2.5E+00	8.1E+00	--	--	--	--	--	5.0E+04	--	--	2.5E+00	Aquatic Habitat
Mercury (elemental)	7439-97-6	2.0E+00	--	6.1E-02	2.5E-02	2.5E-02	5.1E-02	--	8.9E-02	--	3.8E-01	3.0E+01	--	--	2.5E-02	Aquatic Habitat
Methoxychlor	72-43-5	3.0E+01	--	9.0E-02	1.9E-02	3.0E-03	--	--	--	--	--	5.0E+01	4.7E+03	4.7E+04	3.0E-03	Aquatic Habitat
Methylene chloride	75-09-2	5.0E+00	9.3E-01	1.0E+02	2.2E+03	3.2E+03	1.6E+03	7.8E+00	3.2E+03	9.4E+01	1.3E+04	5.0E+04	9.1E+03	9.1E+04	5.0E+00	MCL
Methyl ethyl ketone	78-93-3	5.6E+03	--	5.6E+03	1.4E+04	--	--	--	2.3E+06	--	9.5E+06	5.0E+04	8.4E+03	8.4E+04	5.6E+03	Tap NC-Hazard
Methyl isobutyl ketone	108-10-1	1.2E+02	--	1.2E+02	1.7E+02	--	--	--	5.6E+05	--	2.3E+06	5.0E+04	1.3E+03	1.3E+04	1.2E+02	Tap NC-Hazard
Methyl mercury	22967-92-6	2.0E+00	--	2.0E+00	3.0E-03	--	--	--	--	--	--	5.0E+04	--	--	3.0E-03	Aquatic Habitat
2-Methylnaphthalene	91-57-6	3.6E+01	--	3.6E+01	2.1E+00	3.0E+01	--	--	--	--	--	1.3E+04	1.0E+01	1.0E+02	2.1E+00	Aquatic Habitat
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.0E+00	1.3E+01	6.3E+03	6.6E+04	8.0E+03	--	4.5E+02	1.3E+05	2.0E+03	5.5E+05	5.0E+04	5.0E+00	1.8E+03	5.0E+00	Odor/Nuis
Molybdenum	7439-98-7	1.0E+02	--	1.0E+02	2.4E+02	--	--	--	--	--	--	5.0E+04	--	--	1.0E+02	Tap NC-Hazard
Naphthalene [PAH]	91-20-3	1.7E-01	1.7E-01	6.1E+00	2.4E+01	1.5E+01	--	4.6E+00	1.7E+02	2.0E+01	7.3E+02	1.6E+04	2.1E+01	2.1E+02	1.7E-01	Tap Canc-Risk
Nickel	7440-02-0	1.0E+02	1.2E+01	2.2E+02	5.2E+01	8.2E+00	4.6E+03	--	--	--	--	5.0E+04	--	--	8.2E+00	Aquatic Habitat
Pentachlorophenol	87-86-5	1.0E+00	4.0E-02	2.3E+01	1.5E+01	7.9E+00	8.2E+00	--	--	--	--	7.0E+03	3.0E+01	5.9E+03	1.0E+00	MCL
Perchlorate	7790-98-9	6.0E+00	--	1.0E+00	6.0E+02	--	--	--	--	--	--	5.0E+04	--	--	6.0E+00	MCL
Petroleum - Gasoline	--	7.6E+02	--	7.6E+02	4.4E+02	3.7E+03	--	--	--	--	--	5.0E+04	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Stoddard Solvent	--	2.1E+02	--	2.1E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Jet Fuel	--	2.1E+02	--	2.1E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Diesel	--	2.0E+02	--	2.0E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - HOPs	--	4.1E+02	--	4.1E+02	5.1E+02	5.1E+02	--	--	--	--	--	5.0E+04	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Motor Oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene [PAH]	85-01-8	--	--	--	6.3E+00	4.6E+00	--	--	--	--	--	4.1E+02	1.0E+03	1.0E+04	4.6E+00	Aquatic Habitat
Phenol	108-95-2	4.2E+03	--	4.2E+03	1.3E+03	5.8E+02	4.6E+06	--	--	--	--	5.0E+04	5.0E+00	7.9E+04	5.0E+00	Odor/Nuis
Polychlorinated biphenyls (PCBs)	1336-36-3	5.0E-01	1.9E-03	--	1.4E-02	3.0E-02	1.7E-04	2.9E-01	--	1.3E+00	--	3.5E+02	--	--	1.7E-04	Aquatic Habitat
Pyrene [PAH]	129-00-0	1.2E+02	--	1.2E+02	2.0E+00	1.5E+01	1.1E+04	--	--	--	--	7.0E+01	--	--	2.0E+00	Aquatic Habitat
Selenium	7782-49-2	5.0E+01	--	3.0E+01	5.0E+00	5.0E-01	--	--	--	--	--	5.0E+04	--	--	5.0E-01	Aquatic Habitat
Silver	7440-22-4	1.0E+02	--	9.4E+01	3.4E+00	1.9E-01	--	--	--	--	--	5.0E+04	1.0E+02	--	1.9E-01	Aquatic Habitat
Styrene	100-42-5	1.0E+01	5.0E-01	1.1E+03	--	--	--	--	8.5E+03	--	3.6E+04	5.0E+04	1.0E+01	1.1E+02	1.0E+01	Odor/Nuis
tert-Butyl alcohol	75-65-0	1.2E+01	1.2E+01	--	1.8E+04	--	--	--	--	--	--	5.0E+04	--	--	1.2E+01	Tap Canc-Risk
1,1,1,2-Tetrachloroethane	630-20-6	5.7E-01	5.7E-01	4.8E+02	9.3E+02	--	--	3.8E+00	--	1.7E+01	--	5.0E+04	--	--	5.7E-01	Tap Canc-Risk

2019 (Rev. 2)		Summary of Soil ESLs (mg/kg)															
Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table S-1)						Terrestrial Habitat Levels (Table S-2)		Leaching to Groundwater Levels (Table S-3)		Gross Contamination Levels (Table S-4)	Odor Nuisance Levels (Table S-5)			Soil Tier 1 ESL	Basis
		Residential: Shallow Soil Exposure		Commerical/ Industrial: Shallow Soil Exposure		Construction Worker: Any Land Use/ Any Depth Soil Exposure		Significantly Vegetated Area	Minimally Vegetated Area	Drinking Water	Non-drinking Water		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use: Any Soil Exposure (CW)		
		Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard	Examples: Parkland or single family homes with yards	Examples: High density residential or commercial/ industrial areas								
1,2-Dichlorobenzene	95-50-1	--	1.8E+03	--	9.4E+03	--	7.8E+03	4.3E+00	8.5E+00	1.0E+00	1.0E+00	3.8E+02	1.0E+03	2.5E+03	2.5E+03	1.0E+00	Leaching
1,3-Dichlorobenzene	541-73-1	--	--	--	--	--	--	6.0E+00	1.2E+01	7.4E+00	7.4E+00	6.1E+02	1.0E+02	5.0E+02	5.0E+02	6.0E+00	Terr Habitat
1,4-Dichlorobenzene	106-46-7	2.6E+00	3.4E+03	1.2E+01	2.6E+04	2.8E+02	1.5E+04	4.5E+00	9.0E+00	2.0E-01	2.0E-01	1.9E+02	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
3,3-Dichlorobenzidine	91-94-1	5.8E-01	--	2.7E+00	--	2.0E+01	--	--	--	2.5E-02	1.3E+02	6.0E+01	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
DDD	72-54-8	2.7E+00	--	1.2E+01	--	8.1E+01	--	8.5E+00	1.7E+01	6.5E+01	6.5E+01	6.5E+01	5.0E+02	1.0E+03	1.0E+03	2.7E+00	Canc-Risk
DDE	72-55-9	1.8E+00	--	8.3E+00	--	5.7E+01	--	3.3E-01	6.5E-01	2.9E+01	2.9E+01	2.9E+01	5.0E+02	1.0E+03	1.0E+03	3.3E-01	Terr Habitat
DDT	50-29-3	1.9E+00	3.7E+01	8.5E+00	5.2E+02	5.7E+01	1.4E+02	1.1E-03	7.8E+00	5.6E+00	5.6E+00	5.6E+00	5.0E+02	1.0E+03	1.0E+03	1.1E-03	Terr Habitat
1,1-Dichloroethane	75-34-3	3.6E+00	1.6E+04	1.6E+01	2.3E+05	3.7E+02	7.1E+04	1.1E+01	2.1E+01	2.0E-01	3.1E-01	1.7E+03	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
1,2-Dichloroethane	107-06-2	4.7E-01	3.2E+01	2.1E+00	1.4E+02	4.5E+01	1.3E+02	2.9E+01	2.9E+01	7.0E-03	3.1E-02	3.0E+03	1.0E+02	5.0E+02	5.0E+02	7.0E-03	Leaching
1,1-Dichloroethene	75-35-4	--	8.3E+01	--	3.5E+02	--	3.5E+02	4.3E+01	1.3E+02	5.4E-01	4.2E+00	1.2E+03	5.0E+02	1.0E+03	1.0E+03	5.4E-01	Leaching
cis-1,2-Dichloroethene	156-59-2	--	1.9E+01	--	8.5E+01	--	7.8E+01	8.4E+01	9.4E+02	1.9E-01	1.6E+00	2.4E+03	1.0E+02	5.0E+02	5.0E+02	1.9E-01	Leaching
trans-1,2-Dichloroethene	156-60-5	--	1.3E+02	--	6.0E+02	--	5.7E+02	8.4E+01	9.4E+02	6.5E-01	1.4E+01	1.9E+03	5.0E+02	1.0E+03	1.0E+03	6.5E-01	Leaching
2,4-Dichlorophenol	120-83-2	--	2.3E+02	--	3.5E+03	--	1.1E+03	2.1E+00	--	7.5E-03	7.5E-02	5.6E+03	5.0E+02	1.0E+03	1.0E+03	7.5E-03	Leaching
1,2-Dichloropropane	78-87-5	1.0E+00	1.6E+01	4.4E+00	6.6E+01	9.9E+01	6.6E+01	3.1E+01	6.3E+01	6.5E-02	6.5E-02	1.4E+03	1.0E+02	5.0E+02	5.0E+02	6.5E-02	Leaching
1,3-Dichloropropene	542-75-6	5.7E-01	7.2E+01	2.5E+00	3.1E+02	5.3E+01	3.0E+02	3.1E+01	6.3E+01	1.7E-02	4.0E-02	1.6E+03	5.0E+02	1.0E+03	1.0E+03	1.7E-02	Leaching
Dieldrin	60-57-1	3.7E-02	3.5E+00	1.6E-01	4.8E+01	1.1E+00	1.2E+01	9.6E-04	1.1E-01	4.6E-04	6.3E-03	2.4E+01	5.0E+02	1.0E+03	1.0E+03	4.6E-04	Leaching
Diethyl phthalate	84-66-2	--	5.1E+04	--	6.6E+05	--	1.5E+05	1.3E+01	2.7E+01	2.5E-02	2.5E-02	7.7E+02	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
Dimethyl phthalate	131-11-3	--	--	--	--	--	--	2.1E+01	4.2E+01	3.5E-02	3.5E-02	4.7E+03	5.0E+02	1.0E+03	1.0E+03	3.5E-02	Leaching
2,4-Dimethylphenol	105-67-9	--	1.6E+03	--	2.3E+04	--	7.1E+03	--	--	8.1E+00	8.9E+00	2.4E+04	1.0E+02	5.0E+02	5.0E+02	8.1E+00	Leaching
2,4-Dinitrophenol	51-28-5	--	1.6E+02	--	2.3E+03	--	7.1E+02	--	--	3.0E+00	5.7E+00	8.0E+03	5.0E+02	1.0E+03	1.0E+03	3.0E+00	Leaching
2,4-Dinitrotoluene	121-14-2	2.2E+00	1.6E+02	1.1E+01	2.3E+03	7.9E+01	7.1E+02	--	--	2.3E-02	1.1E+01	7.2E+02	5.0E+02	1.0E+03	1.0E+03	2.3E-02	Leaching
1,4-Dioxane	123-91-1	4.7E+00	8.1E+02	2.2E+01	4.5E+03	2.1E+02	3.4E+03	1.8E+00	1.8E+00	1.7E-04	8.4E-01	1.2E+05	5.0E+02	1.0E+03	1.0E+03	1.7E-04	Leaching
Dioxin (2,3,7,8-TCDD)	1746-01-6	4.8E-06	5.1E-05	2.2E-05	7.2E-04	1.5E-04	2.0E-04	1.3E-05	9.9E-05	3.0E-01	3.0E-01	3.0E-01	5.0E+02	1.0E+03	1.0E+03	4.8E-06	Canc-Risk
Endosulfan	115-29-7	--	4.2E+02	--	5.8E+03	--	1.5E+03	2.3E-02	3.8E-01	9.8E-03	9.8E-03	1.3E+01	5.0E+02	1.0E+03	1.0E+03	9.8E-03	Leaching
Endrin	72-20-8	--	2.1E+01	--	2.9E+02	--	7.4E+01	1.1E-03	1.1E-03	7.6E-03	7.6E-03	3.0E+01	5.0E+02	1.0E+03	1.0E+03	1.1E-03	Terr Habitat
Ethylbenzene	100-41-4	5.9E+00	3.4E+03	2.6E+01	2.1E+04	5.4E+02	1.5E+04	9.0E+01	4.3E+02	4.3E-01	4.3E-01	4.9E+02	5.0E+02	1.0E+03	1.0E+03	4.3E-01	Leaching
Fluoranthene [PAH]	206-44-0	--	2.4E+03	--	3.0E+04	--	6.7E+03	6.9E-01	1.2E+05	8.6E+01	8.6E+01	8.6E+01	5.0E+02	1.0E+03	1.0E+03	6.9E-01	Terr Habitat
Fluorene [PAH]	86-73-7	--	2.4E+03	--	3.0E+04	--	6.7E+03	--	--	6.0E+00	6.0E+00	9.4E+01	5.0E+02	1.0E+03	1.0E+03	6.0E+00	Leaching
Heptachlor	76-44-8	1.2E-01	3.5E+01	5.3E-01	4.8E+02	3.7E+00	1.2E+02	2.5E-01	5.0E-01	4.4E+01	4.4E+01	4.4E+01	1.0E+03	2.5E+03	2.5E+03	1.2E-01	Canc-Risk
Heptachlor epoxide	1024-57-3	6.2E-02	9.1E-01	2.8E-01	1.3E+01	1.9E+00	3.2E+00	--	--	1.8E-04	6.0E-03	1.2E+01	1.0E+03	2.5E+03	2.5E+03	1.8E-04	Leaching
Hexachlorobenzene	118-74-1	1.8E-01	5.6E+01	7.8E-01	7.7E+02	7.7E+00	2.0E+02	1.3E+02	2.5E+02	8.0E-04	8.2E-02	2.3E-01	5.0E+02	1.0E+03	1.0E+03	8.0E-04	Leaching
Hexachlorobutadiene	87-68-3	1.2E+00	7.8E+01	5.3E+00	1.2E+03	1.0E+02	3.5E+02	--	--	2.8E-02	6.2E-02	1.7E+01	5.0E+02	1.0E+03	1.0E+03	2.8E-02	Leaching
g-Hexachlorocyclohexane (Lindane)	58-89-9	5.5E-01	2.1E+01	2.5E+00	2.9E+02	1.6E+01	7.4E+01	7.4E+00	1.5E+01	7.4E-03	7.4E-03	1.2E+02	5.0E+02	1.0E+03	1.0E+03	7.4E-03	Leaching
Hexachloroethane	67-72-1	1.8E+00	3.8E+01	7.8E+00	3.7E+02	1.3E+02	1.2E+02	--	--	1.9E-02	9.2E-02	6.7E+01	5.0E+02	1.0E+03	1.0E+03	1.9E-02	Leaching
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	1.1E+00	--	2.1E+01	--	1.1E+02	--	4.8E-01	9.5E-01	1.6E+01	3.2E+01	2.3E+00	5.0E+02	1.0E+03	1.0E+03	4.8E-01	Terr Habitat
Lead	7439-92-1	8.2E+01	8.0E+01	3.8E+02	3.2E+02	2.7E+03	1.6E+02	3.2E+01	3.2E+01	--	--	--	--	--	--	3.2E+01	Terr Habitat
Mercury (elemental)	7439-97-6	--	1.3E+01	--	1.9E+02	--	4.4E+01	1.5E+01	2.0E+01	--	--	--	5.0E+02	1.0E+03	1.0E+03	1.3E+01	NC-Hazard
Methoxychlor	72-43-5	--	3.5E+02	--	4.8E+03	--	1.2E+03	1.3E-01	4.1E+03	1.3E-02	1.3E-02	1.6E+01	5.0E+02	1.0E+03	1.0E+03	1.3E-02	Leaching
Methylene chloride	75-09-2	1.9E+00	3.1E+02	2.5E+01	2.5E+03	4.9E+02	1.4E+03	9.8E-01	2.0E+00	1.2E-01	1.9E-01	3.3E+03	5.0E+02	1.0E+03	1.0E+03	1.2E-01	Leaching
Methyl ethyl ketone	78-93-3	--	2.7E+04	--	2.0E+05	--	1.2E+05	4.4E+01	8.8E+01	6.1E+00	1.5E+01	2.8E+04	5.0E+02	1.0E+03	1.0E+03	6.1E+00	Leaching
Methyl isobutyl ketone	108-10-1	--	3.4E+04	--	1.4E+05	--	1.4E+05	--	--	3.6E-01	5.1E-01	3.4E+03	1.0E+02	5.0E+02	5.0E+02	3.6E-01	Leaching
Methyl mercury	22967-92-6	--	6.3E+00	--	8.2E+01	--	1.9E+01	3.4E-02	3.4E-02	--	--	--	1.0E+02	5.0E+02	5.0E+02	3.4E-02	Terr Habitat
2-Methylnaphthalene	91-57-6	--	2.4E+02	--	3.0E+03	--	6.7E+02	--	--	8.8E-01	8.8E-01	3.8E+02	5.0E+02	1.0E+03	1.0E+03	8.8E-01	Leaching
Methyl tertiary butyl ether (MTBE)	1634-04-4	4.7E+01	1.6E+04	2.1E+02	6.6E+04	4.1E+03	6.5E+04	3.1E+01	6.3E+01	2.8E-02	2.5E+00	9.0E+03	1.0E+02	5.0E+02	5.0E+02	2.8E-02	Leaching

2019 (Rev. 2)		Summary of Vapor ESLs													
		Subslab/ Soil Gas (µg/m^3)							Indoor Air (µg/m^3)						
Chemicals	CAS No.	Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels (Table SG-1)				Subslab/ Soil Gas Vapor Intrusion: Odor Nuisance Levels (Table SG-2)	Tier 1 ESL	Basis	Direct Exposure Human Health Risk Levels (Table IA-1)				Odor Nuisance Levels (Table IA-2)	Tier 1 ESL	Basis
		Residential		Commercial/ Industrial					Residential		Commercial/ Industrial				
		Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard				Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard			
Dioxin (2,3,7,8-TCDD)	1746-01-6	2.5E-06	1.4E-03	1.1E-05	5.8E-03	--	2.5E-06	Canc-Risk	7.4E-08	4.2E-05	3.2E-07	1.8E-04	--	7.4E-08	Canc-Risk
Endosulfan	115-29-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	72-20-8	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	3.7E+01	3.5E+04	1.6E+02	1.5E+05	6.7E+04	3.7E+01	Canc-Risk	1.1E+00	1.0E+03	4.9E+00	4.4E+03	2.0E+03	1.1E+00	Canc-Risk
Fluoranthene [PAH]	206-44-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene [PAH]	86-73-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	76-44-8	7.2E-02	--	3.1E-01	--	1.0E+04	7.2E-02	Canc-Risk	2.2E-03	--	9.4E-03	--	3.0E+02	2.2E-03	Canc-Risk
Heptachlor epoxide	1024-57-3	3.6E-02	--	1.6E-01	--	1.0E+04	3.6E-02	Canc-Risk	1.1E-03	--	4.7E-03	--	3.0E+02	1.1E-03	Canc-Risk
Hexachlorobenzene	118-74-1	1.8E-01	--	8.0E-01	--	--	1.8E-01	Canc-Risk	5.5E-03	--	2.4E-02	--	--	5.5E-03	Canc-Risk
Hexachlorobutadiene	87-68-3	4.3E+00	--	1.9E+01	--	4.0E+05	4.3E+00	Canc-Risk	1.3E-01	--	5.6E-01	--	1.2E+04	1.3E-01	Canc-Risk
g-Hexachlorocyclohexane (Lindane)	58-89-9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	67-72-1	8.5E+00	1.0E+03	3.7E+01	4.4E+03	--	8.5E+00	Canc-Risk	2.6E-01	3.1E+01	1.1E+00	1.3E+02	--	2.6E-01	Canc-Risk
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	7439-92-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury (elemental)	7439-97-6	--	1.0E+00	--	4.4E+00	--	1.0E+00	NC-Hazard	--	3.1E-02	--	1.3E-01	--	3.1E-02	NC-Hazard
Methoxychlor	72-43-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	75-09-2	3.4E+01	1.4E+04	4.1E+02	5.8E+04	1.9E+07	3.4E+01	Canc-Risk	1.0E+00	4.2E+02	1.2E+01	1.8E+03	5.6E+05	1.0E+00	Canc-Risk
Methyl ethyl ketone	78-93-3	--	1.7E+05	--	7.3E+05	1.1E+06	1.7E+05	NC-Hazard	--	5.2E+03	--	2.2E+04	3.2E+04	5.2E+03	NC-Hazard
Methyl isobutyl ketone	108-10-1	--	1.0E+05	--	4.4E+05	1.4E+04	1.4E+04	Odor/Nuis	--	3.1E+03	--	1.3E+04	4.2E+02	4.2E+02	Nuis/Odor
Methyl mercury	22967-92-6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	--	--	--	--	2.3E+03	2.3E+03	Odor/Nuis	--	--	--	--	6.8E+01	6.8E+01	Nuis/Odor
Methyl tertiary butyl ether (MTBE)	1634-04-4	3.6E+02	1.0E+05	1.6E+03	4.4E+05	1.8E+04	3.6E+02	Canc-Risk	1.1E+01	3.1E+03	4.7E+01	1.3E+04	5.3E+02	1.1E+01	Canc-Risk
Molybdenum	7439-98-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene [PAH]	91-20-3	2.8E+00	1.0E+02	1.2E+01	4.4E+02	1.5E+04	2.8E+00	Canc-Risk	8.3E-02	3.1E+00	3.6E-01	1.3E+01	4.4E+02	8.3E-02	Canc-Risk
Nickel	7440-02-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	7790-98-9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Petroleum - Gasoline	--	--	2.0E+04	--	8.3E+04	3.3E+03	3.3E+03	Odor/Nuis	--	6.0E+02	--	2.5E+03	1.0E+02	1.0E+02	Nuis/Odor
Petroleum - Stoddard Solvent	--	--	1.1E+04	--	4.6E+04	3.3E+04	1.1E+04	NC-Hazard	--	3.3E+02	--	1.4E+03	1.0E+03	3.3E+02	NC-Hazard
Petroleum - Jet Fuel	--	--	1.1E+04	--	4.6E+04	3.3E+04	1.1E+04	NC-Hazard	--	3.3E+02	--	1.4E+03	1.0E+03	3.3E+02	NC-Hazard
Petroleum - Diesel	--	--	8.9E+03	--	3.7E+04	3.3E+04	8.9E+03	NC-Hazard	--	2.7E+02	--	1.1E+03	1.0E+03	2.7E+02	NC-Hazard
Petroleum - HOPs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Petroleum - Motor Oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

From:	Gopi_Mattel
To:	Planning_Commission
Subject:	Cypress Point Housing - Moss Beach
Date:	Monday, June 8, 2020 5:10:24 PM

To the Members of the Planning Commission:

I am a resident of El Granada and a business owner on the coastside.

I am writing to express my support for the Cypress Point proposal in Moss Beach. With this pandemic we can see more and more people losing housing due to their inability to pay high rents. Now, more than ever, we need quality affordable housing for coastal workers and families, and we need our coastal communities to be inclusive and support the valuable, lower-paying hospitality, service industry, and agricultural jobs that comprise so much of the coastal economy.

The site in Moss Beach is a designated site for affordable housing. The proposed project of 71 units fits with the neighborhood character and scale and will be an asset to the mid-coast.

I urge you to approve the proposal.

Thank you,

Gopi Mattel

El Granada

Thanks so much!!!

From:	Ann
To:	Janneth Lujan; Planning_Commission
Cc:	Ann Rothman
Subject:	Do Not Approve LCP Amendment
Date:	Tuesday, June 9, 2020 4:56:09 PM
Attachments:	Planning Commission doc copy.docx

Dear Commissioners,
Please see below. Thanks.

Best,

Ann R.
Sent from my iPad

From: Michael Schaller
To: Janneth Lujan
Cc: Steve Monowitz
Subject: Fw: Item 4. PLN2018-00264
Date: Monday, June 8, 2020 11:05:26 AM

Hello Janneth,

This e-mail just arrived. Please forward onto the commissioners and add to the file. Thanks.

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: Buffy Bunting <babunting10@gmail.com>
Sent: Monday, June 8, 2020 11:02 AM
To: Michael Schaller <mschaller@smcgov.org>
Subject: Item 4. PLN2018-00264

MidPen has put forward new information for building "affordable" housing Moss Beach. MidPen has yet to seriously address matters related to density. Either they don't understand how traffic density affects a community or they are choosing to ignore the overwhelming evidence supporting the consequences of traffic density.

According to a recent report from the California Public Utilities Commission, there is just one road in and out of the proposed site, with no alternate routes and goes on to state that, "*Extreme and elevated wildfire risk is a new reality for the coast. In 2019 the California Public Utilities Commission released updated fire threat maps for the unincorporated Midcoast* ***that classify surrounding areas of Moss Beach and Montara as extreme high fire risk - the highest possible fire risk rating.*** *MidPen's application does not evaluate this risk nor does the County's draft of a Comprehensive Traffic Management Plan (CTMP)."*

"Density" is frequently associated with "nuisance" activities. There are two types of nuisance activities – private and public. "Public nuisance" covers a wide range of issues that may threaten public health and safety, including the welfare of a community and "obstructing a highway or creating a condition to make travel unsafe", among others. Supervisor Horsley has a background in law enforcement and has most likely dealt with the consequences of density and the "nuisance" issues associated with traffic congestion.

The MidPen / Moss Beach development will create major traffic congestion which

will increase accidents/injuries/ and fatalities.

Buffy Bunting
Moss Beach resident 1985 - 2020

--
Buffy

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: Support- 71 Affordable Miss Beach Homes
Date: Tuesday, June 9, 2020 4:15:10 PM

Another one

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: Nancy Saavedra <snancy264@icloud.com>
Sent: Tuesday, June 9, 2020 4:04 PM
To: mschaller@smcgov.org. <mschaller@smcgov.org.>
Subject: Support- 71 Affordable Miss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

I love this community, and it would make me incredibly upset if one day I couldn't be able to afford living here anymore. I've lived here for over 15 years and affordable housing is very limited to the community. I hope in the near future, affordable housing is more available to more families .

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

The more homes we can build, the more neighbors and diversity we'll have, the better off we'll be, as a community. Thank you for your courage and leadership on this proposal.

Respectfully yours,

Nancy Saavedra

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: SUPPORT - 71 Affordable Moss Beach Homes
Date: Tuesday, June 9, 2020 4:06:07 PM

And this one as well.

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: JOANNE M ROKOSKY <joanne.rokosky@comcast.net>
Sent: Tuesday, June 9, 2020 11:11 AM
To: Planning_Commission <Planning_Commission@smcgov.org>; Michael Schaller <mschaller@smcgov.org>
Subject: SUPPORT - 71 Affordable Moss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

The Coastside, from Montera to Pescadero, suffers from the lack of available housing for residents whose income is limited to low income jobs. This includes farmworkers and those in service occupations. The housing crisis has been true for a long time, but the COVID-19 crisis has made it all the more acute. In many instances, people in our Coastside communities are suffering from food shortages so that they can continue to pay their rent.

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

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Respectfully yours,

Joanne Rokosky

[Your Name]

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: SUPPORT - 71 Affordable Moss Beach Homes
Date: Tuesday, June 9, 2020 4:04:39 PM

Just making sure you got this.

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: Daisy Sarabia Medina <daisy358@icloud.com>
Sent: Tuesday, June 9, 2020 4:01 PM
To: Planning_Commission <Planning_Commission@smcgov.org>; Michael Schaller <mschaller@smcgov.org>
Subject: SUPPORT - 71 Affordable Moss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

Half Moon Bay is important to me because it is my home. I grew up here and I feel safe. As a teenager i'm scared that I won't be able to raise my future children here due to the fact that it is only getting more expensive.

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

The more homes we can build, the more neighbors and diversity we'll have, the better off we'll be, as a community. Thank you for your courage and leadership on this proposal.

Respectfully yours,
Daisy Sarabia

Sent from my iPhone

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: SUPPORT - 71 Affordable Moss Beach Homes
Date: Tuesday, June 9, 2020 4:15:33 PM

And one more

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: Margarita Vasquez <mvmvasquez123@gmail.com>
Sent: Tuesday, June 9, 2020 4:14 PM
To: Planning_Commission <Planning_Commission@smcgov.org>; Michael Schaller <mschaller@smcgov.org>
Subject: SUPPORT - 71 Affordable Moss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.
Half Moon Bay has been my home, I don't want to leave because of high housing costs

Half Moon Bay has been my home, I don't want to leave because of high housing costs. I want to be able to live with my family here. However, the longer we go without affordable housing the less likely it is for my family to stay here locally.

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

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Respectfully yours,

Margarita Vasquez

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: SUPPORT - 71 Affordable Moss Beach Homes
Date: Tuesday, June 9, 2020 4:06:07 PM

And this one as well.

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: JOANNE M ROKOSKY <joanne.rokosky@comcast.net>
Sent: Tuesday, June 9, 2020 11:11 AM
To: Planning_Commission <Planning_Commission@smcgov.org>; Michael Schaller <mschaller@smcgov.org>
Subject: SUPPORT - 71 Affordable Moss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

The Coastside, from Montera to Pescadero, suffers from the lack of available housing for residents whose income is limited to low income jobs. This includes farmworkers and those in service occupations. The housing crisis has been true for a long time, but the COVID-19 crisis has made it all the more acute. In many instances, people in our Coastside communities are suffering from food shortages so that they can continue to pay their rent.

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

The more homes we can build, the more neighbors and diversity we'll have, the better off we'll be, as a community. Thank you for your courage and leadership on this proposal.

Respectfully yours,

Joanne Rokosky

[Your Name]

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: SUPPORT-71 Affordable Moss Beach Homes
Date: Tuesday, June 9, 2020 4:05:01 PM

And another one.

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: Johana Soto <johanasoto722@gmail.com>
Sent: Tuesday, June 9, 2020 4:01 PM
To: Planning_Commission <Planning_Commission@smcgov.org>; Michael Schaller <mschaller@smcgov.org>
Subject: SUPPORT-71 Affordable Moss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can. Half Moon Bay is a great community and I love this small community because it is very tight knit and at times in need we all come together and help each other.

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

The more homes we can build, the more neighbors and diversity we'll have, the better off we'll be, as a community. Thank you for your courage and leadership on this proposal.

Respectfully yours,
Johana Soto

Midcoast Community Council

An elected Advisory Council to the San Mateo County Board of Supervisors

representing Montara, Moss Beach, El Granada, Princeton, and Miramar

P.O. Box 248, Moss Beach, CA 94038-0248 | midcoastcommunitycouncil.org

Date: February 26, 2020

To: San Mateo County Planning Commission

Cc: Michael Schaller, Project Planner

Steve Monowitz, Community Development Director

Stephanie Rexing, North Central District Supervisor, California Coastal Commission

Erik Martinez, Coastal Program Analyst, California Coastal Commission

From: Midcoast Community Council

Subject: **Cypress Point PUD-140/CD Zoning and LCP Amendment** (PLN2018-0264)

The majority of the Midcoast Community Council, as well as community members who have spoken at recent public meetings, continue to oppose the Cypress Point project. The primary reasons cited include lack of access to amenities such as shopping, roads, and transit, and the increased traffic, both in the local neighborhood, and on Highway 1. Concern has also been expressed about lack of resources to support the development, particularly water, sewer, and fire, as well as strong interest in an environmental impact report.

The scope of this letter is limited to the PUD-140/CD amendment. The Midcoast Community Council requests three changes to the proposed amendment, as detailed below.

Building Height:

The MCC requests that the amendment for PUD-140/CD Zoning for this project be changed to have a maximum height of 28 feet, using the measurement methodology for the R-1/S-17 zoning. The PUD-140/CD zoning change should also mention the R-1/S-17 height measurement methodology.

We suggest that this be done by adding the following to the PUD-140CD amendment:

> *Buildings shall be a maximum of two stories, with a maximum height of 28 feet. The building height shall be measured as the vertical distance from the lowest of natural or finished grade to the topmost point of the building immediately above.*

We request this height limit to maintain harmony with the zoning in the nearby unincorporated residential community, and to reduce the visual mass of the buildings in this project. LCP Policy 3.13 says:

Require that new development providing significant housing opportunities for low and moderate income persons contribute to maintaining a sense of community character by being of compatible scale, size and design.

The height could be reduced by changing roof slope, or by incorporating secondary roof forms, maintaining the steeper pitch over only a portion of the building width. Other methods are also possible.

Building Setbacks:

The proposed PUD-140/CD amendment would reduce the building setback on the West side of the property near Carlos Street from 20 to 11 feet. The Midcoast Community Council requests that the setback remain at 20 feet, to maintain consistency with the adjacent R-1/S-17 zoning district.

Project Density:

Although the proposed zoning amendment would reduce the project density from Medium High Density to Medium Density, the 71 affordable housing units proposed would be concentrated within a 5.39 acre area on the parcel, representing a density of 13.17 units per acre. We therefore request that the total number of housing units for the site be reduced further to 46 units, representing a density of 8.53 units per developed acre, or 4.23 units per total acre of the parcel.

This further reduction in density would preserve the community character of the neighborhood, and help alleviate the impact on traffic and local resources that Midcoast constituents care about deeply.

Conclusion:

In summary, the Midcoast Community Council requests the following changes to the PUD-140/CD Zoning and LCP amendment:

- Restrict maximum building height to 28 feet, measured as the vertical distance from the lowest of natural or finished grade to the topmost point of the building immediately above.
- Maintain building setback of 20 feet along the West side of the property.
- Reduce the total number of units to 46 affordable housing units.

In addition to our concerns specific to the amendment expressed in this letter, we are attaching three previous letters detailing the broader concerns of the Midcoast Community Council and the community we represent surrounding the Cypress Point project. We request that the Project Planner respond to the concerns raised in our previous letters, and specifically to the comprehensive letter dated 8/22/18. Thank you for considering the people most affected by this project as you evaluate the amendment and the project as a whole.

MIDCOAST COMMUNITY COUNCIL

s/Len Erickson Chair

Midcoast Community Council

representing Montara, Moss Beach, El Granada, Princeton, and Miramar
P.O. Box 248, Moss Beach, CA 94038-0248 - www.MidcoastCommunityCouncil.org

Dave Olson . Claire Toutant . Lisa Ketcham . Dan Haggerty . Chris Johnson . Brandon Kwan . Barbra Mathewson
Chair Vice-Chair Secretary Treasurer

Date: August 22, 2018

To: Michael Schaller, Project Planner
cc: Supervisor Don Horsley
Steve Monowitz, Community Development Director
Renée Ananda, CCC Coastal Program Analysist

From: Midcoast Community Council/ Dave Olson, Chair

Subject: **Proposed 71-Unit Cypress Point Affordable Housing Community on Carlos St, Moss Beach** – PLN2018-00264, APN 037-022-070

Wide public opposition to this project continues unabated, as demonstrated at MCC standing-room-only meeting 8/22/18 to consider this referral.

MCC 9/27/17 comments[1] on the pre-application for this project focused on the many long-standing community concerns regarding traffic, transit, and bike/pedestrian safety & mobility that are the subject of the Highway 1 Safety & Mobility Improvement Studies (Mobility Study), the Midcoast Highway 1 Crossings Project and the soon-to-be-released final draft of Connect the Coastside's Comprehensive Transportation Management Plan. Many years of Midcoast growth without much-needed and long-identified bike/ped safety and mobility improvements have caught up with us now with too many people dependent on their cars and stuck in traffic without safe and convenient alternative transportation. The key challenge to this project is the isolated rural site without adequate transit or bike/ped facilities, leaving residents dependent on their automobiles to reach jobs and services on already congested roads.

Midcoast Residential Build-out

MCC has consistently advocated for the need to significantly reduce Midcoast residential build-out. The proposed LCP amendment would reduce land use density for this 11-acre parcel from medium-high to medium. Residential build-out numbers currently allocated to the parcel would be reduced by more than half, from 148 to 71 units.

Affordability and Residency Preference for Local Workers

A stated project objective is to improve the jobs-housing balance in the Midcoast region; however, Midcoast housing far exceeds local jobs. The applicant has stated they would not be legally allowed to restrict housing to those with local jobs, but that a portion of the units will include a preference for households who already live or work in the region. MCC would prefer that the preference apply to all units. Every new residential unit that does not provide affordable housing for our local workforce, adds to our coastal jobs-housing imbalance and traffic congestion.

[1] http://www.midcoastcommunitycouncil.org/storage/mtgs-com2017/2017-09-27-MidPen-pre-app-MCC-com.pdf

The requested amendment to LCP Policy 3.15(d) calls for all units, apart from resident manager's, to serve low- or moderate-income households. Elsewhere in the submittal the project consistently proposes all units restricted to low income (less than 80% AMI). MCC requests that the proposed LCP amendment match the rest of the submittal regarding low income affordability.

San Mateo County AMI is significantly higher than what local Coastside jobs provide. In Half Moon Bay one quarter of households earns less than $50,000 per year. Please clarify how the proposed income restrictions would provide a Coastside jobs-housing fit.

Construction Phasing

Construction is proposed in one phase, over approximately 18 months. If built in two phases, would there be more opportunity for residents with Coastside jobs to receive preference? Approving more than the annual limit of 40 residential units/year cannot be justified if many of those units will go to residents commuting to jobs out of the area.

Public Transit

The project site is located on the Hwy 1 corridor adjacent to SamTrans Route 17 bus stops at 14th & 16th. Route 17 directly reaches Coastside job hubs in Half Moon Bay, Princeton, and Pacifica (10 minutes to Linda Mar and 25 minutes to downtown HMB). Current #17 service is hourly on weekdays, and every two hours on weekends. However, on weekdays at this location there is no southbound AM or northbound PM service when #17 is routed via Sunshine Valley Road (SVR). Route #18 has limited weekday service to Middle and High School in HMB but is also routed via SVR. Outside those hours, ridership utilizing SVR bus stops is very low and the more direct route on Etheldore and Highway 1 better serves other riders.

Mitigation TRAF-5B: The applicant proposes to address the safety of pedestrians crossing to the adjacent southbound bus stop at the lighthouse hostel by eliminating it and re-routing all buses via SVR. That would also eliminate the Hwy 1 bus stop at 14th, and Etheldore stops at California and Vermont. The closest bus stops to the project would then be 1/2 mile to 7th/Main or 3/4 mile to Etheldore/SVR, well outside the 1/4 mile range of convenience.

This proposal ignores the need for safe crossing at lighthouse/16th for the Coastal Trail, and inefficiency of SVR during non-school hours and travel direction. In order to serve the project, it would be better to keep the adjacent bus stop at the lighthouse hostel and explore re-routing all Route 17 trips to Hwy 1 and Etheldore, and leaving Route 18 to serve school riders on SVR.

This project highlights the urgent need for expanded Coastside public transit. Without convenient school and commuter bus service at this location on the highway corridor, or a project-sponsored shuttle to and from local jobs, this project cannot be justified.

Bike/Pedestrian Safety & Mobility

For pedestrian safety, Mitigation TRAF-5A proposes a sidewalk connection between the project entrance on Carlos to the north side of Sierra Street.

The need for safe highway crossing at the lighthouse/16th cannot be brushed aside by saying there is no need for residents to cross the highway because the bus stop has

been removed. East side residents, workers and visitors all need to be able to conveniently walk or bike to the west side for recreation. Two crossing concepts for the lighthouse/16th were included in the 2012 Mobility Study – a raised median refuge island for 2-stage crossing and an overcrossing to the south where the road cut makes that feasible. The proposed project, with a significant number of new bike/ped/transit users, makes a safe crossing urgent.

If this housing project is to proceed, the Parallel Trail segment in this area must be prioritized and implemented, at a minimum between downtown Moss Beach and 14th St. Creating a bike/pedestrian-friendly community and calming highway traffic will help draw the kind of neighborhood commercial businesses needed to serve existing and future residents.

Vehicle Highway Access & Safety

Carlos: Mitigation TRAF-2B proposes to decrease hazards by closing Carlos St north of the project entrance to all vehicles except emergency services. The Mobility Study and Connect the Coastside show this intersection as right turn only entering the highway and continued use of the center left turn lane eastbound into Carlos. Traffic counts show significant existing peak hour traffic from Sierra and Stetson using this route, which should remain available. Feasibility of re-routing Carlos to 16th for safer vehicle highway access needs further analysis. It is insufficient to say it is not feasible due to grading requirements and Level of Service (LOS) impact on 16th St, which has only three residences.

Vallemar/Etheldore and lighthouse/16th: Mitigation TRAF-3B proposes to address LOS by restricting peak hour left turns entering the highway at Etheldore/Vallemar. Left turns would be reassigned to Calif/Wienke. This would be a significant re-route for Vallemar which does not connect directly to Wienke and would add trips to that complicated 5-way intersection. As long as there is lane space on Vallemar so that left-turning vehicles do not block those turning right, turning movements should not be restricted simply to achieve a better LOS rating. A similar right-turn-only restriction proposed for lighthouse/16th during PM peak period seems unnecessary to address LOS at that very lightly used intersection.

California/Wienke: Mitigation TRAF-1A proposes to address LOS by converting intersection control at California/Wienke to roundabout or signal, to be determined by ICE study required by Caltrans. California meets the signal warrant under existing conditions. Additional project trips at this intersection should be re-calculated for keeping Carlos open and should also consider that all new and re-assigned traffic will not necessarily use California for highway access. When a queue builds, motorists often choose among the three other adjacent intersections to spread out the wait time to enter the highway.

MCC and the community are adamantly opposed to any more traffic signals in the Midcoast. A signal at California, stopping highway traffic, and added pollution-spewing stacking lanes further splitting our town, would destroy the community vision for a context appropriate village circulation plan as was outlined in the Safety & Mobility Study. A roundabout at each end of Moss Beach would calm traffic without stopping it, provide safe pedestrian crossings, and convenient U-turns to avoid making left turns onto the highway, improving LOS at all intersections.

Discrepancies in submittal documents

Consistency Evaluation
Table 1, LCP Policies:
Policy 3.16(a)

- *"limits the number of building permits in any 12-month period to 60"*.
  Correction: not building permits, but affordable housing units.

Policy 3.3:

- "*A portion of units in the project will include a preference for households who already live or work in the region.*"
  Other references in the application make no mention of limiting this preference to a portion of the units. Please clarify.
- *"According to census data compiled in 2016, the three adjacent communities of Montara, Moss Beach, and El Granada – all of which are within 6 miles of the project site – contain 1,364 jobs."*
  Does this include jobs in Princeton and unincorporated Miramar?
- *"The project is within 1/4 mile walking distance of the Coastside Market grocery, Moss Beach Park, Farallone View Elementary School, and the Seton Coastside Medical Center."*
  Correction: Coastside Market (a liquor/convenience store) and Moss Beach Park 1/2 mile, Farallone View School 1 mile, Seton Medical Center 1.2 miles.

Table 4 Community Plan 7.2(b):

- *"The project would consist of two-story buildings with roof heights varying between 32 and 36 ft.*"
  This conflicts with PUD-124, #5: "*No structure shall exceed two stories or an average height of 25 ft*."
  Adherence to the lower height limit will help with neighborhood visual compatibility.

Cumulative Impacts Analysis
Table 3 – List of Reasonably Foreseeable Projects

- HMB and Pacifica included comprehensive list with single-family dwellings. SMC unincorporated Midcoast includes only Big Wave, Harbor Village RV, 7th St Hotel, Main St Hotel. The mixed-use building at Hwy 1/Virginia and the many Midcoast single-family dwellings in the permitting process should be included.

Table 4&5 -- Population & Housing Units

- Pacifica and HMB are included, but the MIdcoast is represented by only Montara and Moss Beach. El Granada, Princeton, and Miramar should be included.

Hwy 1 Moss Beach 50 mph speed limit is consistently misreported:
Responses to Workshop Comments
#3 Traffic: "*combination of conditions that include 55 mph speed limits…*"
#8 Pedestrian Traffic: "*operational challenges due to the 55 mph speed limit…"*
Traffic Impact Analysis, p.33: *"a 55-mph facility such as Highway 1"*

Thank you for the opportunity to comment.

Midcoast Community Council

representing Montara, Moss Beach, El Granada, Princeton, and Miramar
P.O. Box 248, Moss Beach, CA 94038-0248 - www.MidcoastCommunityCouncil.org

Dave Olson . Claire Toutant . Lisa Ketcham . Dan Haggerty . Chris Johnson . Brandon Kwan . Barbra Mathewson
Chair Vice-Chair Secretary Treasurer

Date: September 26, 2018

To: Michael Schaller, Project Planner
cc: Supervisor Don Horsley
Steve Monowitz, Community Development Director
Renée Ananda, CCC Coastal Program Analyst

From: Midcoast Community Council/ Dave Olson, Chair

Subject: **Proposed 71-Unit Cypress Point Affordable Housing Community on Carlos St, Moss Beach** – PLN2018-00264, APN 037-022-070

Thank you for the additional time to comment on this project referral. The following comments are in addition to those MCC submitted on August 22, 2018 (attached).

Hazardous Materials

- Additional soil sampling should be performed, as recommended in the Phase 2 report, to assess the horizontal extent of lead-impacted surface soils.
- Remnants of 1940's-era buildings should be assessed for asbestos-containing materials, and surface soils should be analyzed for elevated levels of asbestos fibers.

Traffic Impacts and the Comprehensive Transportation Management Plan (CTMP)

It does not serve the community or the project, to attempt to determine key circulation elements for Moss Beach absent an approved long-range Comprehensive Transportation Management Plan (CTMP), aka Connect the Coastside.

- Project traffic impacts and proposed mitigations are analyzed based on existing LOS standards, whereas the March 2016 draft of the long-delayed CTMP proposes a significant revision of LOS standards.
- Project traffic mitigations propose re-routing peak-hour Vallemar highway access to Wienke, whereas the 2016 draft CTMP clearly states Wienke highway access would have to be restricted and an alternate route identified. Vallemar or Wienke are the only access points for a neighborhood of about 75 homes.
- The 2016 CTMP draft proposal of two Hwy 1 traffic signals at California and Cypress galvanized a strong MIdcoast preference for roundabouts, which has since been partially addressed with a feasibility study for Cypress. At California/Wienke the 2016 draft CTMP (p. 25) balks at doing any significant study for a roundabout due to the complication of the 5-way intersection, but then acknowledges that a signalized intersection would require re-routing Wienke Way! The community has heard no more on the matter until the Community Development Director's 8/16/18 email which does not bode well: "From our analysis to date, the project will necessitate the installation of a signal and improved crossing at California Ave."

Midcoast Community Council

An elected Advisory Council to the San Mateo County Board of Supervisors
representing Montara, Moss Beach, El Granada, Princeton, and Miramar
P.O. Box 248, Moss Beach, CA 94038-0248 - www.MidcoastCommunityCouncil.org

Date: May 22, 2019

To: Michael Schaller, Project Planner

Cc: Supervisor Don Horsley

Steve Monowitz, Community Development Director

From: Midcoast Community Council/ Claire Toutant, Chair

Subject: Cypress Point LCP Amendment and PUD zoning change – PLN2018-00264, APN 037-022-070

The following comments are made with respect to the updated application documents, submitted on April 15, 2019. They are a followup to comments submitted on August 22, 2018 and September 26, 2018.

In the updated Cover Letter, in response to earlier MCC comments, it states:

> The proposed live-work preference for the project will ultimately be determined by San Mateo County.

In earlier meetings and documents, the preference for renters who work in the area was said to be part of the MidPen Housing application process. Please clarify how the County will determine this, and under what process.

In the Policy Consistency Evaluation document, it states:

> The project would consist of two-story buildings with roof heights varying between 32 and 36 feet. Considering the elevation of the project site and existing on site trees to be retained, the project would not appear out of scale with the community.

Related statements are made in the Aesthetic Visual Resources document in sections 2 and 6, with both sections stating “Less than Significant Impact”.

The MCC disagrees, and regards this as a Significant Impact.

As the MCC has stated many times in the past, we believe that building heights above 28 feet are a problem for the Midcoast, impacting views, and increasing perception of high mass in developments. This is particularly true with 18 buildings in close proximity.
We request that the maximum height be limited to 28 feet to be consistent with existing Midcoast standards. This could easily be done by having a lower pitched roof than is shown in the preliminary design drawings. There is no need for a 4 in 12 slope roof in this area, and many homes have

HOUSING
LEADERSHIP
COUNCIL

May 29, 2020

Chair Federick Hansson
Vice Chair Mario Santacruz
Commissioner Manuel Ramirez Jr.
Commissioner Kumkum Gupta
Commissioner Lisa Ketcham

San Mateo County Planning Commission
455 County Center, 2nd Floor
Redwood City, CA 94063

Re: Support - Midpen's 71 affordable homes in Moss Beach

Dear San Mateo County Planning Commission,

On behalf of the **Housing Leadership Council of San Mateo County (HLC)**, I am writing to express our support for Midpen's 71 affordables homes in Moss Beach. The Housing Leadership Council of San Mateo County works with communities and their leaders to create and preserve quality affordable homes. These proposed affordable homes have our full support and are critical to the midcoast community of San Mateo County.

We need to provide housing at all income levels so that we can preserve our community and protect our most vulnerable residents. However there is currently no deed-restricted affordable housing in the mid-coast of San Mateo County. Midpen's Cypress Point can provide those desperately needed affordable homes with dignity and privacy. Moss Beach can continue to benefit from diversity and inclusion with these proposed homes.

Cypress Point's 71 affordable homes have been in the planning process for quite some time. Many residents facing rent burdens and those living in their cars do not have any time to spare. Vulnerable coastside individuals and families desperately needed these homes yesterday. Our public health crisis has highlighted how housing is healthcare. **We urge the San Mateo County Planning Commission to approve the amendment in the LCP, as soon as possible, to make these affordable homes feasible.**

Sincerely,

Alexander Melendrez
Organizer, Housing Leadership Council

Housing Leadership Council of San Mateo County
2905 S. El Camino Real, San Mateo, CA 94403 • (650) 242-1764 • hlcsmc.org

LAW OFFICES OF BRIAN GAFFNEY, A Professional Corporation
446 Old County Road, Suite 100-310
Pacifica, California 94044
(650) 219 3187 Phone
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June 8, 2020

Via Email

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

RE: MidPen Housing proposed Cypress Point project
PLN2018-00264

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

This office represents Resist Density regarding the proposed Cypress Point project in Moss Beach. This office submitted comments to the Planning Commission regarding the proposed project on January 22, 2020. Below are additional comments upon our review of the June 3, 2020 San Mateo County Staff Report ("Staff Report") addressing the following:

1. The Staff Report does not respond to substantial expert comments regarding the project, its impacts and mitigations;
2. The Staff Report "piecemeals" the project to avoid environmental review at the earliest possible stage in the County's review;
3. The Staff Report improperly defers until after project approval the formulation of mitigation measures;
4. Setbacks, lot coverage, and floor area are based on plans not made available to the public;
5. The Staff Report uses an improper environmental baseline in regards to traffic safety and circulation impacts;
6. The project description continues to change and there has been no analysis of the potential environmental impacts of these changes.

Thank you for your careful consideration of these comments..

Sincerely,

Brian Gaffney

Brian Gaffney

1. The Staff Report does not acknowledge or respond to the substantial comments submitted to the Planning Commission and the Planning Department on April 9, 2020 by Matt Hagemann / SWAPE regarding project hazards and hazardous materials impacts and regarding hydrology and water quality impacts. Nor does the Staff Report acknowledge or respond to the substantial comments submitted on May 7, 2020 by Pang Engineers, Inc. regarding traffic comments impacts and mitigations. Additional comments were submitted on June 8, 2020 by BioMaAs regarding biological impacts and by Robert W. Emerick regarding sewage impacts.

In addition, the Staff Report does not attempt to refute Resist Density's comments that the proposed project is inconsistent with the Coastal Act and the San Mateo County LCP.

2. The Staff Report reveals that San Mateo County will avoid analysis of the reasonable foreseeable impacts of the proposed project and intends to "piecemeal" the project to avoid environmental review at the earliest possible stage in the County's review.

Yet, the stated purpose of the LCP Amendment is "in preparation for the future submittal of a coastal development permit application." P.2. "[A]pprovals that require CCC approval will be processed first, and the County-specific approvals including the General Plan amendment and site specific approvals will be processed thereafter. The accompanying change to the General Plan Land Use Designation will be resubmitted for Planning Commission consideration, along with an environmental document that addresses CEQA requirements, if the proposed LCP Amendments are certified by the CCC." P. 3. This ignores that the Cypress Point Project Executive Summary (April 2019) already described the requested approvals as including amending the San Mateo County's General Plan. Likewise, the January 22, 2020 Staff Report described the issue before the Planning Commission as including "Consideration of a General Plan Land Use Map Amendment." And, the approval before the Planning Commission is a proposed discretionary action to add PUD-140.

In so doing, the Staff Report fails to address Commissioner Ketcham's concern that specific findings on the precise plan would normally be informed by full CEQA review. P. 7. Nor does Staff contend that there is adequate analysis of impacts, only that "Staff believes there is sufficient detail within the submitted plans to do this analysis" later after approval of the LCP Amendment and PUD designation for the site. P. 7.

Nor does the Staff Report respond to Commissioner Ketcham request for examples of other use of this "reverse 2-step approval process." P. 8. Tellingly, Staff asserts the Applicant's cost (ie invest) is more important to Staff than either plan specificity or analysis of impacts prior to project approval. Staff does not provide any reference to the Coastal Act, the LCP, or other law to support its assertion that the "reverse 2-step process" is appropriate. P. 8.

Likewise, the Staff Report does not address Commissioner Ketcham's comment about the need for analysis of the impacts of 692 haul truck trips. Instead, Staff impermissibly defers analysis to the "development review process." p. 12. Because these trips are a reasonable foreseeable result of the LCP and amendment and PUD-140 creation, environmental review must be conducted before project approval.

The Staff also does not agree to require additional soil sampling, as recommended in the Phase 2 report and requested by Commissioner Ketcham, to assess the horizontal extent of lead-impacted surface soils." P. 13. Instead Staff improperly defers analysis of both likely hazardous and asbestos impacts and mitigations until the "development review process (Phase 2 of this project)."[1]

3. The Staff Report improperly defers until after project approval the formulation of mitigation measures with specific performance criteria in regards to traffic circulation mitigation measures (pp. 4 & 5), does not explain undefined "contributions" to the installation of an intersection control within the Highway One Moss Beach corridor[2] (p. 5), fails to analyze the feasibility of roundabouts as potential traffic mitigations (p. 5), assumes without analysis that hazards mitigation will "eliminate any health risks" (p. 9), and defers mitigations for construction fill and traffic. P. 12.

In regards to the "Preliminary Circulation Improvement Plan," (pp. 37 – 39) there is no analysis of the potential adverse impacts of each component of this proposed plan, there is no analysis of whether and to what extent pedestrian and bicycle access plans will reduce potentially significant traffic impacts, there is no definition of what constitutes "Fair share contribution" for accessible bus stops or "Fair share contribution" to intersection control at Highway 1, there is no explanation of what "if feasible" means in the context of "Fair share contribution," there is no performance standards for the deferred maintenance of "suite of transportation demand management strategies," and the Plan says not that MidPen will be required to implement or pay for subsidies - only that MidPen will "consider" them. Thus, the traffic mitigations are vague and unenforceable.

4. Regarding Setbacks, the Staff Report claims that "the applicant has revised the site plan so that no buildings will be closer than 20-feet from the Carlos Street right-of-way." The Ordinance, however, does not support this assertion. The proposed PUD-140 (Ordinance Section F) instead states only that "The minimum setbacks of the proposed buildings shall conform to those shown on the plans reviewed by the Planning Commission on June 10, 2020, or as modified by Coastal Development Permit conditions of approval." There is no reference to a 20-foot setback. Moreover, those plans have not been made available to the public, thus thwarting public review.

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[1] There is a reasonable argument that, by contributing $4.5 Million in funding to Cypress Point, San Mateo County has already approved the proposed project prior to conducting proper environmental review.

[2] Does one dollar constitute an adequate contribution, and why ?

Further, those setbacks may be changed in applicant-driven CDP conditions of approval.

Nor is the public able to adequately comment on either the lot coverage or the permissible floor areas - as these too are based on plans not made available to the public.

5. The Staff Report continues to use an improper baseline in regards to traffic safety and circulation impacts by comparing the proposed project to PUD-124. P. 4.

6. The project continues to change. Thus the project description is not stable.

For the first time, the project will include "removal of dead trees and other highly flammable vegetation." (P. 5.) In contrast, MidPen's Biological Resource Assessment (May 2018) stated that "The dense cypress habitat along the northern property boundary is not proposed for removal/disturbance." Despite this change in the project, there is no analysis of the biological impacts of this tree/vegetation removal.

Similarly, the project will now include more than 142 parking spaces. A minimum of 142 parking spaces is envisioned with the possibility of more if the "applicant wished to create more parking spaces." Not only is this a change in the project, but there has been no analysis of the impacts on traffic.

June 8, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org

RE: MidPen Housing Cypress Point Housing Project, Moss Beach CA
Wastewater Impact Analysis

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

I write regarding the Wastewater Impact Analysis for the proposed MidPen Cypress Point project.

I am a registered Civil Engineer (State of California License No. 58914) experienced in wastewater treatment and disposal. I received my Ph.D. in Civil and Environmental Engineering from the University of California at Davis in 1999 where I majored in wastewater treatment with doctoral minors in ecology and stochastic modeling. I have taught wastewater treatment process design courses for the State Water Resources Control Board and owned a 150-person engineering firm specializing in municipal infrastructure permitting, planning, design, and operation (ECO:LOGIC Engineering, Roseville, CA) prior to its sale to Stantec in 2011. My CV is attached.

To prepare these comments I reviewed the following documents:

- Cypress Point Project MidPen Housing, Public Services and Utilities (Stevens Consulting, July 2018)
- Cypress Point Project Cumulative Impacts Analysis (2nd County Review Draft, April 2019)
- Cypress Point Project Preliminary Environmental Evaluation Report (2nd County Review Draft, April 2019)
- Carollo Engineers (1999) Sewer Authority Mid-Coastside Wet Weather Flow Management Program Facility Plan Report DRAFT
- Sewer Authority Mid-Coastside Infrastructure Plan: FY17/18 –FY21/22
- Sewer Authority Mid Coastside (April, 2018) DRAFT 20-Year Capitol Improvement Plan
- Consent Judgment, *Ecological Rights Foundation v. Sewer Authority Mid-Coastside*, Northern District of California Case No. 3:18-CV-04413
- San Mateo County Local Coastal Plan, Table 2.3, 2.4 & 2.7, Estimate Of Midcoast Sewage Generation

Based on my review of the above documents and my background and experience, I offer my professional opinion on the following three issues: (1) the current condition of the wastewater conveyance system to transport sewage generated by MidPen's project to the Sewer Authority Mid-Coastside (SAM) wastewater treatment facility and the history of sewage spills, (2) the potential adverse impacts from construction of the new sewage collection system

for the proposed MidPen development, and (3) the completeness of MidPen's assessment of project-specific and cumulative wastewater impacts.

Existing Conveyance System & History of Sewage Spills

As background, I understand that the SAM operates an Intertie Pipeline System (IPS) for conveying wastewater from its member agencies to the SAM wastewater treatment plant. The IPS consists of pump stations, force mains (i.e., pipelines operating under pressure), and gravity flow pipelines. The totality of these systems must operate in a manner that does not allow sewage to overflow into homes, onto streets, or into waters of the United States. Any sewage that overflows the sewerage collection and conveyance system is unlawful and is called a sanitary sewer overflow (SSO).

The proposed MidPen development is located within the Montara Water & Sanitary District (MWSD), which is located at the furthest end of the IPS from the SAM wastewater treatment plant. All of the Montara sewage is pumped through the IPS by SAM's northern pump station, the Montara Pump Station, to the sewage treatment plant located in Half Moon Bay (MWSD 2018). Wastewater generated by the proposed MidPen project must necessarily be conveyed by the IPS through segments also serving Montara, Princeton by the Sea, El Granada, and the City of Half Moon Bay. SAM's Intertie Pipeline System has had at least 65 separate discharges of inadequately treated or raw sewage since 2013 alone. Over 557,103 gallons of sewage have been illegally released, the vast majority of it released into the Pacific Ocean and Half Moon Bay. In addition, SAM's operation of the wastewater sewage collection systems has resulted in tens of thousands of gallons of raw or inadequately treated sewage being released onto streets in residential neighborhoods. Sewage contains human waste, viruses, protozoa, mold spores, bacteria, and chemical contaminants. Many of the pollutants found in raw and/or inadequately treated sewage are acutely toxic.

The inadequacy of the wastewater sewage collection system and the serious ecological problems resulting therefrom have been known to SAM for decades. As far back as 1999 SAM's consultants recognized that the IPS had not been maintained in a manner to prevent regular occurrences of SSOs.[1] During wet weather, the IPS receives its highest flows owing to Inflow and Infiltration (I/I) (i.e., surface runoff and water from saturated soil that enters the IPS through system defects such as cracked pipes, separated pipe joints, and illegal cross connections to roof and yard drains).

About 18 years after the need for improvements was first identified by Carollo Engineers, SAM prepared an Infrastructure Plan to work toward eliminating SSOs.[2] That plan has not been followed in its entirety. I understand that litigation regarding the SAM system ultimately resulted in a Consent Decree being issued in 2019.[3] Pertinent elements of the

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[1] Carollo Engineers (1999) Sewer Authority Mid-Coastside Wet Weather Flow Management Program Facility Plan Report DRAFT

[2] Sewer Authority Mid-Coastside Infrastructure Plan: FY17/18 –FY21/22

[3] *Ecological Rights Foundation v. Sewer Authority Mid-Coastside*, Case No. 3:18-CV-04413

Consent Decree include completing the replacement of Granada Force Main Segment 4 by June 30, 2020, implementing the feasible recommendations of a Princeton Force Main condition assessment and pump station feasibility study by June 30, 2024, and completing replacement of the Montara Force Main by June 30, 2024 to prevent SSOs. Therefore, the system used to accommodate the proposed MidPen Cypress Point wastewater will not be able to guarantee compliance with Regional Water Quality Control Board regulatory requirements associated with SSOs until June 30, 2024 at the earliest.

Additionally, a draft Capitol Improvement Plan was issued as recently as April 2018 describing maintenance and upgrades needed through 2038.[4] The Capitol Improvement Plan describes Category 1 improvements (i.e., items requiring attention to address full regulatory compliance) and Category 2 improvements (i.e., maintenance items for existing infrastructure to assure compliant operation). Not all of these designated Category 1 and Category 2 improvements have been completed per the plan.

Given the above, an adequate analysis of MidPen's wastewater impacts must include evaluation of potential project impacts in light of this history of sewage spills, the SAM Infrastructure Plan, the Force Main segment replacements and Pump Station noted above, as well as the status of each program element described within the Capitol Improvement Plan.

That analysis has not been completed or released to the public to date, and thus there is an insufficient basis to assess whether there is adequate capacity to serve existing commitments with the addition of the proposed MidPen development, or cumulative development.

New Conveyance System & Potential for Adverse Impacts

The Cypress Point Project Public Services and Utilities Analysis (Stevens Consulting, July 2018) conclusion - that there will be a less than significant sewer services impact[5] - suffers from a number of inadequacies and omissions. First, "no utility plans have been completed for the proposed project." Therefore, what actually is proposed is not adequately described. Steven's Consulting does reveal that there is no existing sanitary sewer infrastructure on the project site, and new sewer pipelines will be needed to connect the project site with the existing MWSD sewer lines in adjacent roadways. Further, while MidPen vaguely acknowledges that "MWSD transmission facilities" may need to be upgraded in the vicinity of the project site," specific sanitary sewer infrastructure plans should be provided for review prior to making a determination that the project has a less than significant wastewater impact.

Second, it is reasonably likely that a pump station will be needed for the project and if improperly designed could result in spills of sewage to waters of the United States. At its closest point, the project site is located about 750 feet from the coastline of the Pacific Ocean. Elevations of the project site range from 77 feet at the northwest corner to 189 feet along the

[4] Sewer Authority Mid Coastside (April, 2018) DRAFT 20-Year Capitol Improvement Plan
[5] Cypress Point Project MidPen Housing (July, 2018) Public Services and Utilities

easterly boundary. A perennial stream (Montara Creek) is located approximately 50 to 250 feet to the northwest of the project site and runs parallel to the northern border prior to reaching the Pacific Ocean. There is a 100 foot elevation change moving away from the Pacific Ocean and a stream at the northern boundary. Given this geography and in the absence of utility plans, it is reasonably likely that a new pump station will be required to adequately remove wastewater from the MidPen project site to a neighboring sewerage conveyance system. Pump stations have the potential to overflow into waters of the United States if not adequately designed and maintained. Thus, there is a potentially significant adverse wastewater impact that should be evaluated further before project approval.

Assessment of Treatment Facility Capacity and Pollutant Loads

Stevens Consulting Wastewater Analysis (July 2018) claims that the SAM wastewater treatment system and IPS has adequate capacity for growth anticipated in the region - based entirely on "[c]onsidering dry weather flows." It appears that MidPen has not evaluated capacity with wet weather flows. Average Dry Weather Flow (ADWF) is a regularly used term with regards to regulating wastewater treatment facilities, but it has essentially no basis in assessing adequate design and operation of wastewater treatment facilities.[6] Important wastewater treatment facility design parameters must account for both wet weather flows and peak pollutant loads. It appears that MidPen has not evaluated either peak wet weather flows or pollutant loads.

The most critical flow parameter in assessing adequate capacity is instantaneous peak flow, because that parameter determines whether there will be spills or overflows within the conveyance or treatment facilities, as well as adequate disinfection. As described above, the sewage collection system is currently unable to fully handle peak I/I flows without occasional SSOs.

Loads constitute the pollutants present in wastewater and are the basis of regulating the discharge. Although there has been discussion regarding a decrease in flows owing to water conservation, MidPen has not evaluated potentially significant impacts related to pollutant loads.

It is misleading to suggest in the planning documents that because water conservation has reduced flows to the wastewater treatment facility that there necessarily remains adequate treatment capacity. Water is simply a carrier for the pollutant loads. It is instructive to note that if the amount of water discharged by residences is halved owing to water conservation, it does not free up capacity that can be used by others. Rather, the concentration of pollutants in the water will instead double (i.e., the mass of pollutants remains constant when diluted in half the amount of water). In some instances treatment processes must be modified to adapt to

[6] Current treatment plant loading should instead be compared to wastewater treatment plant design criteria in lieu of the average dry weather flow presentations currently used to assess capacity.

the concurrent higher pollutant concentrations combined with lower flows. In no case is treatment capacity ever increased by reducing water volume alone.

Pollutant loads should be considered when determining whether there is adequate treatment capacity to accommodate current obligations. Two issues are entirely missing from the MidPen's analysis of wastewater impacts: (1) impacts associated with constructing accessory dwelling units (ADUs) throughout the District and (2) sludge processing and disposal needs associated with the treatment facility.

Accessory Dwelling Units

Stevens Consulting reports that even without construction of the proposed MidPen project, there are already 22,000 coastal residents discharging to the wastewater treatment plant. The San Mateo Local Coastal Plan describes the need to account for 466 second units and 45 caretaker's quarters at the residential buildout served by the sewers.[7] In addition, the California Legislature recently approved an increase in pollutant loads to the wastewater treatment plant from existing developed sites (e.g., Assembly Bills 68, 881 and Senate Bill 13). The legislation allows for increasing the number of habitable dwellings discharging into existing wastewater treatment plants.

MidPen's wastewater analysis fails to evaluate the impact on wastewater treatment facility capacity of the proposed MidPen project in combination with the second units contemplated in the LCP and the impact of adding these additional ADUs.

Also, MidPen does not consider whether the expanded sewage line and potential pump station for the project will increase the development intensity or off-site development by facilitating such second units or ADUs in the project vicinity.

Analysis of Cumulative Wastewater Impacts

The Cypress Point Cumulative Impacts Analysis (April, 2019) concludes that the Cypress Point project would make a less than cumulatively considerable contribution - based on its assumptions that "the proposed project would not require or result in the construction of new wastewater treatment facilities, or the expansion of existing treatment facilities" and that "SAM has sufficient capacity." However, as discussed above these cumulative impact conclusions are suspect given that MWSD transmission facilities may need to be upgraded in the vicinity of the project site, specific sanitary sewer infrastructure plans has not been provided, an improperly designed pump station could result in spills of sewage to waters of the United States, and to date MidPen has not evaluated either peak wet weather flows or pollutant loads from the proposed project.

The Cypress Point Cumulative Impacts Analysis (April, 2019) at Table 3 describes reasonably forseeable residential projects. The report predicts 19 accessory dwelling units

[7] San Mateo County Local Coastal Plan, Table 2.3 Estimate Of Midcoast Sewage Generation

within El Granada (10 units), Half Moon Bay (1 unit), Montara (5 units), and Moss Beach (3 units) with no units forecast for Miramar, Pacifica, and Princeton. The projection of only 19 accessory dwelling units in a system accommodating at least 22,000 coastal residents appears low and is unsubstantiated. Insofar as (1) housing is already generally scarce throughout California and the scarcity was the basis for passing the legislation, (2) the legislation results in reduced impact fees associated with constructing on already developed lots, and (3) the cost of constructing ADUs is expected to be far less than constructing residences on new lots owing to the presence of existing infrastructure, it does not appear reasonable to suggest that only 19 ADUs will be constructed within District limits. An adequate cumulative impact analysis would consider the ultimate potential for ADUs following the recently enacted legislation within existing lots and develop pollutant loading criteria accordingly when assessing how much treatment capacity remains at the wastewater treatment plant.

Sludge Production.

As stated above, MidPen's Public Services and Utilities (Stevens Consulting, July 2018) does not address pollutant loads. As stated above, pollutant loads ultimately become sludge that requires its own treatment and disposal. It is appropriate to include analysis pertaining to sludge treatment capacity and long-term sludge disposal capacity when assessing the ability of the wastewater treatment plant to treat to meet existing commitments, including those the proposed MidPen project as well as associated with likely ADUs.

Thank you for considering these project comments.

Sincerely,

Robert W. Emerick Ph.D., P.E.

Robert W. Emerick Ph.D., P.E.

1013 K Street – Lower Level
Sacramento, CA 95814
(916)826-6990

Dr. Emerick was a principal owner of ECO:LOGIC Engineering, a 150+ person engineering firm specializing in design, permitting, operation, and management of water/wastewater infrastructure. The firm was sold to Stantec, Inc. in 2011, with Dr. Emerick leaving the firm in 2015 to aid in the redevelopment of downtown Sacramento and to work as a private engineering consultant. Dr. Emerick has 25 years of civil engineering/water quality experience, including teaching at the undergraduate and graduate level, research, engineering management, regulatory permitting, environmental studies, regulatory enforcement, and water/wastewater treatment process development, design and operation. He is an acknowledged leading expert in obtaining waste discharge permits for private and public agencies and developing treatment processes for the removal of trace contaminants from wastewater discharges.

EDUCATION

B.S., Civil Engineering, University of California, Davis, California, 1992

M.S., Civil and Environmental Engineering, University of California, Davis, California, 1993

Ph.D., Civil and Environmental Engineering, University of California, Davis, California, 1998

REGISTRATIONS

Professional Engineer #58914, State of California

PROJECT EXPERIENCE

Teaching

State Water Resources Control Board

Instructor (via role as Adjunct Professor at UC Davis). Responsible for wastewater process design, operation, and troubleshooting course development and presentation. This project involves a series of classes presented to all State of California regulators, fund reviewers, policy makers, and facility inspectors. Courses are intermittently on-going and include (1) Disposal of Non-Designated Waste to Land, (2) Wastewater Facility Inspection and Monitoring, (3) Introduction to Wastewater and Its Treatment, and (4) Wastewater Engineering 2 "The Advanced Class." Courses have been video recorded for archival at the State Water Resources Control Board. Courses have been translated into Spanish and have been presented to operators in Mexico.

University of California at Davis, California State University Sacramento

Teaching Assistant and Adjunct Professor. Courses were aimed at (1) retraining nuclear engineers after the closure of Mare Island Naval Shipyard for civilian practice, and (2) undergraduate and graduate civil engineering education. Taught wastewater treatment design for UC Davis to aid in their accreditation process. Served on the review panel for UC Davis civil engineering accreditation.

Redevelopment

Sacramento, CA

Owner and Engineer. Restored and recently completed redevelopment/construction of 35,000 square feet of historic commercial property for contemporary uses. Started businesses as part of the redevelopment effort, including Crest Theatre (950 seat venue for concerts, movies, community events), Empress Tavern (7500 square foot fine dining restaurant), and Mother (1500 square foot casual vegetarian restaurant).

Permitting, Compliance, Auditing

Facility Improvements, Ione, California

Project Manager for developing facility improvements needed for compliance with Reclamation permit limitations associated with Castle Oaks Golf Course (Ione, CA).

Robert Emerick Ph.D., P.E.

Lincoln, Rio Vista, Merced, Dixon, Donner Summit, Reno

Project Manager/Engineer responsible for negotiating permits for (1) land discharge of secondary effluent for Lincoln, CA (2) land discharge of secondary effluent for Dixon, CA, (3)master reclamation permit for Lincoln, CA., (4) surface water discharge of secondary and tertiary effluent for Lincoln, CA, (5) surface water discharge of secondary and tertiary effluent for Rio Vista, CA., (6) surface water discharge of secondary and tertiary effluent for City of Merced, CA., (7) surface water discharge for Donner Summit Public Utility District, (8) aquifer storage and recovery project for Reno, NV.

North Lake Tahoe Public Utilities District Potable

Project Manager/Engineer responsible for negotiating a the nation's first permit and designing improvements to produce potable water on an unfiltered drinking water supply using UV disinfection technology for North Lake Tahoe Public Utilities District.

Research

City of Reno, NV

Developing a membrane/ozone/biologically active activated carbon treatment process for the removal of trace emerging contaminants of concern for a groundwater aquifer storage and recovery project.

City of Dixon, CA

Responsible for analyzing groundwater and effluent quality for determining the presence of and/or extent of groundwater degradation. Project involves the application of tracers for determining origin and fate of wastewater contaminants.

Lincoln, CA and Rio Vista, CA

Investigating the partitioning of priority pollutant contaminants and wastewater treatment process impacts on the removal/reduction of priority pollutants for Lincoln, CA and Rio Vista, CA. Developed methodology for determining the correct hardness when applying CTR metals criteria.

Caltrans

Investigating/developing new treatment processes for removing iron, nitrogen, phosphorous, and turbidity from stormwater for Caltrans to aid in compliance with discharge restrictions into Lake Tahoe. Project involved development, construction, and operation of pilot treatment facilities treating highway runoff in the Lake Tahoe basin.

Sacramento Regional Wastewater Treatment Plant Coliform Bacteria Study

Investigated the physical parameters influencing the development of coliform bacteria associated with wastewater particles. Research involved developing an oligonucleotide probe specific to the family Enteriobacterioceae for visual identification of coliform bacteria within wastewater particles.

Sacramento Regional Wastewater Treatment Plant UV Disinfection Performance

Investigated the impact of particle size distribution impacts on UV disinfection performance for Sacramento Regional Wastewater Treatment Plant. Research involved developing a new computer aided photographic method of determining the particle size distribution of wastewater.

Sacramento Regional Wastewater Treatment Plant Tertiary Process Development

Aided in the development of a pilot facility to investigate removal of trace contaminants from the discharge into the Sacramento River. Provided professional peer-review of study results.

UV Equipment Validation Testing

Designed and operated a pilot testing facility for approval of UV disinfection system by the State of California Department of Health for use on recycled effluents. UV disinfection systems tested include (1) the Trojan Technologies Swift 4L12 UV disinfection system, (2) the Trojan Technologies UV 3000+ UV disinfection system (3) Trojan Technologies UV 2000 disinfection system, (4) Fisher Porter UV disinfection systems, (5) WEDECO TAK55 spot check validation for City of Lincoln, CA, (6) Trojan Technologies UV 3000+ spot check validation for City of Yucaipa, CA., (7) ENAQUA low pressure high output UV disinfection system.

Title 22 Filtration Validation Testing

Designed and operated a pilot testing facility testing for approval of filtration systems by the State of California Department of Health for use on recycled effluents. Filtration systems tested include (1) Nordic Water Products Disc Filter, (2) Parkson Disc Filter, and (3) AMIAD Screen Filter.

* denotes projects completed with other firms

Robert Emerick Ph.D., P.E.

Biological Virus Removal Within Intermittently Dosed Fixed Growth Filters
Academic project involved development of a biological virus degradation process for the production of unrestricted recycled water for on-site reuse (UC Davis).

Water Environment Research Foundation (Project 96-CTS-3) Impact of Upstream Wastewater Treatment Process Type on Downstream UV Disinfection Performance
Project involved determining wastewater treatment process impacts and developing a fundamental stochastic model describing the ability of UV disinfection to inactivate pathogens.

Water Environment Research Foundation (Project No. 91-WWD-1) Comparison of UV Irradiation to Chlorination for Achieving Optimal UV Performance
Project involved developing an empirical mathematical model for predicting UV disinfection performance.

Stormwater Management

State of California Department of Transportation (Caltrans) Stormwater BMP Pilot Program (Peer Reviewer)
This study was directed at reviewing, critiquing, and developing solutions associated with the BMP pilot research program.

San Francisco-Oakland Bay Bridge Storm Water Detention Basin Treatment Best Management Practice (BMP) Feasibility Study (Project Manager/ Engineer)
This study, for Caltrans, was directed at determining and comparing the environmental benefits derived from implementing stormwater treatment for the bridge expansion in relation to the costs related to stormwater treatment.

Caltrans Maximum Extent Practicable Analysis for Storm Water Detention Basins Associated with Highway Runoff (Project Manager and Project Engineer)
This study was directed at determining and comparing the environmental benefits associated with implementing stormwater detention basins statewide as part of all new and retrofit roadway expansions/improvements.

Lake Tahoe Basin New Stormwater Treatment Processes (Project Engineer)
The development of new stormwater treatment processes for implementation within the Lake Tahoe Basin. This pilot study investigates treatment trains to remove nutrients, iron, turbidity, and narrative toxicity for compliance with the nation's most stringent effluent limits associated with stormwater runoff.

Sacramento County Stormwater BMP Review Program (Project Manager)
This project was directed toward developing approval criteria for the selection of stormwater Best Management Practices (BMPs) for installation within Sacramento County.

Wastewater Treatment

State of Nevada Department of Environmental Protection
Responsible for summarizing reclamation policy and groundwater recharge policy nationwide and developing a unified reclamation policy for the State of Nevada that integrates the findings of ozonation/biological activated carbon adsorption research conducted concurrently for the City of Reno.

Donner Summit Public Utility District, CA
Responsible for permitting and process development for nutrient removal treatment process upgrades, mixing zones, and associated regulatory permitting.

City of Reno, NV
Responsible for treatment process development for removing emerging contaminants of concern to non-detectable levels as part of a groundwater aquifer storage and recovery project.

City of Davis, CA (Process Design Manager)
In charge of developing treatment and disposal options for compliance with effluent dominated stream regulatory requirements.

* *denotes projects completed with other firms*

Robert Emerick Ph.D., P.E.

City of Lincoln, Midwestern Placer Regional Sewer Project Environmental Impact Report (EIR), Lincoln, California (Process Design Manager)
In charge of process development for a tertiary (Title 22 unrestricted reuse) wastewater treatment and reclamation facility for the City of Lincoln. This treatment facility is the first in Northern California to be designed specifically to comply with California Toxics Rule Regulatory requirements (toxic contaminant limitations) and receiving water limits related to effluent dominated streams. The treatment process consists of a headworks, nitrification/ denitrification, clarification, priority pollutant maturation ponds, dissolved air flotation algae removal, coagulation/flocculation, granular medium filtration, UV disinfection, and effluent reaeration.

City of Ceres Wastewater Treatment Plant Expansion, Ceres, California (Project Engineer)
The design of a tertiary (Title 22 unrestricted reuse) wastewater treatment plant. This facility consisted of headworks, nitrifying oxidation ditches, clarification, coagulation/flocculation, granular medium filtration, and UV disinfection.

Salt Accumulation Analysis, City of Ceres, California (Project Manager/Engineer)
A salt accumulation analysis related to land discharge of effluent for Ceres, CA. This analysis consisted of developing a groundwater hydraulic model for determining long-term salt impacts to groundwater related to a proposed groundwater replenishment project.

Priority Pollutant Characterization (Project Engineer)
Responsible for priority pollutant characterization for (1) Brentwood, CA (2) Mountain House, CA (3) Lincoln, CA (4) Rio Vista, CA, and (5) La Contenta Golf Course.

UV Disinfection Feasibility Study (Project Engineer)
Responsible for determining the feasibility of applying UV disinfection to (1) Manteca, CA (2) Sacramento Regional Wastewater Treatment Plant, CA, (3) Woodland, CA, (4) Rio Vista, CA, and (5) Auburn, CA.

Water Treatment

North Lake Tahoe Public Utility District UV Disinfection System
Process Design Manager/Engineer for a UV disinfection system on an unfiltered water supply for the North Lake Tahoe Public Utility District, CA. This UV disinfection system is the first in California to be permitted for the production of potable water, and the first nationally to be permitted for use on an unfiltered drinking water supply.

Groundwater Desalinization Project, Sparks, Nevada
Project Engineer responsible for analyzing the feasibility of groundwater desalinization.

UV Disinfection System for Third World Environments
Project Manager/Engineer for product review of a new UV disinfection system for application in Third World environments for the inactivation of Cryptosporidium and Giardia (Core Resources; Water Health UV Disinfection System).

Pulsed Light UV Disinfection System
Project Manager/Engineer for product review of a new pulsed light UV disinfection system for application on drinking water treatment (New Star Lazers).

Steiger Hills, CA Master Water Plan
Project Engineer responsible for master-planning a water supply and distribution system for Steiger Hills, CA.

* *denotes projects completed with other firms*

Robert Emerick Ph.D., P.E.

PUBLICATIONS

Contributing author to Potable Reuse Research Compilation: Synthesis of Findings, Water Environment and Research Foundation, 2016.

Contributing author to Wastewater Engineering, Treatment, Disposal, Reuse. *Metcalf and Eddy, Fourth Edition*, 2010.

Presentation. Emerick, R. W., Sundaram, V., Borroum, Y., Shumaker, S. Cost Effectiveness and Environmental Benefits of Combined Ozonation – UV System for Water Reclamation and Surface Water Discharge. *WEFTEC*, 2008.

Presentation. Borroum, Y., Emerick, R.W., Pedri, J. Development of Site-Specific Metal Translators. *WEFTEC*, 2008.

Presentation. Emerick, R. W., Borroum, Y., Pedri, J. Development of Protective Hardness-Based Metal Limitations. *WEFTEC*, 2006.

Presentation. Emerick, R.W., Borroum, Y., Pedri, J. Bioassay Comparison of Similar Pilot- and Full-Scale UV Disinfection Systems. Validation of the Scale-up Relationship Recommended by the NWRI UV Disinfection Guidelines. *WEFTEC*, 2005.

Emerick, R. W., Swift, J., Sakaji, R. Treat, Disinfect, Reuse – Part II.. *Water Environment and Technology, Vol. 15, No. 3*, 2003.

Swift, J., Emerick, R. W., Scheible, K., Soroushian, F., Putnam, L. R., and Sakaji, R. Treat, Disinfect, Reuse. *Water Environment and Technology, Vol. 14, No. 11*, 2002.

Loge, F. J., Emerick, R. W., Ginn, T. R., and Darby, J. L. Association of Coliform Bacteria with Wastewater Particles: Impact of Operational Parameters of the Activated Sludge Process. *Water Research, 36(2002):41-48*, 2001.

Loge, F. J., K. Bourgeous, R. W. Emerick, and J. L. Darby. Variations in the Water Quality Parameters Influencing UV Disinfection Performance: Relative Impact of Filtration. *Journal of Environmental Engineering, 127(9): 832-837*, 2001.

Presentation. Emerick, R.W., Soroshian, F., Tchobanoglous, G. Standardizing UV Equipment Performance Validation, Proceedings of UV 2000. *A Technical Symposium*, 2000.

Blatchley, E. R., Emerick, R. W., Hargy, T., Hoyer, O., Hultquist, R. H., Sakaji, R. H., Scheible, O. K., Schmelling, D. C., Soroushian, F., and Tchobanoglous, G., Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse. *National Water Research Institute, American Water Works Association Research Foundation*, 2000.

Emerick, R.W., Loge, F.J., Ginn, T., and Darby, J. Modeling the Inactivation of Coliform Bacteria Associated with Particles. *Water Environment Research, 72:4, 432-438*, 2000.

Emerick, R. W., Manning, J., Tchobanoglous, G., and Darby, J. Impact of Bacteria and Dosing Frequency on the Removal of Virus Within Intermittently Dosed Biological Filters. *The Small Flows Journal, 1:1, 36-41*, 2000.

Robert Emerick Ph.D., P.E.

Presentation. Loge, F. J., Emerick, R. W., Tchobanoglous, G., and Darby, J. Design and Optimization of Upstream Treatment Processes to Improve the Performance of Ultraviolet Disinfection Facilities at Sacramento Regional Wastewater Treatment Plant. *Publication of the Center For Environmental and Water Resources Engineering, UC Davis No. 99-1*, 1999.

Presentation. Tchobanoglous, G., Emerick, R.W., Loge, F., and Darby, J. Recent Developments in Ultraviolet Disinfection. *United States Environmental Protection Agency 6th National Drinking Water and Wastewater Treatment Technology Transfer Workshop*, 1999.

Presentation. Emerick, R.W., Darby, J., and Tchobanoglous, G. Impact of Bacteria and Dosing Frequency on the Removal of Virus Within Intermittently Dosed Biological Filters. *Water Reuse Foundation's Annual Water Reuse Research Conference*, 1999.

Emerick, R. W., Loge, F. J., Thompson, D. E., and Darby, J. L. Factors Influencing UV Disinfection Performance - Part II: Association of Coliform Bacteria with Wastewater Particles. *Water Environment Research, 71:6, 1178-1187*, 1999.

Loge, F. J., Emerick, R. W., Thompson, D. E., Nelson, D. C., and Darby, J. L. Factors Influencing UV Disinfection Performance - Part I:Light Penetration into Wastewater Particles. *Water Environment Research, 71:3, 377-381*, 1999.

Loge F. J., Emerick, R. W., Thompson, D. E., Nelson, D. C., and Darby, J. L. Development and Application of a Fluorescent 16S rRNA Oligonucleotide Probe Specific to the Family Enterobacteriaceae. *Water Environment Research, 71:1, 75-83*, 1999.

Emerick, R.W., Loge, F.J., Tchobanoglous, G., and Darby, J. Impact of Upstream Wastewater Treatment Process Type on Downstream UV Disinfection Performance. *Water Environment Research Foundation, Project 96-CTS-3*, 1999.

Presentation. Emerick, R.W., Loge, C., Williams, C., and Darby, J. Modeling the Inactivation of Particle Associated Coliform Bacteria Exposed to UV Light. *Water Environment Federation 72nd Annual Conference and Exposition*, 1999.

Presentation. Emerick, R.W., Tchobanoglous, G. Secondary Effluent Compliance with Contemporary Effluent Limitations. *California Water Environment Federation Northern Regional Training Conference*, 1999.

Presentation. Emerick, R.W., Loge, F.L., Darby, J. L., and Tchobanoglous, G., Impact of Particles with Embedded Coliform Bacteria on Ultraviolet Light Disinfection. *Water Environment Federation 71th Annual Conference and Exposition*, 1998.

Presentation. Emerick, R.W., Loge, F.L., Darby, J. L., and Tchobanoglous, G., Proposed UV Disinfection Equipment Testing Protocol to Demonstrate Compliance with the California Reclamation Criteria. *Proceedings of the Water Reuse Annual Conference*, 1998.

Presentation. Tchobanoglous, G., Emerick, R.W., Loge, F., and Darby, J.. *Seeing the Light, Environmental Protection*, 1998.

Presentation. Loge, F. J., Emerick, R. W., Darby, J. L., and Tchobanoglous, G. Factors Influencing the Performance of a UV Disinfection System in Reclaimed Wastewater Effluent. *Water Reuse Annual Conference*, 1998.

Robert Emerick Ph.D., P.E.

Emerick, R. W., Test, R., Tchobanoglous, G., and Darby, J. L. Shallow Intermittent Sand Filtration: Microorganism Removal. *The Small Flows Journal, 3:1, 12-22*, 1997.

Presentation. Tchobanoglous, G., Loge, F., Emerick, R., and Darby J. L. Application of the WERF Model for Designing a UV System for Disinfecting Wastewater. *UV Disinfection Workshop at the Water Environment Federation 70th Annual Conference and Exposition*, 1997.

Presentation. Loge, F. J., Emerick, R. W., Williams, C., Kido, W., Tchobanoglous, G., and Darby J. L. Impact of Particle Associated Coliform on UV Disinfection Performance. *Proceedings of the Water Environment Federation 70th Annual Conference and Exposition*, 1997.

Presentation. Emerick, R. W., Tchobanoglous, G., and Darby, J. L. (1997) Use of Sintered Glass as a Medium in Intermittently Dosed Wastewater Filters: Removal and Fate of Virus. *Proceedings of the Water Environment Federation 70th Annual Conference and Exposition*, 1997.

Loge, F. J., Emerick, R. W., Heath, M., Jacangelo, J., Tchobanoglous, G., and Darby, J. Ultraviolet Disinfection of Secondary Wastewater Effluents: Prediction of Performance and Design. *Water Environment Research, 68:5, 900-916*, 1996.

Presentation. Heath, M., Swaim, P., Jacangelo, J., Loge, F., Emerick, R., and Tchobanoglous, G. Comparative Costs of Chlorination/Dechlorination and UV Radiation. *Proceedings of the Water Environment Federation Annual Conference*, 1995.

Presentation. Emerick, R. W., and Darby, J. L. Ultraviolet Light Disinfection of Secondary Effluents: Predicting Performance based on Water Quality Parameters. *WEF Disinfection Spec. Conf. Proc., Whippany, NJ, pp. 175-186*, 1993.

From:
To: Planning_Commission
Subject: Item 4. PLN2018-00264 - MidPen Moss Beach Housing Project
Date: Monday, June 8, 2020 12:32:21 PM

My name is Rich Francis and I have lived here in Montara for 15 years.

This new project, called the MidPen Moss Beach Housing Project will seriously impact our way of life and it appears that the people in charge, you, are not adequately listening to our concerns.
As is evident in Montara, with minimal lot sizes and inappropriate house to lot to tree coverage requirement (unfortunately we're starting to look like El Granada...), the zoning laws and requirements within the moss Beach community have not been met in order to proceed with a project of this type and magnitude.

-This project is waaaaay too big for the infrastructure / area

-Traffic impacts are very significant and to date have remain unmitigated, unresolved, and inadequately planned for

-Connect the Coastside traffic management plan is being rushed and now when completed needs to be looked at by a unbiased Third Party for proper evaluation since the current administration has failed to meet its responsibilities in a timely fashion

-Peer Reviews of MidPen's Traffic Report and Hazardous materials are still not included in current staff reports and should be as a matter of public record.

-No Commitment to perform an Environmental Impact Report which is required by law not only by the County, but also by the Coastal Commission, as it is for private structures

-There will be a significant and cumulative impact on accessibility from El Granada, Half Moon Bay and Montara

-How many times do we have to yell this, there is one road in and one road out, no matter how manyu stop signs and turn abouts are installed and this project is a threat to coastal evacuation

Finally and in conclusion, this project/building is being seen as a cheap and easy appeasement to the lower income housing community and is being located in an inappropriate and much too isolated location. You should be asking the developer to spend their clients income and resources in finding a more appropriate place for such housing. The place is not in Moss Beach as it is not in Hillsboro or Tiburon, or Los Altos Hills or Atherton, if you understand what's being said here...QUIT TRYING TO DO WHAT'S EASY BUT INSTEAD DO WHAT'S RIGHT!

Rich Francis

From:
To: Planning_Commission
Subject: Item 4. PLN2018-00264
Date: Monday, June 8, 2020 12:07:31 PM

I have been concerned about the MidPen Moss Beach Housing Project since the beginning and have voiced my opinion several times in the past.

There is nothing new for me to say. My objection is based on the following: the current infrastructure can not handle this development; the traffic impact will create dangerous situations; no EIR has been completed yet; the location is isolated.

I won't say anymore. No doubt you have heard many concerns. Mine are the same as I have had since the beginning.

Thank you for including my voice in your decisions.

Sherry Kritzer

Moss Beach

June 7, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

RE: Vegetation Assessment of MidPen Housing Cypress Point Project Site
and California red-legged frog site adjacent to Montara Creek

Dear Commissioners and Mr. Schaller,

I write regarding the proposed Cypress Point project in Moss Beach.

I'm a professional forager, naturalist, and a plant and mushroom identification expert. I live in Montara, so I'm especially familiar with the plant communities of this area. I hike frequently, and identify plants on these walks. In 2015, I devoted myself to brokering and promoting wild foods full-time. I operate Morchella Wild Foods of California.

California's coastal fog belt is the most biodiverse part of our state, a narrow band of habitat that occurs only where summer fog brings moisture to the flora during otherwise dry months. The year-round moisture and mild temperatures result in thick vegetation, rich soil and a deep seed bank. Coastal forests here are comprised of Monterey pine and Monterey cypress, trees native to California and designated vulnerable/endangered by IUCN and the California Native Plant Society due to their small native ranges and susceptibility to disease and climate shifts. These forests are host to many native plant and mushroom communities.

The purpose of this letter is a concern I have with the planned development at Cypress Point. I attended the Planning Commission hearing in Half Moon Bay on January 22, 2020, where I was disappointed to hear the flora on the Cypress Point site described as "invasive grasslands," when it is in fact native forest. After the hearing I read MidPen's May 24, 2018 "Biological Resources Assessment," section Vegetation and found that this Assessment only discussed a fraction of the native vegetation I've observed on the project site and surrounding area. Even some of the most prominent plants were omitted from the list of species recorded during MidPen's survey in March 2017.

Some of the resources and reference guides I used in preparing this correspondence include:
Calflora database (https://www.calflora.org/)
iNaturalist database (https://www.inaturalist.org/)
Tending the Wild by Kat Anderson
California Foraging by Judith Lowry
California Native Plants for the Garden, by Carol Bornstein, David Fross, and Bart O'Brien
Mushrooms of the Redwood Coast by Noah Siegel and Christian Schwarz
Mushrooms Demystified by David Arora

Attached is a map of the project site and surrounding area with points of interest labeled 1-11 where I've observed native flora, and below I identify the plants I've observed in each specific area

1) A native plant community of coyote brush, beach and wood strawberry, yerba buena, yarrow, California mugwort, little western bittercress, oso berry, California bee plant, California everlasting, and coast angelica.
2) Mugwort, yerba buena, California bee plant, poison oak and coyote brush along northern edge of site.
3) Abundant mycorrhizal mushrooms occurring with Monterey pine here: Amanita muscaria, lactarius deliciosus, suillus spp., boletus edulis, russula queletii, and others.
4) Pacific aster, California coffeeberry, and Pacific sanicle are found throughout the site including here.
5) Beach sagewort.
6) Monterey cypress here host many native mushrooms including Agaricus bernardii, Agaricus brunneofibrillosus, Clitocybe nuda, and others.
7) Yarrow is found throughout the site, and in abundance here.
8) Coffeeberry, coyote brush, beach strawberry, Douglas iris, and checkerbloom can be found in the median between Carlos and Cabrillo Highway. In the Calflora database, there is an observation of rose leptosiphon, California Rare Plant (Rank 1B.1) being found at this location. A small and solitary plant, it would be difficult to find except when in bloom during a short period in May and June.
9) Pink honeysuckle and salt-loving agaricus mushrooms.
10) Watercress presence in Montara Creek is evidence of aquatic habitat which likely hosts red-legged frogs.
11) Single leaf onion, red flowering currant, red elderberry, arroyo willow and more can be found nearby in Montara Creek.

Of the many native plants omitted from MidPen's Biological Assessment, the most puzzling to me are the omission of California coffeeberry, yarrow, Pacific aster, Pacific sanicle, and California bee plant - because they are some of the most prominent vegetation throughout the site.

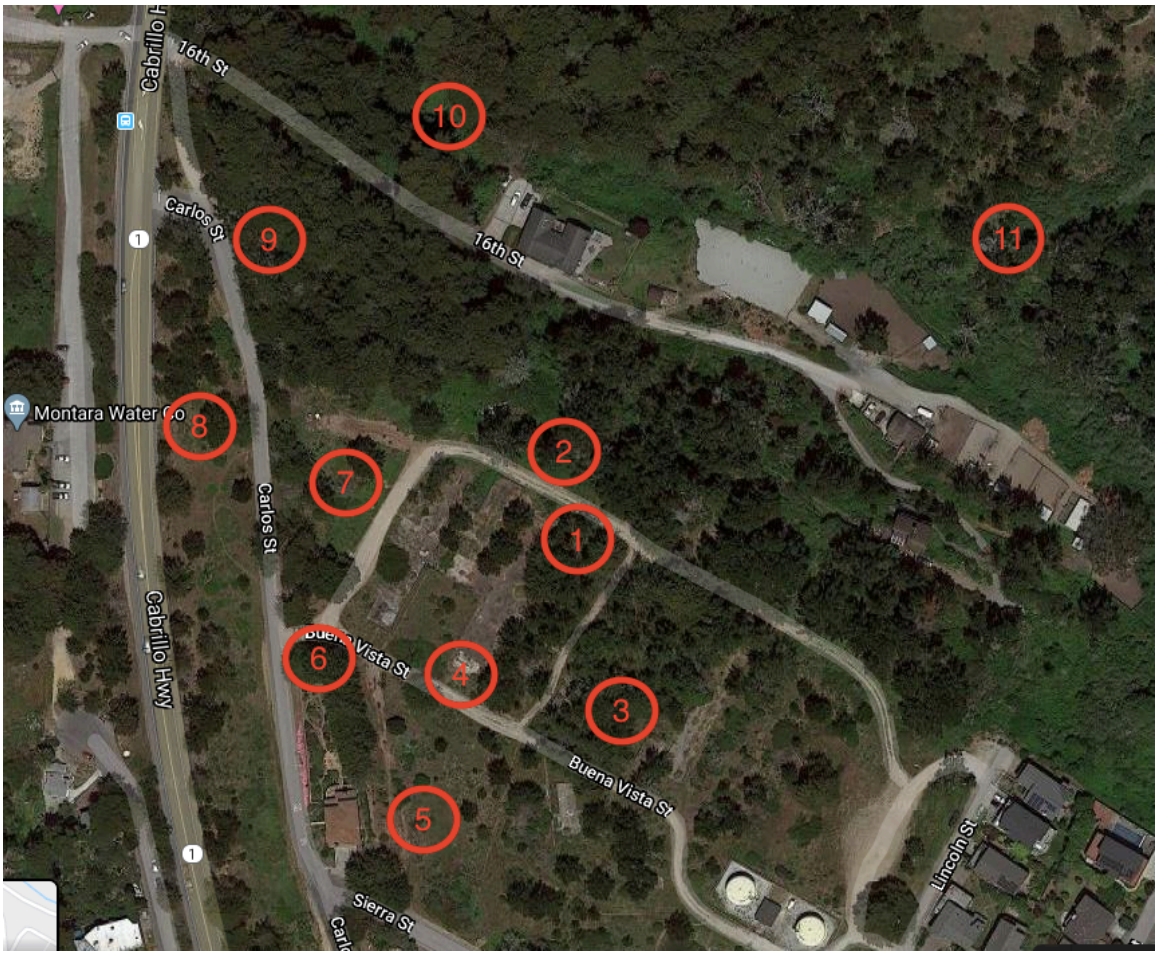
In addition, please consider that on April 12, 2020 I observed what I believe was a California red-legged frog adjacent to Montara Creek. The frog was on 14th Street, at the edge of the road, in a perennially wet spot created by a neighbor's groundwater drainage. I observed the frog about 100 yards north of Montara Creek. I understand that at this time of year this species roams from their aquatic breeding spots to upland areas during rainy periods like we had in early April this year. I have attached an image of the frog I observed. Although I am not an expert in herpetology, I understand that the prominent dorsolateral folds on the frog I observed are a key feature that distinguish California red-legged frogs from more common Pacific tree frogs. California red-legged frogs are our state amphibian, and designated a vulnerable species by IUCN due to habitat loss.

In conclusion, MidPen's Vegetation Assessment is clearly incomplete and understates the native flora that would be impacted by development here.

I urge you to postpone further consideration of this proposed project - until more a reliable biological assessment has been performed.

Sincerely,

Bryan Jessop


16th St
Cabrillo H
10
Carlos St
9
16th St
11
Montara Water Co
8
2
7
Carlos St
1
Cabrillo Hwy
6
4
3
Buena Vista St
5
Sierra St
Lincoln St

PANG ENGINEERS, INC.
TRAFFIC AND TRANSPORTATION CONSULTANTS

GAY LAWRENCE PANG, C.E., T.E.

2020010 (2)
May 1, 2020

Law Offices of Brian Gaffney APC
446 Old County Rd, Suite 100-310
Pacifica, CA 94044
ATTN: Brian Gaffney
Attorney at Law

Re: Cypress Point TIA
Moss Beach
San Mateo County, California
PLN2018-00264

Dear Mr. Gaffney:

We have "peer reviewed" for the proposed Cypress Point "Affordable" Apartment Residential Development at the northeast corner of Carlos Street and Sierra Street in Moss Beach and San Mateo County, CA, the following documents:

1. Traffic Impact Analysis (TIA), dated April, 2019 by Kittelson & Associates, Inc. in Oakland, California;
2. State of California, Department of Transportation (CalTrans) letter response, dated April 9, 2018;
3. CalTrans letter response, dated August 29, 2018;
4. San Mateo County Civil Comments-Traffic, dated September 24, 2018;
5. Executive Summary of the "Connect The Coastside" Report, January 15, 2020.

Our comments, questions, concerns, TIA omissions, and/or constructive suggestions are to gain a better understanding of the project impacts for the Transportation and Traffic elements. Several items are enumerated, and include but are not limited to this partial list, e.g. Trip Generation, Trip Distribution and Assignments, count data, Level of Service (LOS) analysis, parking, access and circulation, proposed Mitigation Measures at the critical intersections, Vehicle Miles Traveled (VMT), and other miscellaneous items.

The proposed project is a 71 Dwelling Unit (DU) "affordable" apartment complex on 10.875 acres of vacant land. It is assumed that the development is "apartments", since the TIA utilizes Land Use 220 or "apartments" within the Institute of Transportation Engineers (ITE) Trip Generation Manual.

PO BOX 4255
MOUNTAIN VIEW
CA 94040

(650) 465-2006

1. TRIP GENERATION

The TIA project trip generation estimates referenced the 9th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual, which subsequently has been updated to the 10th Edition around April, 2018. As the TIA was initiated with critical intersection counts collected during April, 2017, it is understandable that the 9th Edition was utilized at that time. However, with the subsequent delay in the release of various draft versions of the TIA in January, 2018, as evidenced by the CalTrans comment letter of April 9, 2018, and the July 2018 Planning Permit Application Referral noted in the CalTrans letter of August 29, 2018, and then the release of the latest version of the TIA dated April, 2019, there is a concern about the accuracy of the TIA trip generation estimates given the lack of review for compatibility and comparison with the latest or 10th Edition.

The TIA omits the daily weekday trip generation estimates for the proposed project.

Here are other potential comparisons for weekday daily, AM and PM peak hours, and Saturday peak hours:
DAILY:
9th Edition Estimate = 473 trips (average method); missing from TIA;
9th Edition Estimate = 554 trips (with "equation");
10th Edition Estimate = 520 trips (average method);
10th Edition Estimate = 496 trips (with "equation");

AM:
9th Edition Estimate = 37 trips (average method); shown in TIA;
9th Edition Estimate = 39 trips (with "equation");
10th Edition Estimate = 33 trips (average method);
10th Edition Estimate = 35 trips (with "equation");

PM;
9th Edition Estimate = 45 trips (average method); shown in TIA;
9th Edition Estimate = 57 trips (with "equation");
10th Edition Estimate = 40 trips (average method);
10th Edition Estimate = 44 trips (with "equation");

SATURDAY Peak Hour:
9th Edition Estimate = 37 trips (average method); shown in TIA;
9th Edition Estimate = 49 trips (with "equation");
10th Edition Estimate = 54 trips (average method);
10th Edition Estimate = 44 trips (with "equation").

Best practice would have been for the TIA's AM peak hour estimate to utilize the higher of the average vs equation methods or 39 trips, to represent a conservative approach. However, the 37 AM peak hour trips in the TIA are slightly LESS than the 39 trips for the 9th Edition. The estimates could be slightly reduced if the 10th Edition is utilized from 37 in the TIA to 35.

The PM peak hour estimate should also have utilized the higher of the average vs equation methods or 57 trips. The 45 trips in the TIA are LESS than the 57 trips for the 9th Edition. The estimates could be reduced if the 10th Edition is utilized from 45 in the TIA to 44.

The Saturday peak hour estimate should have utilized the higher of the average vs equation method or 49 trips. The 37 trips in the TIA are LESS than the 49 trips for the 9th Edition. The estimates would be increased if the 10th Edition is utilized from the 37 in the TIA to 54.

The TIA's trip generation numbers are different from the ITE manual. The TIA analyses failed to: (1) include the estimated DAILY trips for the proposed project (an omission); (2) use the HIGHER of the average vs equation methods; and (3) use the updated 10th Edition from ITE.

Because of these errors and omissions, the TIA's estimates of Project trip generation are unreliable, and unless corrected, should not serve as the basis for conclusions about Project traffic impacts.

2. TRIP DISTRIBUTION AND ASSIGNMENTS

The Project Trip Distribution along State Route 1 is shown on Table 4, page 26 of the TIA. The TIA states that "the distribution of Project trips was derived from existing travel volume data and from knowledge of the local travel times". The problem with this statement is that there is no disclosure of the time frame of the CalTrans SR 1 "seasonally" adjusted volume estimates referenced. Thus, the peer reviewer does not know if trip volume estimates were based on the April, 2017 critical intersection counts, or something else, such as a travel demand model? That foundational information must be provided to properly assess the trip distribution.

Additionally, the TIA fails to provide a "Figure" which shows the percent of traffic distribution to the local streets. Table 4 only indicates the traffic distribution along SR 1.

Further, the TIA fails to disclose the project driveway volumes shown at an "unnumbered" intersection with Carlos Street. This is important information to assess the estimated trip generation percentages from the north and south on Carlos Street. While TIA Figure 7 on page 27 shows the estimated project trip distribution, there is no driveway "intersection" disclosure as previously noted. Thus, project traffic volumes on the local streets are impossible to discern without the percentages.

The potential redistribution of the estimated project trips, along with the desire to update or revise the trip generation estimates with new information, has a direct bearing on the trip assignments at the project driveway, as well as at all critical intersections.

Because of these omissions, the TIA's estimates of Project trip distribution are unreliable, and unless corrected should not serve as the basis for conclusions about Project traffic impacts.

3. COUNTS

Appendix 2 of the TIA contains the counts at the critical intersections which were collected during April, 2017. At this point, these traffic counts are three years old. Thus, they cannot be relied upon for assessments of traffic impacts.

Rather than reliance on outdated traffic counts to accurately estimate traffic impacts, the counts should be redone to reflect more typical current expected 2020 traffic patterns (excluding the coronavirus issues), and be conducted to reflect traffic when school is open as well as a typical Summer weekday and weekend day (Saturday) traffic. Along with the outdated counts, the "seasonally" adjusted volumes utilized in the TIA remains unclear as to how they were determined. Additional clarity is required to evaluate traffic impacts to also reflect the Summer months recreational traffic and school period traffic on certain movements.

Since there is the potential for a lot of variation in the actual counts, the TIA should include both a typical school day and a Summer day be counted to adequately assess the traffic impacts.

There were several Summer months over the last three years available for additional counts. There could have been selected counts performed, especially at the critical intersections that are shown in the TIA to be significantly impacted.

The school year and Summer month traffic volumes should be compared and the HIGHER one or "worst" case utilized for the Level of Service (LOS) calculations at the critical intersections.

4. LEVEL OF SERVICE (LOS)

The errors and omissions from the TIA's estimated project trip generation, omissions from the TIA's trip distribution and assignment discussion, the lack of any "growth" factors due to the delay of nearly 3 years for "existing" and Summer traffic counts, and the omission of an updated list of "approved" projects, all are factors which make the TIA's LOS calculations unreliable.

On that basis, ALL of the LOS calculations should be redone based on proper trip generation estimates, accurate trip distribution and assignments, and updated traffic counts as discussed above. In the absence of modified LOS calculations, the TIA's current LOS results should not serve as the basis for conclusions about Project traffic impacts.

Additional comments are provided in the Traffic Mitigation section.

Notwithstanding the above flaws, the LOS calculations shown in the TIA indicate significant traffic impacts at some of the critical intersections, and should not be ignored.

5. PARKING

The proposed on-site parking on the Site Plan indicates 142 stalls, or 2 stalls per apartment dwelling unit. That is 15 parking stalls in excess of the San Mateo County code requirement of 127 stalls. See TIA Table 18, page 60.

The TIA utilized the 4th Edition of the Parking Generation Manual. Since 2017 there is a 5th Edition released in April, 2019 available. What is troubling is that the TIA utilizes Land Use #221 and not Land Use #220 available in the 5th Edition. Thus, this portion of the TIA should be updated, e.g. Table 19, page 61.

Further analysis is required to include not only the average parking generation rates but also the 85th percentile values, and compare that with the San Mateo County code requirements.

Notably, if the goal is to reduce the project traffic impacts with less traffic, then the increase in the project parking supply above the San Mateo County code requirements will have the opposite effect.

6. ACCESS AND CIRCULATION

Based on the review of the Site Plan (page 12), we understand that only one driveway is proposed to provide project vehicular access to and from Carlos Street. The driveway is in close proximity to Intersection #3, SR-1/Carlos Street, as well as Intersection #4, Carlos Street/Sierra Street. There is an emergency access to Lincoln Street to the east (page 46).

A more detailed Driveway/Carlos Street intersection design or sketch is required to indicate how the project vehicular operations will be implemented.

There are likely to be significant adverse traffic impacts from the proposed project Driveway/Carlos Street intersection operations. These operational issues should be analyzed further before project approval. Currently, operational traffic issues from inadequate sight distance, inadequate turning radii, and others, have not been adequately analyzed, mitigated, or avoided.

7. MITIGATION MEASURES

The proposed Mitigation Measures are in the TIA starting on page 49.

In reference to the significant traffic impacts based on the LOS calculations for the Existing Conditions or TRAF-1, the TIA discusses mitigations TRAF-1A and TRAF-1B.

TRAF-1A
Intersection #7 or SR-1/California Avenue-Wienke Way for the PM peak hour and Saturday peak hour:

The conversion of the existing two-way STOP control into a roundabout or signalized intersection is the proposal with a determination upon the completion of the Intersection Control Evaluation (ICE) study required by CalTrans. This is an unresolved mitigation measure as there has not been a completion of the ICE study nor any information regarding the potential "fair share" cost sharing aspects with the proposed development. In the absence of this information about who will pay or the ICE results, the mitigation's feasibility is unknown.

The ICE study and the Connect to Coastside Study recommendations, when completed, should be included in an updated TIA analysis.

Without the ICE Study and without a "fair share" cost sharing agreement, this proposed mitigation measure is incomplete, unenforceable, and cannot be relied upon for a conclusion of a less than significant traffic impact.

TRAF-1B
"Develop a Transportation Demand Management (TDM) Plan for the review and approval by San Mateo County".

In the absence of a TDM Plan, it is impossible to assess its feasibility or how it will potentially mitigate acknowledged significant traffic impacts.

The TIA indicates that "the effectiveness of a TDM plan cannot be guaranteed" (page 50). CalTrans has also commented on this issue, as well as prior San Mateo County Civil (Traffic) responses and suggestions. Thus, the proposed mitigation measure does not resolve the significant traffic impacts that have been identified.

In reference is to the significant traffic impacts based on the LOS calculations for the Background Conditions or TRAF-2, the TIA discusses mitigations TRAF-2A and TRAF-2B.

TRAF-2A
Intersection #7 or SR-1/California Avenue-Wienke Way for the PM peak hour and Saturday peak hour:

Similar to TRAF-1A and 1B above, those comments are repeated herein.

TRAF 2B:
Intersection #3 or SR-1/Carlos Street for the Saturday peak hour.

Three potential mitigation measures were considered (page 52):
1. Closing Carlos Street between SR-1 and the Project to all but emergency vehicles;
2. Connecting Carlos Street with 16th Street instead of SR-1;
3. Grading the east side of SR-1 to provide clear sight distance.

The TIA does not identify "feasible" mitigation measures for Item #1 above.

Item #2 above has geometric and topographic challenges, and right of way issues, which remain unresolved.

Item #3 above is a challenge to obtain the clear sight distance requirements. However, merely stating that a topographic map will be required is insufficient. There are other CalTrans issues not studied nor adequately discussed including but not limited to a "fair share" agreement for the right of way, and intersection and street improvement costs.

The TIA has not identified cost sharing for any of the above three mitigations, and that undermines the feasibility of the proposed mitigation measures as discussed above.

Also, the TDM Plan is once again mentioned and the prior response stated above in TRAF 1B applies.

In reference to the significant traffic impacts based on the LOS calculations for the Cumulative Conditions or TRAF-3, the TIA discusses mitigations TRAF-3A, TRAF-3B, and TRAF-3C.

TRAF-3A
Intersection #3 or SR-1/Carlos Street for the AM, PM and Saturday peak hours.

The TIA proposes to implement the TDM program or TRAF-1B, which has not as yet been developed nor submitted, is an unacceptable mitigation measure for the reasons above.

TRAF-3B
Intersection #6 or SR-1/Vallemar Street-Etheldore Street for the Saturday peak hour.

The TIA proposes to implement the TDM program or TRAF-1B which has not as yet been developed nor submitted, is an unacceptable mitigation measure for the reasons above.

An additional mitigation measure of a new traffic signal was analyzed and the peak hour signal warrant was not satisfied. Therefore, this is NOT an adequate proposed mitigation measure.

TRAF-3C
Intersection #2 or SR-1/16th Street for the PM peak hour and Cumulative with Project Condition.

The TIA proposes to implement the TDM program or TRAF-1B which has not as yet been developed nor submitted, is an unacceptable mitigation measure. The traffic signal peak hour warrant is not satisfied. Therefore, there is no mitigation measure that reduces the traffic impacts to less than significant.

In reference to the significant traffic impacts based on Design Features or TRAF 4, the TIA discusses mitigation TRAF-4A.

TRAF 4A
The SR-1/Carlos Street intersection (#3) has restricted sight distance along the east side of SR-1.

The proposed mitigation measure of TRAF-1B or a TDM program is unacceptable for the reasons above. The TIA fails to provide a design of this intersection to resolve the sight distance issues, along with a "fair share" agreement as to the future costs of any proposed intersection improvements, and other sight distance and intersection street improvements.

In reference to the safety of public transit, bicycle and pedestrian facilities or TRAF-5, the TIA discusses mitigations TRAF-5A and TRAF-5B.

TRAF 5A
Sidewalk construction mitigation measure should be a condition of development.

TRAF-5B
The proposed mitigation measure of distributing information is a given and not a true mitigation measure. The TIA fails to provide a sketch detailing the bus stop locations with signing, crosswalk markings if deemed feasible, and the correction with actual physical improvements of the inadequate sight distance along SR-1.

Additional continuing collaborative efforts with Sam Trans at a minimum should be required for all project related bus route changes, and the TIA should include analysis of impacts on traffic of such bus-related mitigation measures.

8. VEHICLE MILES TRAVELED

The concept of Vehicle Miles Traveled (VMT) should either complement or replace the LOS analysis depending upon the transition by San Mateo County to this type of analysis. However, it is important to note that VMT analysis does not eliminate nor remove the significant traffic impacts already noted with the LOS calculations within the TIA.

To accurately analyze traffic impacts, the TIA should provide estimates of the VMT for this proposed project to complement the results and traffic impacts from the LOS calculations.

9. OTHER

A. Queues (TIA, page 63)

The TIA contains the queue calculations for the 95th percentile analysis at the request of CalTrans. It appears that the analyses are adequate assuming that the inputs were consistent. Nevertheless, there are issues previously mentioned with the trip generation, trip distribution and assignments, and "seasonally" adjusted counts that must be analyzed to properly reflect the project traffic impacts.

B. CalTrans Comments

Two CalTrans comment letters have been submitted regarding the proposed project. The first is dated April 9, 2018 and the second August 29, 2018. Our comments are as follows:

CalTrans April 9, 2018 Letter

This Caltrans letter raises the issue of Vehicle Miles Traveled (VMT) and its goal to reduce VMT while tripling bicycle, and doubling pedestrian and transit travel. Their comments are based on the January 2018 Draft Traffic Analysis.

CalTrans indicates that "improvements to SR-1 may be necessary to accommodate increased vehicle, transit, pedestrian, and bicycle trips associated with the project". There are many SR-1 challenges and multiple constraints affecting SR-1 which still MUST be evaluated before project approval. Some of the items raised by CalTrans, to the best of our knowledge, have NOT been adequately analyzed within the revised TIA of April, 2019. These include the following:

1. right of way (ROW) constraints and topography limit options for the Carlos Street/SR-1 intersection;
2. SR-1 has limited accommodations for transit users, cyclists, and pedestrians in his area;
3. sight distance and potential turning movement conflicts limit the options for intersection improvements;
4. accessing the coast or existing southbound SamTrans Route 17 bus stop, which runs on one-hour headways, requires crossing SR-1 at an unsignalized intersection;
5. accessing the northbound SamTrans Route 17 bus or the community of Montara requires walking along the shoulder of SR-1 for approximately 0.15 miles.

The TIA does not adequately address those issues. Not only should additional analyses be performed, e.g. a CalTrans ICE Study, but those items should be adopted prior to project approval.

The TIA still does not include an adequate nor detailed analysis for the issues such as the Carlos Street emergency vehicles only between project driveway and SR-1; 16th street, eastbound and westbound approaches, right turns only; and Vallemar Street/Etheldore Street, eastbound and westbound approaches, right turns only.

Also, the TIA proposes to convert the SR-1/California Avenue-Wienke Way intersection from a two-way STOP controlled into a roundabout or signalized intersection. However, while there are some LOS calculations in the Appendices of the TIA, an actual sketch or preliminary design for either a signalized intersection or roundabout has not been included within the revised TIA.

The TIA has however, included a queue analysis for vehicular storage as previously noted, but has NOT analyzed the truck U-Turn issue at critical intersections.

With respect to Multimodal Planning, Caltrans has identified a "Fair Share" contribution concept "toward multimodal and regional transit improvement to fully mitigate cumulative impacts to regional transportation". The "fair share" contribution concept has not been included within the revised April, 2019 TIA.

Additionally, CalTrans has suggested a Pedestrian Hybrid Beacon (PHB) be evaluated and considered with high visibility crosswalk at the SR-1/14th Street intersection, and the relocation of the SamTrans route 17 southbound bus stop to that location across from the existing northbound stop. Neither of those suggestions were adequately analyzed, with the PHB issue completely ignored within the revised April, 2019 TIA.

Primary and secondary effects on pedestrians, bicyclists, disabled traveler, and transit user have not been adequately analyzed within the revised TIA.

A robust TDM Program is suggested by CalTrans to reduce VMT. The revised TIA has not adequately analyzed the development of a TDM Program yet indicates that there are no guarantees involved in reducing traffic impacts.

CalTrans has noted that "any proposed non-standard design feature (such as inadequate sight distance) will have to be approved by a Fact Sheet for Exceptions to Mandatory and/or Advisory Design Standards prior to implementation." The revised TIA has not moved forward with any sketches regarding the sight distance inadequacy along SR-1.

CalTrans August 29, 2018 Letter

This Caltrans letter refers to the Application Referral. It duplicates the first letter with respect to the VMT issue, and multimodal planning. New issues include hydraulics, as well as the Travel Demand Analysis and Mitigation wherein "the July, 2018 TIA has not been updated to reflect CalTrans' comments on the January 2018 Draft Traffic Analysis". Nor has the "fair share" contribution concept been included within the revised TIA, and it is again mentioned herein.

The VMT reduction is once again mentioned and has not been analyzed within the revised TIA.

CalTrans has commented that "reducing parking supply can encourage active forms of transportation, reduce regional VMT, and lessen future transportation impacts on State facilities". Yet the proposed project has a parking supply of 142 stalls or 15 stalls ABOVE the San Mateo County code required amount of 127 stalls.

The revised TIA has failed to address many of the comments from CalTrans' two letters. This points to the TIA's continued failure to adequately analyze project impacts and feasible mitigation measures.

C. San Mateo County Comments

San Mateo County has provided Civil (Traffic) comments. Nine items were listed, and the key items are:

Item #4: "the proposed turn restrictions as mitigation measures are not acceptable. Please provide alternative mitigation measures to address project significant impact at Highway 1 and Vallemar/Etheldore and Highway 1 and 16th." (Not included within the revised TIA);

Item #5:"the closure of Carlos Street to all motor vehicles other than emergency vehicles is not acceptable as a mitigation measure. Please provide other mitigation measures to address the project's significant impacts." (Not included within the revised TIA).

Item #6: SamTrans bus stop relocation is not a County project. It is up to the applicant to coordinate with SamTrans and provide all the necessary approvals from SamTrans to the County for review and consideration before the TIA can be approved. Please provide alternate mitigation measures in case SamTrans does not approve the proposed rerouting." (Not included within the revised TIA).

Item #7: "Please provide documentation that supports the premise that a fully funded project is currently moving forward. Absent an assurance that a fully funded project is in the process of being implemented, the applicant will be responsible for mitigating the project's impacts." (Not included within the revised TIA).

Item #8: "If the applicant is proposing any TDM measures as mitigation, the measures need to be clearly defined and calculations shown as how many trips will be reduced by each measure and how that will impact the operations and LOS at the applicable intersections. In addition, please provide a monitoring measure to each of the TDM measures proposed and alternate measure in case the monitoring shows that TDM is not as effective as assumed."
(Not included within the revised TIA).

The revised TIA has failed to address many of the San Mateo County Civil (Traffic) comments. This points to the TIA's continued failure to adequately analyze project impacts and feasible mitigation measures.

D. Traffic Infusion on Residential Environment (TIRE)

The Executive Summary of the Connect The Coastside Report refers to the extensive community outreach program. Curiously, the TIA does not include mitigation measures for street segments e.g. along Carlos Street, as that street serves the proposed project and has a traffic impact on the existing residential developments. A Traffic Infusion on Residential Environmental (TIRE) analysis which requires Average Daily Traffic (ADT) volumes for both a typical weekday and weekend day for two scenarios i.e. during the school year and for a Summer day, should be performed. The analysis and evaluation would include the comparison of the TIRE Index and the change in the index with the proposed project. The potential traffic impacts on at least two segments along Carlos Street, e.g. near the project site north of Sierra Street, and also north of Etheldore Street should be included. This evaluation would reveal whether or not the Carlos Street segments would be adversely impacted on those two segments.

SUMMARY

This "peer review" of the April, 2019 TIA, CalTrans' two comment letters, and the San Mateo County Civil (Traffic) comments for the proposed 71 dwelling units "affordable" apartment residential development, included a summary review of the Traffic Impacts that were listed as significant and unavoidable.

Additional clarification is required as to how these Traffic impacts will be mitigated appropriately and conditioned as part of the approval of the proposed project, with the comments and concerns previously indicated.

The estimated trip generation, trip distribution and assignments, traffic counts, the Level of Service (LOS) calculations for several scenarios, parking, access and circulation, the TRAF Mitigation Measures, Vehicle Miles Traveled (VMT), and residential street segments, all have some errors and omissions as noted above, which require further evaluation/clarification and should be analyzed in more detail.

Of particular concern is that many of the comments from Caltrans and the San Mateo County Civil (Traffic) comments do not appear to have been included in the revised April, 2019 TIA.

Our review indicates that there are potentially significant deficiencies, omissions, and inaccuracies within the TIA. It is our opinion that the deficiencies, omissions, and inaccuracies would require revisions and amplifications to arrive at an acceptable and complete evaluation of the traffic and transportation issues within a subsequent and additional revised TIA.

Reasonable, appropriate, and updated potential mitigation measures, along with conditions of development, any "fair share" contributions, and with the appropriate findings and conclusions, should be included within any revised evaluations.

Very Truly Yours,

Gay Lawrence Pang
Civil Engineer #20,203
Traffic Engineer #073

Documents Reviewed

1. TIA dated April, 2019
2. CalTrans comment letter dated April 9, 2018
3. CalTrans comment letter dated August 29, 2018
4. San Mateo County Civil (Traffic) comments dated September 24, 2018
5. Executive Summary-Connect The Coastside, dated January 15, 2020

From:
To: midcoastcommunitycouncil@gmail.com
Cc: Michael Schaller; Planning_Commission; Lisa Ketcham PUD 140 Cypress Point Moss
Subject: Beach / MidPen - (APN 037-022-070)
Date: Wednesday, March 11, 2020 6:36:50 PM

Dear Midcoast Community Council members,

The proposed Cypress Point project includes proposed amendment to the San Mateo County General Plan to change the land use designation of APN 037-022-070, amendment to the County's Zoning Map, amendment of the County's zoning text, and creation of an entirely new Planned Unit Development (PUD -140) designation for the project site.

With this letter I want to iterate my concerns raised during the Feb 26 MCC meeting regarding the PUD -140. While PUD-140 contains a number of misleading statements, I'm especially concerned about the following two items:

1. Environmental impact due to proximity to an environmentally sensitive habitat areas (ESHA) – Montara Creek

The 1985 EIR for a different project on the same site found that Montara Creek is located approximately 50 feet north of the project site. The Montara Creek riparian corridor is an Environmentally Sensitive Habitat Area (ESHA) as defined by the San Mateo County LCP.

PUD-140 states on page 7:

No environmentally sensitive habitat areas (ESHA) have been identified on the project site. The closest ESHA is Montara Creek, which lies to the north of the project parcel.

And page 21 states:

Montara Creek, a perennial stream, is located approximately 250 feet to the northeast of the site, and runs parallel to the site's

northern border.

Question: Why does the EIR from 1985 state a distance of 50 feet to Montara Creek (ESHA) vs 250 feet in PUD-140? Did property boundaries or the location of Montara Creek change?

2. Updated liquefaction maps show that the named property (APN 037-022-070) is in a landslide zone and parts are in a liquefaction landslide overlap zone.

Source: The California Geological Survey released a series of new seismic hazard zones for parts of San Mateo and Contra Costa counties (April 2019) including Moss Beach.

https://www.mercurynews.com/2019/04/05/earthquake-maps-for-san-mateo-contra-costa-counties-show-vulnerable-areas/

PUD 140 Page 21 states:

Hazards Component Policy 9.1 (Definition of Hazard Areas) defines hazardous areas as “fault zones and land subject to dangers from liquefaction and other severe seismic impacts, unstable slopes, landslides, coastal cliff instability, flooding, tsunamis, fire, and steep slopes (over 30%).”

AND

The subject site is not within or immediately adjacent to a known fault zone, nor does it have steep or unstable slopes or soils subject to liquefaction.

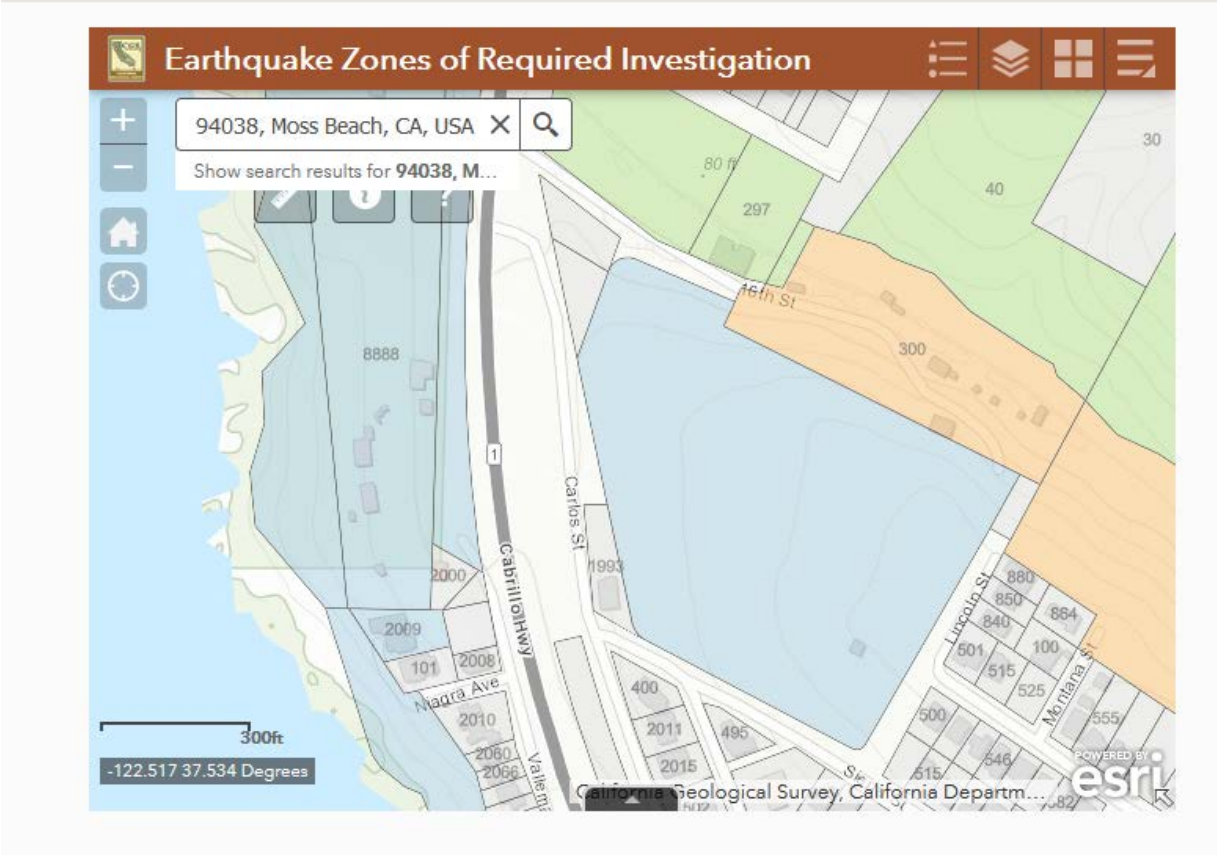
Question: What additional measures need be taken to build a large scale development in a landslide and liquefaction landslide overlap zone? This is especially important as this property has been extensively used by the Navy in the past and no records are available indicating that the site has been cleaned up.

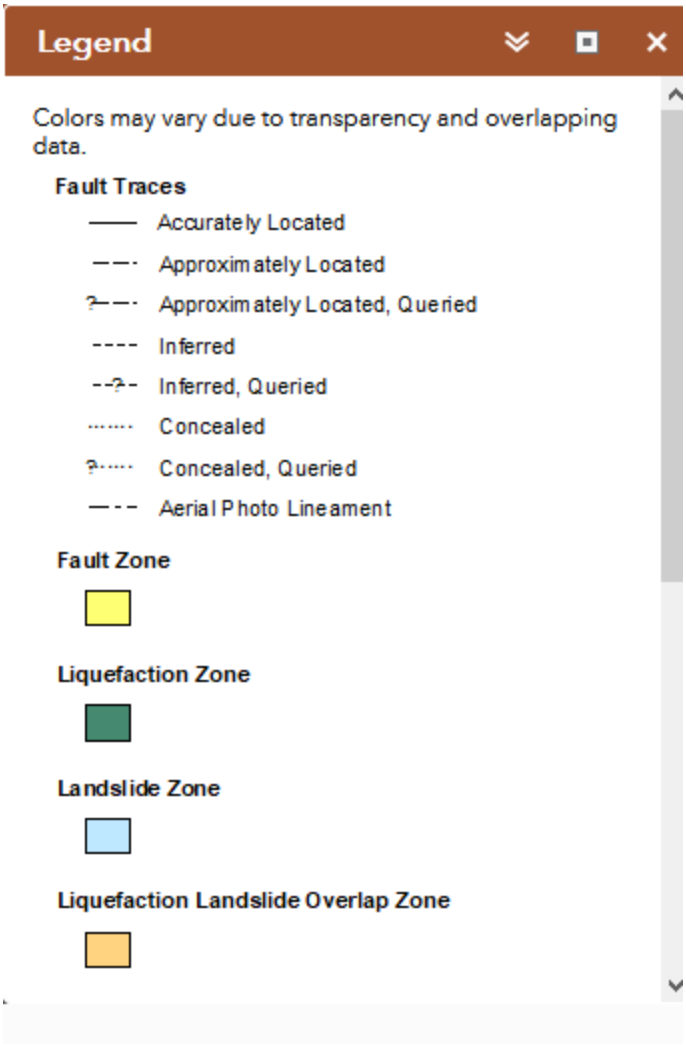
Thank you for all your work on the MCC.

Best regards,

Harold Herrman

SM MidCoast




Legend
Colors may vary due to transparency and overlapping data.
Fault Traces
Accurately Located
Approximately Located
Approximately Located, Queried
Inferred
Inferred, Queried
Concealed
Concealed, Queried
Aerial Photo Lineament
Fault Zone
Liquefaction Zone
Landslide Zone
Liquefaction Landslide Overlap Zone

From:
To: Planning_Commission
Subject: Wednesday June 10th meeting, regular agenda item #4
Date: Friday, May 29, 2020 5:00:20 PM

I'm writing in support of the MidPen project at Carlos and Sierra in Moss Beach. I have for years been a frequent patron of local businesses such as the Moss Beach Distillery, and various businesses down at Pillar Point. More housing in this area will mean that workers in these businesses will have more options to live locally, reducing commute times, traffic, and GHG emissions. Our county desperately needs more affordable housing. I hope you will be advancing this project without further delay.

Regards,
Auros Harman

From:
To: Planning_Commissio
Subject: Support 71 affordable homes in Moss Beach
Date: Friday, June 5, 2020 2:43:32 PM

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

I am a long-time resident of the Coastside and a homeowner in El Granada. We need affordable homes on the Coastside so that people who work in retail, hospitality, health care, services, and agriculture can live close to work. We also need affordable homes to achieve racial equity and economic inclusion.

I do not want to see the Coastside continue down a path of providing homes only for the wealthy. This trend is not only unjust but it is also contrary to community well-being The current pandemic has shown us exactly how much we depend every day on essential workers who would income-qualify for these homes. Let's show our gratitude to our essential workforce by approving housing that is truly affordable at their income level.

Respectfully yours,

Jan Stokley
Resident of El Granada

--

From:	Alexander Melendrez
To:	Planning_Commission
Cc:	Janneth Lujan
Subject:	Support - 71 Affordable Homes at Moss Beach
Date:	Friday, May 29, 2020 5:45:01 PM
Attachments:	_Support - Moss Beach Cypress Point - June 2020.pdf

Dear San Mateo County Planning Commission,

On behalf of the Housing Leadership Council of San Mateo County, I would like to reiterate our strong support for Midpen's Cypress Point. Please see attached our updated letter of support for these 71 affordable homes.

Additionally, we would like to share with the commission these three articles in the Half Moon Bay Review reflecting support for Midpen's Cypress Point in Moss Beach.

Letter to the Editor: We Need Cypress Point housing
Letter to the Editor: Coastside community depends on more than just homeowners
OP-ED: Supporting the people who support us

Thank you for the opportunity to comment and we wish you all good health.

Sincerely,

Alex Melendrez

--
#HousingIsHealthcare

Alexander Melendrez
Organizer
Housing Leadership Council of San Mateo County (HLC)
2905 S El Camino Real
San Mateo, CA 94403
(650) 242-1764 ext. 4 Linkedin
Pronouns: He, Him, His

HLC: Website | Facebook | Twitter | LinkedIn | Instagram | Become A Member!

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June 5, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

Subject: MidPen Housing Cypress Point Housing Project, Moss Beach CA
Biological Resources Assessment

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

BioMaAS peer reviewed the Biological Resources Assessment (BRA) for a proposed 71 affordable housing unit subdivision at the corner of Sierra and Carlos Streets, in Moss Beach, San Mateo County, California, prepared by De Novo Planning Group on May 24, 2018. Two additional documents, BKF's May 2, 2018 Cypress Point Hydromodification Management Memorandum, and the Stevens Consulting Cypress Point Project Public Services And Utilities Report, were utilized as references during our peer review of the BRA, but these documents were not peer reviewed for content.

My qualifications and experience are as follows.
Over 20 years of experience working throughout California on projects involving environmental consulting, biological assessments, special status species studies and management, environmental compliance, habitat restoration, and mitigation.

USFWS Section **10(a)(1)(A)** Recovery Permit holder for California red-legged frog, San Francisco garter snake, Alameda whipsnake, salt marsh harvest mouse and California tiger salamander.

A copy of my CV is attached.

General Comments

Based on our review, we believe that there are several sections of the BRA that should be clarified or expanded to include more pertinent information, and adequate analysis of project impacts and mitigations.

While the document lists various federal state and local regulations under the heading of regulatory setting, there is not much discussion as to how the listed regulations apply to this particular project, or what the implications of those regulations will be. The BRA entirely fails to analyze if the project will potentially violate the federal Endangered Species Act, the federal Clean Water Act, California's Fish & Game Code, California's Wetlands Conservation Policy, the Coastal Act or San Mateo County's Local Coastal Program. Further, while noting that there are 20 special-status plant species and 10 special status wildlife species within 5 miles of the project site, the BRA indicates that most species are "absent" (none observed during surveys), rather than giving a level of potential for their occurrence and gives little justification regarding those "absent" findings. An explanation for the rationale behind labeling of species as absent is warranted.

In addition, a more thorough discussion of potential mitigation measures, including agency consultation, should be included regarding some of these species.

Finally, as described further below, the BRA fails to adequately describe potential impacts to wetlands and how potential impacts could be mitigated.

Specific Comments

<u>Project Description</u>
An adequate analysis of biological impacts must be based on an adequate description of the project. Our review of the BRA reveals only that "the proposed project would result in construction activities that would change a portion of the 10.88-acre parcel into medium high-density housing, and that "the ground-disturbing activities on the site will consist of demolishing the existing foundations and grading the site."

The BRA should provide a description of all actions associated with the proposed project. Of particular concern to project impacts on wetlands and riparian habitat, the BRA makes only vague reference to drainage being "directed away from" the adjacent creek. This contrasts with BKF's May 2, 2018 Cypress Point Hydromodification Management Memorandum and the Stevens Consulting Cypress Point Project Public Services and Utilities Report which both state that excess stormwater runoff surface flows ultimately discharge to Montara Creek. The BRA should provide a more thorough description of the location, volume, and rate of drainage in order to adequately evaluate impacts to the adjacent Montara Creek. A map of the projected drainage should also be included.

<u>Environmental Setting</u>
As an initial observation, it has been almost 2 years since the project site was last surveyed by De Novo. Circumstances may have changed in this period and it would be prudent to re-survey the site and adjacent habitat.

The BRA states that based on field surveys the potential for each special-status species to occur within the project site was evaluated as either "No Potential," "Potential," or "Present." However, BRA's findings on species "presence" reported in Table 1 fails to use these classifications. This is more than just a technicality. For example, the BRA defines "Potential" as "Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable." By failing to use this classification system, the reader of the BRA is deprived an understanding of the survey findings and thus at a loss to understand project biological impacts.

Further, Table 1 simply lists many species as "absent" which can't be proven by lack of observation. The BRA - in many instances - fails to explain the justification for its determination of a species as absent. In addition, Table 1 identifies Fragrant fritillary as absent, but surveys were not conducted during the June to September period when this plant is in bloom.

The BRA's "California red-legged frog" section does not mention the relatively close proximity of the species occurrence within the adjacent Montara Creek. To adequately analyze project impacts, the BRA must explain why the proposed project site does not provide suitable upland habitat for the species.

Project Impacts

As noted above, the BRA entirely fails to analyze if the project will potentially violate the federal Endangered Species Act, the federal Clean Water Act, California's Fish & Game Code, California's Wetlands Conservation Policy, the Coastal Act or San Mateo County's Local Coastal Program. There are species protected by the federal Endangered Species Act and California's Fish & Game Code – including San Francisco garter snake, California red-legged frog, and birds of prey – that are noted in the BRA, which make analysis of potential violations of the regulations essential.

Table 1 mentions that the San Francisco garter snake is potentially present, and that the "drainage north of site provides limited habitat, cypress along northern boundary is potential upland." Given this, the BRA fails to adequately analyze potential impacts to this species.

In the "San Francisco dusky-footed woodrat" section, the BRA provides inadequate justification for its conclusion that construction activities would not impact this species. Because this species occurs in scrub habitats in addition to forest, it would be prudent for all vegetated areas within the proposed project area to be thoroughly surveyed. The BRA does not make it clear that this has been done, and thus its conclusion is suspect.

In regard to bats, the BRA states that no bats were observed during surveys, but does not specify if a bat survey was conducted. Trees provide potential bat habitat but were omitted from the BRA's discussion of suitable bat habitat.

For Impact BIO-3, the BRA states "The closest recognizable wetlands are approximately 350 feet to the north near 16th street, and approximately 600 feet to the west in the Pacific Ocean. Neither construction nor operation of the project would have a substantial adverse effect on these nearby wetlands, given the distance of these wetlands to the project site, and the fact that drainage from the site will be directed away from the adjacent stream." Yet, the BRA fails to provide a detailed description of the project drainage, which likely will adversely impact wetlands.

The BRA does not mention the retention ponds proposed as part of the site. In contrast, BKF's May 2, 2018 Cypress Point Hydromodification Management Memorandum states that there will be post-project drainage towards "the bioretention areas" which will have a "6,500 square foot footprint," and that "this configuration will be adjusted accordingly as ***more*** bioretention areas are introduced into the site plan."

The Stevens Consulting Cypress Point Project Public Services and Utilities Report at Section 7.4.1 reveals that the project site slopes range from 10 percent to 50 percent, there is no existing storm drain infrastructure on the property, and that "stormwater ultimately discharges to Montara Creek within the James V. Fitzgerald Area of Specific Biological Significance (ASBS) watershed area." In addition to stormwater from the 11-acre project site, there is an additional one (1) acre of offsite runoff that drains through the project site and contributes to the overall drainage area.

Drainage out of the retention ponds and stormwater runoff has the potential to adversely impact wetlands.

In addition, project retention ponds may function as habitat, or as an attractive nuisance, for California red-legged frogs by luring them to breed at a site where reproductive success is unlikely. The BRA omits the necessary analysis of these potential adverse impacts, and thus also omits any discussion of potential mitigation measures.

<u>Mitigation Measures</u>
The BRA's discussion of mitigation measures appears inadequate, as it includes no discussion with the US Fish & Wildlife Service or CDFW to avoid "take" of California red-legged frog, San Francisco garter snake, San Francisco dusky-footed woodrat, and bats.

Regarding Mitigation Measure Bio-2, the BRA fails to include surveys for all protected bird species. In addition to raptors, other native nesting birds should be protected from disturbance. Preconstruction surveys should be conducted and there should be communication with CDFW to avoid take of active nests if they are discovered.

The BRA fails to include an analysis of proposed methods to prevent adverse wetland impacts, including the methods to be used and their location, both during and after construction.

If you have any questions or comments, please feel free to contact Steve Powell, 510-734-7286.

Regards,

Steve Powell
BioMaAS Inc.
1278 Indiana St. #300
San Francisco, CA 94107

BioMaAS

Steve Powell, B.S.
Principal, Biologist

Years of Experience
23

Expertise
Senior Permitted Biologist

Education

B.S. (Biology) at California State University, Hayward, 1998.

Registrations/Certifications

Certified Marbled Murrelet Surveyor

Permits

USFWS Section **10(a)(1)(A)** Recovery Permit (**TE-107075-3**) for California red-legged frog, San Francisco garter snake, Alameda whipsnake, salt marsh harvest mouse and California tiger salamander.

Experience

Mr. Powell is a permitted biologist for San Francisco garter snake, California red-legged frog, California tiger salamander, salt marsh harvest mouse, and Alameda whipsnake. He has over 23 years of experience working on projects in endangered species habitat, dealing with issues of environmental compliance, endangered species management and habitat restoration.

With experience as a biologist, environmental inspector, researcher, consultant, project manager, and monitor, Mr. Powell has extensive field experience and has conducted numerous studies throughout a broad range of wildlife and biological communities in California. Mr. Powell is skilled in vertebrate identification, taxonomy, natural history, California special status species survey methods, and habitat assessments. Mr. Powell also has extensive experience in monitoring efforts, habitat preservation, mitigation, restoration, trapping and relocation for the California red-legged frog, foothill yellow-legged frog, California tiger salamander, salt marsh harvest mouse, San Francisco dusky-footed woodrat, Alameda whipsnake, San Francisco garter snake, Western pond turtle, and burrowing owl.

Mr. Powell has conducted surveys and habitat assessments for a variety of other species including California Ridgway's rail, California black rail, Swainson's hawk, Northern goshawk, California spotted owl, Western snowy plover, marbled murrelet, San Joaquin kit fox, bats, and valley elderberry longhorn beetle. Mr. Powell has also contributed to many fish surveying and relocation projects, which involved species such as steelhead and delta smelt.

His environmental document writing experience includes: Environmental Impact Reports, Management Plans, Invasive Plant Management Programs, Nesting Bird Reports, Habitat Conservation Plans, restoration plans, and Biological Assessments. Mr. Powell has managed many biological projects and performed functions such as oversight, training, deployment of personnel, and budget management.

Relevant Experience

Alameda Creek Diversion Dam – Fish Passage Facilities Project, Sunol, California
Owner: San Francisco Public Utilities Commission
Mr. Powell was an agency-approved monitor and environmental inspector. He performed preconstruction surveys for Alameda whipsnake, California tiger salamander, California red-legged frog, Foothill Yellow-legged frog (FYLF), Western pond turtle, bats, San Francisco dusky-footed woodrat, and nesting birds. He conducted surveys and relocation of several dozen FYLF egg masses and monitored their survival over three seasons. He relocated dozens of adult and juvenile FYLF as well. He also relocated dusky-footed woodrats, CRF, and AWS. He also conducted acoustic monitoring and exclusion for bats. His duties included construction access road inspections to minimize Take of special status species, wildlife exclusion fence inspection, daily compliance repots, environmental training, and speed limit enforcement on site.

Caltrans Devil's Slide Hwy 1 Tunnel Project, San Mateo County
Owner: Caltrans District 4
Mr. Powell was responsible for environmental and biological monitoring at three project sites, including quality assurance for contractor implementation of water quality measures, erosion control, spill and containment, SWPPP compliance inspection, water sampling, ESA and wildlife fence inspection, and biological monitoring for California red-legged frog, San Francisco garter snake, migratory birds, and San Francisco dusky-footed woodrat. Pre-construction work included trapping and relocation of California red-legged frogs and relocation of San Francisco dusky-footed woodrats outside of the construction area as well as nesting bird surveys. Mr. Powell functioned as the lead construction and biological monitor for south and north portal work on the Devil's Slide Hwy 1 Tunnel Project.

Calera Creek Wetland Restoration Project, San Mateo County, CA
Client: City of Pacifica Department of Public Works
Mr. Powell conducted trapping and visual surveys for San Francisco garter snake, Western pond turtle, California red-legged frog, and San Francisco dusky-footed woodrat. He also took samples and collected data on water quality. He compiled the data into a report and created a habitat management plan which improved and maintained habitat for California red-legged frog, San Francisco garter snake, western pond turtle, and San Francisco dusky-footed woodrat through control of invasive vegetation, and enhancement of upland and wetland vegetative cover.

Bean Hollow Ponds Management, Pescadero, CA
Client: San Mateo County Public Works Department
Mr. Powell is involved in the management of several wetland sites that provide habitat for San Francisco garter snake and CA red-legged frog. We are currently conducting nocturnal and diurnal surveys and are developing an on-site habitat enhancement plan to enhance and create more wetland habitat near the existing ponds.

San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project, Palo Alto, CA
Owner: San Francisquito Creek Joint Powers Authority
Mr. Powell was the USFWS approved permitted biologist and fisheries biologist for a levee improvement and salt marsh restoration project in salt marsh adjacent to San Francisco Bay. Mr. Powell's responsibilities included: preparing species avoidance plans for California Ridgway's rail, salt marsh harvest mouse, and anadromous fish, preparing environmental education program, identification of any salt marsh harvest mice and other rodents encountered within the project area, Resource Agency consultation, environmental compliance management and, compliance monitoring, pre/post construction surveys for saltmarsh harvest mouse and California Ridgway's rail, relocation of several thousand fish during dewatering, coordination of contractor and environmental monitors, and ensuring the integrity of the exclusion fencing. Mr. Powell identified Salt marsh harvest mice and western harvest mice on the project. Other special status species included California Ridgway's rail, California black rail, Western pond turtle, California red-legged frog, green sturgeon, and steelhead.

Tyler Ranch Caltrans Mitigation Site, Alameda Co., California
Owner: Caltrans District 4
Mr. Powell participated in the design and implementation of an Alameda whipsnake trapping program to determine the presence and distribution of this listed species within a proposed Caltrans mitigation site located on Tyler Ranch. Whipsnakes were marked and photographed as part of an effort to ascertain population size. He also conducted aquatic sampling to determine the presence of California tiger salamander and California red- legged frog within wetlands on and adjacent to the property. Mr. Powell captured and marked Alameda whipsnakes and trapped numerous California red-legged frogs during the project.

Biological Constraints Analysis for Proposed Crow Canyon Road Safety Improvement Project.
Owner: Alameda County Public Works
Mr. Powell conducted a biological constraints analysis for 13 proposed road improvements at a number of locations along Crow Canyon Road. The constraints analysis included a review of literature and field surveys to determine the extent of previous biological surveys and the species and habitats known or likely to occur along the segment. Special status species included: CA red-legged frog, CA tiger salamander, and western pond turtle

Old Niles Project, Alameda Co. CA
Owner: Caltrans District 4
Conducted pre-construction surveys prior to retaining wall installation on Niles Canyon Road adjacent to Alameda Creek. Special status species within the area included California red-legged frog, foothill yellow-legged frog, Alameda whipsnake, and Central Coast ESU steelhead. Conducted nesting bird surveys and mapped nests within and adjacent to the project area.

San Pedro Creek Bridge Replacement Project, Pacifica, CA
Owner: Caltrans District 4
As project manager, Mr. Powell performed nesting bird deterrence, listed species relocation, biological monitoring and environmental inspection during vegetation removal for a bridge replacement and dredging project in California red-legged frog (CRF) and steelhead habitat. He conducted daily bird surveys and bird deterrence during the nesting season to prevent nesting birds from delaying the start of the project. This work included removing nest-starts and installing deterrents to nesting. He conducted preconstruction surveys and a habitat assessment for CRF and steelhead and relocated numerous CRF egg masses and adults from the work area. He also relocated nests of San Francisco dusky-footed woodrats and monitored the removal of trees and other vegetation prior to the start of construction

Route 92 West Albert Canyon Mitigation Project, San Mateo Co.
Owner: Caltrans District 4
Mr. Powell was responsible for environmental and biological monitoring on a culvert repair and creek bank restoration project on highway 92. Special status species on

site included California red-legged frog, San Francisco dusky-footed woodrat, and central coast steelhead. Mr. Powell also conducted pre-construction surveys, nesting bird surveys, contractor education, completed daily reports, and removed wildlife from the construction area. After concrete was poured to line the inside of a culvert, a plastic detention basin surrounded by exclusion fence was constructed at the pipe outfall to prevent entry by California red-legged frog. Mr. Powell conducted daily water tests on the discharge from the pipe to check the pH and determine when it was safe to be released downstream. Until the proper pH levels were reached, water was pumped from the fenced detention basin and into a truck for disposal.

SMART CP4 Haystack Landing Bridge Replacement, Petaluma, CA
Owner: Sonoma Marin Area Rail Transit (SMART)
Mr. Powell was the Service-Approved lead biologist on a railroad bridge replacement project over the Petaluma River. His responsibilities included oversight of the biological monitors and contractor to ensure resource agency permit compliance with the federal Biological Opinion and all project permits. Of special interest on this project were water quality concerns due to working in a live river, impacts to fish during dewatering, and impacts to special status species during vegetation clearing and ground disturbance. Special status species in the area included salt marsh harvest mouse, California red-legged frog, California clapper rail, Delta smelt and green sturgeon.

Mare Island Salt Marsh Harvest Mouse Habitat Assessment, Vallejo, CA
Owner: U.S. Navy
Mr. Powell conducted habitat assessments for salt marsh harvest mouse (SMHM) at several sites throughout the Mare Island Naval Base. As a permitted SMHM biologist, he conducted site visits to multiple locations to assess the potential for SMHM to occur within proposed project areas and wrote reports detailing the results. He also reviewed reports of other biologists for accuracy.

I-680 Highway Widening, Pleasanton, CA
Owner: Caltrans District 4
As a CDFW/USFWS-approved biological monitor, Mr. Powell performed preconstruction surveys, camera trapping, live-trapping, and midden relocation for San Francisco dusky-footed woodrat next to the Bernal Ave. onramp on I-680. He assisted in the relocation of over a dozen woodrat middens. He inspected trapped adult woodrats to evaluate their reproductive status, lactating females were returned to their nests, other woodrats were relocated along with their middens

SFPUC Water System Improvement Program Crystal Springs-San Andres Pipeline Upgrade Project, San Mateo Co. CA
Owner: San Francisco Public Utilities Commission
Mr. Powell conducted environmental and biological inspection for compliance during a water pipeline improvement project. He monitored construction activities such as de-watering, excavation, rip-rap placement, drilling, and demolition of concrete structures. Special status species within the project area include; San Francisco garter snake, California red-legged frog, Western pond turtle, Central California Coast ESU steelhead, San Francisco Dusky-footed woodrat, and migratory

nesting birds. Mr. Powell also conducted preconstruction surveys, contractor education, filed daily reports documenting compliance, and relocated special status species.

Surveys and Exclusion Activities for the Permit-level Composting Facility at the Altamont Landfill and Resource Recovery Facility
Client: Waste Management of Alameda County
Mr. Powell conducted protocol-level surveys for the San Joaquin kit fox, CA red-legged frog, CA tiger salamander, and burrowing owl. Surveys included spot lighting, track dusting, and burrow surveys. Owls were found in the construction footprint, and coordination with CDFG biologists allowed for passive exclusion the owls from burrows so that construction could continue. Mr. Powell also conducted surveys for Alameda whipsnake.

PG&E Jefferson-Martin 230 kV Line Installation Project, San Mateo County
Owner: PG&E
Mr. Powell was responsible for permitted biological monitoring and conducting surveys for special-status species including the California red-legged frog, San Francisco garter snake, and San Francisco dusky-footed woodrat on the Jefferson-Martin 230 k-V Line Project adjacent to San Andreas Reservoir. Efforts included a capture and relocation program for these species to remove them from the construction zone and providing a permitted construction monitoring team as required by the project permits. He relocated many CRF and SFGS by hand and through trapping, and relocated woodrat middens.

PG&E San Francisquito Creek Emergency Pipeline Repair Project, Santa Clara County, CA
Mr. Powell provided project management, and environmental/biological monitoring during an emergency PG&E project that involved the dewatering of an approximate 100-foot stretch of stream to facilitate the repair of a 24-inch gas pipeline which crossed below the creek bed. Central coast ESU steelhead were relocated from the project area prior to pipeline repair. He conducted preconstruction surveys for CA red-legged frog and CA tiger salamander, and bats. After the completion of construction, he directed the installation of erosion control and the revegetation of the area with native plants. He conducted quarterly assessments of the revegetation and the status of the creek as suitable anadromous fish habitat over the course of 5 years.

Three-year fish survey of lower Delta marsh channels, Contra Costa County, CA
Client: Cal Fed
Mr. Powell conducted a three-year fish survey of restored lower Sacramento-San Joaquin Delta marsh channels to determine their use by native California species including the federally and state threatened Delta smelt (*Hypomesus transpacificus)*. We successfully adapted standard fish capture methods to function well in Delta marsh drainage channels with strong tidal flows. This permitted quarterly sampling of all fish entering and leaving restored and preserved marshes over a three-year period.

significantly lower slopes. The comparison to the height of the existing water tanks is not relevant, in our opinion.

Please list all the changes proposed to the PUD Zoning for this parcel.

In the Energy Report, in the Impact Analysis section, is this paragraph:

> CONSTRUCTION ENERGY USAGE
> Project construction would require site preparation, site grading and excavation, trenching, interior architectural finishing, paving and landscaping. Construction would be typical for the region and building type, and the project site does not include unusual building challenges that would require unusually high energy usage. The importation of a maximum of 7,000 cubic yards of fill material would be required, which would result in a maximum of 692 haul truck trips, as indicated in the California Emissions Estimator Model (CalEEMod) modeling estimates in the Air Quality Technical Report.

We are concerned about the amount of fill, and particularly the number of haul truck trips to bring it to the site. We would suggest a design change to minimize the amount of fill required for the project, and if at all possible, to use cut and fill methods, rather than importing fill.

In the Cumulative Impacts document, it appears that it is out of date, missing current and planned projects in Moss Beach. It also appears that the Big Wave project is not included. The lack of details makes it hard to check. It would be helpful if the projects in the Midcoast were listed in an appendix to this document.

With respect to the updated evaluation of traffic impact and mitigation, we appreciate the inclusion of transportation alternatives, and discussion of roundabouts, rather than just signals. The Council requests that the PUD zoning change not be approved until after Connect the Coastside is finalized and approved by the Coastal Commission.

We are also pleased to see that the development will design and build to LEED standards.

MIDCOAST COMMUNITY COUNCIL
s/Claire Toutant, Chair

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

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Matt Hagemann, P.G, C.Hg.
(949) 887-9013

April 9, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

Subject: Comments on the MidPen Cypress Point Project, PLN2018-00264

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

We write regarding the proposed MidPen Cypress Point Project ("Project") located in Moss Beach, California. MidPen proposes to develop 71 housing units, a community building, and outdoor recreation areas on the 11-acre Project site. I am a California-licensed hydrogeologist and the former Senior Science Policy Advisor with the U.S. EPA. My CV is attached for reference as Exhibit A.

To prepare the comments below, we have reviewed the Project's Preliminary Environmental Evaluation Report (PEIR) dated April 2019, the Phase I Report dated November 10, 2015, the Additional Subsurface Investigation and Water Well Evaluation dated February 20, 2018, the Groundwater Sampling and Well Destruction Report dated April 9, 2018.

Our review of the above documents leads us to conclude that the PEIR fails to adequately evaluate the Project's impacts in the subject areas of Hazards and Hazardous Materials and Hydrology and Water Quality. Impacts associated with construction and operation of the proposed Project are undisclosed and inadequately mitigated. An Environmental Impact Report (EIR) should be prepared to assess and mitigate the potential impacts that the Project may have.

Hazards and Hazardous Materials

The PEIR fails to disclose residual soil contamination at the Project site. The Project site is a former World War II-era facility used for gunnery training. A November 10, 2015 Phase I Environmental Site Assessment (ESA), prepared for the Project, describes the Project site to have been used for barracks, offices, a mess hall, a library, a garage, a boiler room, and an incinerator.

On the basis of a Phase I recommendation, a Phase II ESA sampling investigation was completed. The Phase II ESA found two locations (Borings B-7 and B-21) where lead concentrations in soil exceeded the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL).

The concentrations of lead in those two samples, taken at the ground surface, was 230 mg/kg and 88 mg/kg, respectively. In contrast, the RWQCB ESL for lead in residential shallow soil is 32 mg/kg[1] based on terrestrial habitat exposure.

The lead contamination was attributed in the Phase I ESA to the use of lead paint. The Phase II ESA was followed by an additional investigation (the February 20, 2018 "Additional Subsurface Investigation & Water Well Evaluation") that conducted further sampling for lead in soil. The additional investigation found lead at one location at concentrations above the ESL. The concentration of lead in soil at boring CS-3 was found to be 290 mg/kg – nine times the ESL. Figure 2 from the additional investigation is attached and shows that the horizontal extent of the lead contamination has not been determined.

The additional investigation, without any regulatory input, prescribed mixing of Project site soils upon excavation as a solution to the lead contamination. None of these lead contamination results, nor the suggested soil mixing plan, were disclosed in the PEIR. The mixing plan also does not address the fact that the horizontal extent of the lead contamination is unknown and that additional elevated lead soil concentrations ("hot spots") may be found if further testing as conducted.

No documentation was provided in the PEIR, in the Phase I, the Phase II or the additional investigation to show that the results were shared with any regulatory agency. The Project site does not appear on the RWQCB Geotracker or the Department of Toxic Substances (DTSC) Control Envirostor websites and therefore the lead contamination that was found apparently has not been brought to the attention of the RWQCB or the DTSC.

The Phase I, the Phase II and the additional investigation basically self-certify that the sampling that was conducted and the analysis of the results do not pose a threat to human health with the soil mixing plan that is planned. The additional investigation concluded (p. 5):

> On the basis of the information, presented herein, no further investigation or remedial action is warranted at this time.

Without regulatory review, this conclusion of no further action or remediation and the basis for this conclusion (all which was not disclosed in the PEIR), should not be relied upon for decision making about the potential risk to human health and the adequacy of the Mitigation Measure HAZ-1, the sole mitigation measure proposed to address Hazards and Hazardous Waste impacts. Mitigation Measure HAZ-1 only commits to a management plan and is quoted in its entirely below:

> MidPen will prepare a Site Management Plan for the project site prior to submitting an application for a Coastal Development Permit for the proposed project, and will comply with all requirements and implement all BMPs contained in the plan during construction of the project.

Because of the lead contamination, the Phase I, the Phase II and the additional investigation should be submitted for regulatory review, to the San Mateo County Environmental Health Services, to the San

[1] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html (Table "Tier 1 ESLs")

Francisco Bay RWQCB, and to DTSC. A formal voluntary oversight agreement is recommended with the RWQCB to certify the reliability of the data for decision making and to ensure the protection of public health. Any determination by the regulatory agencies about the need for further action, to include sampling or soil excavation and off-site disposal, should be included in an EIR.

Hydrology and Water Quality

The Project site is located approximately 750 feet from the coastline. A perennial stream (Montara Creek), located approximately 50 to 250 feet to the northeast of the project site, runs in parallel to the northern border of the site (prior to emptying into the Pacific Ocean).

The PEIR states (p. 18):

> Potential impacts to groundwater and surface water quality could occur both during construction and operation of the proposed project. Temporary increases in the erosion of exposed soils during construction of the project could result in minor on-or-off-site water quality impacts, particularly if rainfall events occur during an active construction phase.

The PEIR further states (p. 18):

> On-site soils are subject to severe water erosion hazards (NRCS 2018).

What the PEIR fails to disclose is that onsite soils are contaminated with lead at concentrations greater than the RWQCB ESL 32 mg/kg for the protection of terrestrial habitat.[2] The PEIR makes no specific provisions in Mitigation Measure GEO-2 for the protection of terrestrial habitat in the adjacent Montara Creek from the erosion of lead-contaminated soils upon soil disturbance during the Project's construction period or from any residual soil contamination that would be left in place after the mixing of site soils, as planned.

Note that the statistical analysis that was performed in the Additional Subsurface Investigation & Water Well Evaluation found the upper 95th percentile confidence limit for lead in soil to be 42 mg/kg. This value exceeds the ESL of 32 mg/kg for the protection of terrestrial habitat.

Best management practices (BMPs) that are specific to known lead contamination at concentrations above the terrestrial habitat protection ESL need to be implemented during the project construction period. The reference in the PEIR to compliance with the State Water Resources Control Board Construction General permit is insufficient mitigation without consideration of the lead contamination and specific BMPs that would be taken to control lead in stormwater runoff An EIR should be prepared to disclose lead contamination in the context of Hydrology and Water Quality impacts, along with effective mitigation measures and BMPs to control lead-contaminated soils from erosion and transportation to the adjacent Montara Creek.

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[2] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html (Table "Summary of Soil ESLs")

Sincerely,

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

Attachment A: CV, Matt Hagemann

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

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

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.

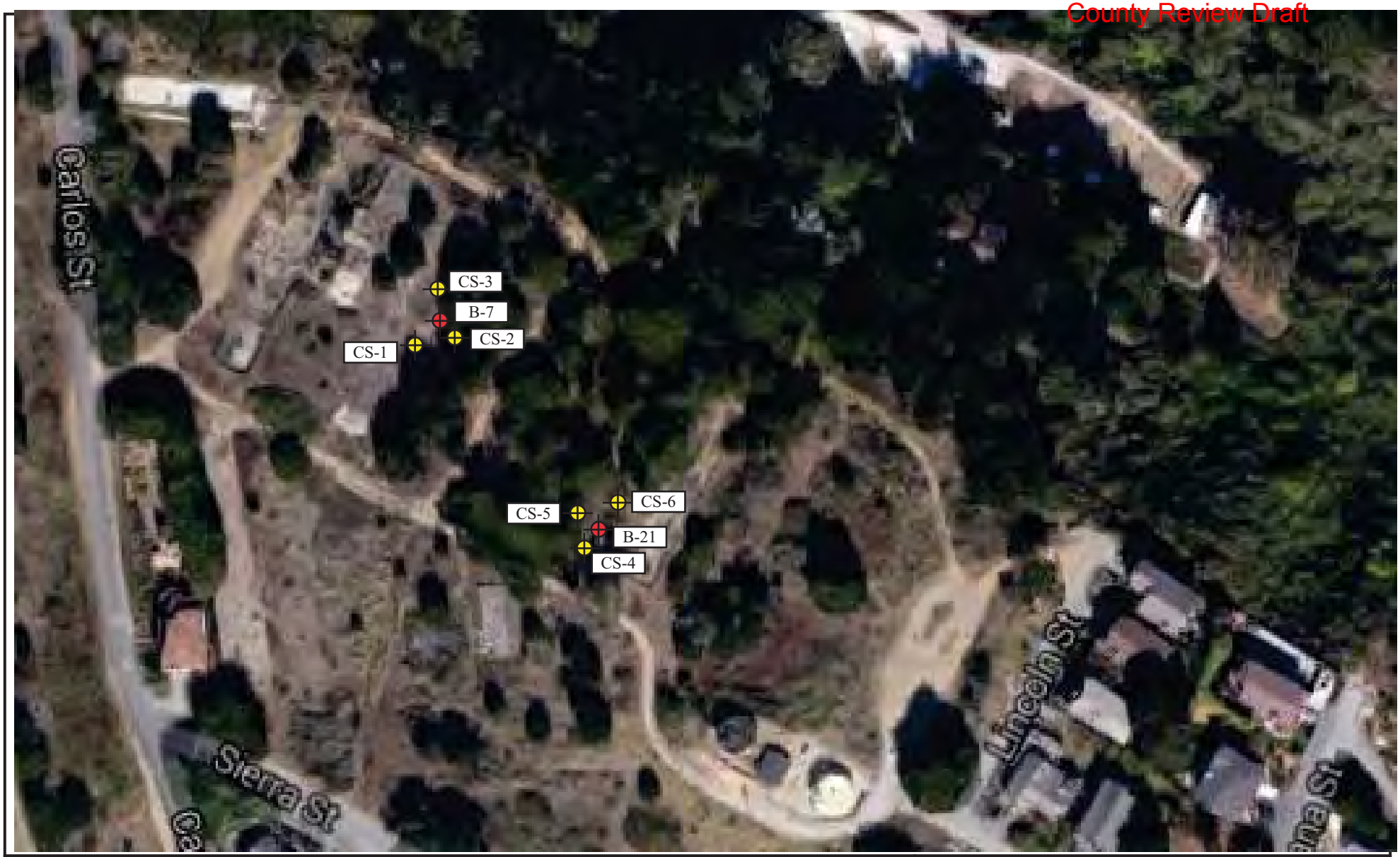
Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

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

Attachment B: Additional Subsurface Investigation & Water Well Evaluation – Figure 2

County Review Draft



LEGEND

- Soil Boring (AEI, 2017)
- Exploratory Boring (AEI, 2015)

0 50 100
APPROXIMATE SCALE (Feet)

N

AEI CONSULTANTS

3880 S. BASCOM AVENUE, SAN JOSE, CALIFONIA

CONFIRMATION BORING LOCATIONS

Carlos Street at Sierra Street
Moss Beach, California

FIGURE 2
Project No. 350248

Attachment C: Environmental Screening Level Tables

Tier 1 ESLs [1]

2019 (Rev. 2)

Based on a generic conceptual site model designed for use at most sites[2]

Chemicals	CAS No.	Groundwater (µg/L)	Soil (mg/kg)	Subslab / Soil Gas (µg/m^3)	Indoor Air (µg/m^3)
1,2-Dichloropropane	78-87-5	2.3E+00	6.5E-02	9.4E+00	2.8E-01
1,3-Dichloropropene	542-75-6	5.0E-01	1.7E-02	5.8E+00	1.8E-01
Dieldrin	60-57-1	1.4E-04	4.6E-04	2.0E-02	6.1E-04
Diethyl phthalate	84-66-2	1.5E+00	2.5E-02	--	--
Dimethyl phthalate	131-11-3	1.5E+00	3.5E-02	--	--
2,4-Dimethylphenol	105-67-9	1.0E+02	8.1E+00	3.3E+01	1.0E+00
2,4-Dinitrophenol	51-28-5	3.9E+01	3.0E+00	--	--
2,4-Dinitrotoluene	121-14-2	2.4E-01	2.3E-02	--	--
1,4-Dioxane	123-91-1	3.8E-01	1.7E-04	1.2E+01	3.6E-01
Dioxin (2,3,7,8-TCDD)	1746-01-6	1.4E-08	4.8E-06	2.5E-06	7.4E-08
Endosulfan	115-29-7	8.7E-03	9.8E-03	--	--
Endrin	72-20-8	2.3E-03	1.1E-03	--	--
Ethylbenzene	100-41-4	3.5E+00	4.3E-01	3.7E+01	1.1E+00
Fluoranthene [PAH]	206-44-0	8.0E+00	6.9E-01	--	--
Fluorene [PAH]	86-73-7	3.9E+00	6.0E+00	--	--
Heptachlor	76-44-8	2.1E-04	1.2E-01	7.2E-02	2.2E-03
Heptachlor epoxide	1024-57-3	1.1E-04	1.8E-04	3.6E-02	1.1E-03
Hexachlorobenzene	118-74-1	7.7E-04	8.0E-04	1.8E-01	5.5E-03
Hexachlorobutadiene	87-68-3	1.4E-01	2.8E-02	4.3E+00	1.3E-01
g-Hexachlorocyclohexane (Lindane)	58-89-9	1.6E-02	7.4E-03	--	--
Hexachloroethane	67-72-1	3.3E-01	1.9E-02	8.5E+00	2.6E-01
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	4.9E-02	4.8E-01	--	--
Lead	7439-92-1	2.5E+00	3.2E+01	--	--
Mercury (elemental)	7439-97-6	2.5E-02	1.3E+01	1.0E+00	3.1E-02
Methoxychlor	72-43-5	3.0E-03	1.3E-02	--	--
Methylene chloride	75-09-2	5.0E+00	1.2E-01	3.4E+01	1.0E+00
Methyl ethyl ketone	78-93-3	5.6E+03	6.1E+00	1.7E+05	5.2E+03
Methyl isobutyl ketone	108-10-1	1.2E+02	3.6E-01	1.4E+04	4.2E+02
Methyl mercury	22967-92-6	3.0E-03	3.4E-02	--	--
2-Methylnaphthalene	91-57-6	2.1E+00	8.8E-01	2.3E+03	6.8E+01
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.0E+00	2.8E-02	3.6E+02	1.1E+01
Molybdenum	7439-98-7	1.0E+02	6.9E+00	--	--
Naphthalene [PAH]	91-20-3	1.7E-01	4.2E-02	2.8E+00	8.3E-02
Nickel	7440-02-0	8.2E+00	8.6E+01	--	--
Pentachlorophenol	87-86-5	1.0E+00	1.3E-02	--	--
Perchlorate	7790-98-9	6.0E+00	5.5E+01	--	--
Petroleum - Gasoline	--	1.0E+02	1.0E+02	3.3E+03	1.0E+02
Petroleum - Stoddard Solvent	--	1.0E+02	1.0E+02	1.1E+04	3.3E+02
Petroleum - Jet Fuel	--	1.0E+02	1.0E+02	1.1E+04	3.3E+02
Petroleum - Diesel	--	1.0E+02	2.6E+02	8.9E+03	2.7E+02
Petroleum - HOPs	--	1.0E+02	--	--	--
Petroleum - Motor Oil	--	--	1.6E+03	--	--
Phenanthrene [PAH]	85-01-8	4.6E+00	7.8E+00	1.8E+03	5.5E+01
Phenol	108-95-2	5.0E+00	1.6E-01	5.2E+03	1.6E+02
Polychlorinated biphenyls (PCBs)	1336-36-3	1.7E-04	2.3E-01	1.6E-01	4.9E-03
Pyrene [PAH]	129-00-0	2.0E+00	4.5E+01	--	--
Selenium	7782-49-2	5.0E-01	2.4E+00	--	--
Silver	7440-22-4	1.9E-01	2.5E+01	--	--
Styrene	100-42-5	1.0E+01	9.2E-01	3.1E+04	9.4E+02
tert-Butyl alcohol	75-65-0	1.2E+01	7.5E-02	--	--
1,1,1,2-Tetrachloroethane	630-20-6	5.7E-01	1.7E-02	1.3E+01	3.8E-01
1,1,2,2-Tetrachloroethane	79-34-5	1.0E+00	1.8E-02	1.6E+00	4.8E-02
Tetrachloroethene	127-18-4	6.4E-01	8.0E-02	1.5E+01	4.6E-01
Thallium	7440-28-0	2.0E+00	7.8E-01	--	--
Toluene	108-88-3	4.0E+01	3.2E+00	1.0E+04	3.1E+02
Toxaphene	8001-35-2	2.0E-04	5.1E-01	--	--
1,2,4-Trichlorobenzene	120-82-1	5.0E+00	1.2E+00	7.0E+01	2.1E+00

Tier 1 ESLs [1]

2019 (Rev. 2)

Based on a generic conceptual site model designed for use at most sites[2]

Chemicals	CAS No.	Groundwater (µg/L)	Soil (mg/kg)	Subslab / Soil Gas (µg/m^3)	Indoor Air (µg/m^3)
1,1,1-Trichloroethane	71-55-6	6.2E+01	7.0E+00	3.5E+04	1.0E+03
1,1,2-Trichloroethane	79-00-5	5.0E+00	7.6E-02	5.8E+00	1.8E-01
Trichloroethene	79-01-6	1.2E+00	8.5E-02	1.6E+01	4.8E-01
2,4,5-Trichlorophenol	95-95-4	1.1E+01	2.9E+00	--	--
2,4,6-Trichlorophenol	88-06-2	6.3E-01	4.0E-02	1.0E+01	3.0E-01
1,2,3-Trichloropropane	96-18-4	5.0E-03	1.1E-04	1.0E+01	3.1E-01
Vanadium	7440-62-2	1.9E+01	1.8E+01	--	--
Vinyl chloride	75-01-4	8.6E-03	1.5E-03	3.2E-01	9.5E-03
Xylenes	1330-20-7	2.0E+01	2.1E+00	3.5E+03	1.0E+02
Zinc	7440-66-6	8.1E+01	3.4E+02	--	--

Notes:

1 - ESLs are developed based on methodologies discussed in the User's Guide. Evaluation of laboratory detection limits and naturally occurring background or ambient concentrations should be independently conducted. See User's Guide Chapter 12 (Additional Considerations) for further information.

2 - Generic Conceptual Site Model - See User's Guide Chapter 2. Input settings are:
Land Use = Residential
Groundwater Use = Drinking Water Resource
MCL Priority over Risk-Based Levels = Yes
Discharge to Surface Water = Saltwater & Freshwater
Vegetation Level = Substantial
Soil Exposure Depth = Shallow

Abbreviations:

DDD - Dichlorodiphenyldichloroethane
DDE - Dichlorodiphenyldichloroethene
DDT - Dichlorodiphenyltrichloroethane
HOPs - Hydrocarbon Oxidation Products (biodegradation metabolites and photo-oxidation products of petroleum hydrocarbons). See User's Guide Chapter 4 for further information.
PAH - Polycyclic aromatic hydrocarbon
TCDD - Tetrachlorodibenzodioxin

2019 (Rev. 2)		Summary of Groundwater ESLs (µg/L)														
Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table GW-1)			Aquatic Habitat Goal Levels (Table GW-2)			Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3)				Gross Contam-ination Levels (GW-4)	Odor Nuisance Levels (Table GW-5)		GW Tier 1 ESL	Basis
								Residential		Commercial/Industrial						
		MCL Priority[1]	Tapwater Cancer Risk	Tapwater Non-cancer Hazard	Fresh Water Ecotox	Saltwater Ecotox	Seafood Ingestion Human Health	Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard		Drinking Water	Non-Drinking Water		
Heptachlor	76-44-8	1.0E-02	1.4E-03	1.3E+00	3.8E-03	3.6E-03	2.1E-04	1.8E-01	--	7.9E-01	--	9.0E+01	2.0E+01	2.0E+02	2.1E-04	Aquatic Habitat
Heptachlor epoxide	1024-57-3	1.0E-02	1.4E-03	1.2E-01	3.8E-03	3.6E-03	1.1E-04	1.3E+00	--	5.5E+00	--	1.0E+02	--	--	1.1E-04	Aquatic Habitat
Hexachlorobenzene	118-74-1	1.0E+00	8.8E-03	1.6E+01	3.7E+00	6.5E+01	7.7E-04	7.9E-02	--	3.4E-01	--	3.1E+00	3.0E+03	3.0E+04	7.7E-04	Aquatic Habitat
Hexachlorobutadiene	87-68-3	1.4E-01	1.4E-01	6.5E+00	4.7E+00	3.2E+00	5.0E+01	3.0E-01	--	1.3E+00	--	1.6E+03	6.0E+00	6.0E+01	1.4E-01	Tap Canc-Risk
g-Hexachlorocyclohexane (Lindane)	58-89-9	2.0E-01	3.2E-02	3.6E+00	8.0E-02	1.6E-02	6.3E-02	--	--	--	--	3.7E+03	1.2E+04	1.2E+05	1.6E-02	Aquatic Habitat
Hexachloroethane	67-72-1	3.3E-01	3.3E-01	6.2E+00	1.2E+01	9.4E+01	8.9E+00	1.6E+00	2.0E+02	7.0E+00	8.2E+02	2.5E+04	1.0E+01	1.0E+02	3.3E-01	Tap Canc-Risk
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	2.5E-01	2.5E-01	--	--	1.5E+01	4.9E-02	--	--	--	--	9.5E-02	--	--	4.9E-02	Aquatic Habitat
Lead	7439-92-1	1.5E+01	9.2E+00	2.0E-01	2.5E+00	8.1E+00	--	--	--	--	--	5.0E+04	--	--	2.5E+00	Aquatic Habitat
Mercury (elemental)	7439-97-6	2.0E+00	--	6.1E-02	2.5E-02	2.5E-02	5.1E-02	--	8.9E-02	--	3.8E-01	3.0E+01	--	--	2.5E-02	Aquatic Habitat
Methoxychlor	72-43-5	3.0E+01	--	9.0E-02	1.9E-02	3.0E-03	--	--	--	--	--	5.0E+01	4.7E+03	4.7E+04	3.0E-03	Aquatic Habitat
Methylene chloride	75-09-2	5.0E+00	9.3E-01	1.0E+02	2.2E+03	3.2E+03	1.6E+03	7.8E+00	3.2E+03	9.4E+01	1.3E+04	5.0E+04	9.1E+03	9.1E+04	5.0E+00	MCL
Methyl ethyl ketone	78-93-3	5.6E+03	--	5.6E+03	1.4E+04	--	--	--	2.3E+06	--	9.5E+06	5.0E+04	8.4E+03	8.4E+04	5.6E+03	Tap NC-Hazard
Methyl isobutyl ketone	108-10-1	1.2E+02	--	1.2E+02	1.7E+02	--	--	--	5.6E+05	--	2.3E+06	5.0E+04	1.3E+03	1.3E+04	1.2E+02	Tap NC-Hazard
Methyl mercury	22967-92-6	2.0E+00	--	2.0E+00	3.0E-03	--	--	--	--	--	--	5.0E+04	--	--	3.0E-03	Aquatic Habitat
2-Methylnaphthalene	91-57-6	3.6E+01	--	3.6E+01	2.1E+00	3.0E+01	--	--	--	--	--	1.3E+04	1.0E+01	1.0E+02	2.1E+00	Aquatic Habitat
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.0E+00	1.3E+01	6.3E+03	6.6E+04	8.0E+03	--	4.5E+02	1.3E+05	2.0E+03	5.5E+05	5.0E+04	5.0E+00	1.8E+03	5.0E+00	Odor/Nuis
Molybdenum	7439-98-7	1.0E+02	--	1.0E+02	2.4E+02	--	--	--	--	--	--	5.0E+04	--	--	1.0E+02	Tap NC-Hazard
Naphthalene [PAH]	91-20-3	1.7E-01	1.7E-01	6.1E+00	2.4E+01	1.5E+01	--	4.6E+00	1.7E+02	2.0E+01	7.3E+02	1.6E+04	2.1E+01	2.1E+02	1.7E-01	Tap Canc-Risk
Nickel	7440-02-0	1.0E+02	1.2E+01	2.2E+02	5.2E+01	8.2E+00	4.6E+03	--	--	--	--	5.0E+04	--	--	8.2E+00	Aquatic Habitat
Pentachlorophenol	87-86-5	1.0E+00	4.0E-02	2.3E+01	1.5E+01	7.9E+00	8.2E+00	--	--	--	--	7.0E+03	3.0E+01	5.9E+03	1.0E+00	MCL
Perchlorate	7790-98-9	6.0E+00	--	1.0E+00	6.0E+02	--	--	--	--	--	--	5.0E+04	--	--	6.0E+00	MCL
Petroleum - Gasoline	--	7.6E+02	--	7.6E+02	4.4E+02	3.7E+03	--	--	--	--	--	5.0E+04	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Stoddard Solvent	--	2.1E+02	--	2.1E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Jet Fuel	--	2.1E+02	--	2.1E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Diesel	--	2.0E+02	--	2.0E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - HOPs	--	4.1E+02	--	4.1E+02	5.1E+02	5.1E+02	--	--	--	--	--	5.0E+04	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Motor Oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene [PAH]	85-01-8	--	--	--	6.3E+00	4.6E+00	--	--	--	--	--	4.1E+02	1.0E+03	1.0E+04	4.6E+00	Aquatic Habitat
Phenol	108-95-2	4.2E+03	--	4.2E+03	1.3E+03	5.8E+02	4.6E+06	--	--	--	--	5.0E+04	5.0E+00	7.9E+04	5.0E+00	Odor/Nuis
Polychlorinated biphenyls (PCBs)	1336-36-3	5.0E-01	1.9E-03	--	1.4E-02	3.0E-02	1.7E-04	2.9E-01	--	1.3E+00	--	3.5E+02	--	--	1.7E-04	Aquatic Habitat
Pyrene [PAH]	129-00-0	1.2E+02	--	1.2E+02	2.0E+00	1.5E+01	1.1E+04	--	--	--	--	7.0E+01	--	--	2.0E+00	Aquatic Habitat
Selenium	7782-49-2	5.0E+01	--	3.0E+01	5.0E+00	5.0E-01	--	--	--	--	--	5.0E+04	--	--	5.0E-01	Aquatic Habitat
Silver	7440-22-4	1.0E+02	--	9.4E+01	3.4E+00	1.9E-01	--	--	--	--	--	5.0E+04	1.0E+02	--	1.9E-01	Aquatic Habitat
Styrene	100-42-5	1.0E+01	5.0E-01	1.1E+03	--	--	--	--	8.5E+03	--	3.6E+04	5.0E+04	1.0E+01	1.1E+02	1.0E+01	Odor/Nuis
tert-Butyl alcohol	75-65-0	1.2E+01	1.2E+01	--	1.8E+04	--	--	--	--	--	--	5.0E+04	--	--	1.2E+01	Tap Canc-Risk
1,1,1,2-Tetrachloroethane	630-20-6	5.7E-01	5.7E-01	4.8E+02	9.3E+02	--	--	3.8E+00	--	1.7E+01	--	5.0E+04	--	--	5.7E-01	Tap Canc-Risk

2019 (Rev. 2)		Summary of Soil ESLs (mg/kg)															
Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table S-1)						Terrestrial Habitat Levels (Table S-2)		Leaching to Groundwater Levels (Table S-3)		Gross Contamination Levels (Table S-4)	Odor Nuisance Levels (Table S-5)			Soil Tier 1 ESL	Basis
		Residential: Shallow Soil Exposure		Commerical/ Industrial: Shallow Soil Exposure		Construction Worker: Any Land Use/ Any Depth Soil Exposure		Significantly Vegetated Area	Minimally Vegetated Area	Drinking Water	Non-drinking Water		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use: Any Soil Exposure (CW)		
		Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard	Examples: Parkland or single family homes with yards	Examples: High density residential or commercial/ industrial areas								
1,2-Dichlorobenzene	95-50-1	--	1.8E+03	--	9.4E+03	--	7.8E+03	4.3E+00	8.5E+00	1.0E+00	1.0E+00	3.8E+02	1.0E+03	2.5E+03	2.5E+03	1.0E+00	Leaching
1,3-Dichlorobenzene	541-73-1	--	--	--	--	--	--	6.0E+00	1.2E+01	7.4E+00	7.4E+00	6.1E+02	1.0E+02	5.0E+02	5.0E+02	6.0E+00	Terr Habitat
1,4-Dichlorobenzene	106-46-7	2.6E+00	3.4E+03	1.2E+01	2.6E+04	2.8E+02	1.5E+04	4.5E+00	9.0E+00	2.0E-01	2.0E-01	1.9E+02	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
3,3-Dichlorobenzidine	91-94-1	5.8E-01	--	2.7E+00	--	2.0E+01	--	--	--	2.5E-02	1.3E+02	6.0E+01	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
DDD	72-54-8	2.7E+00	--	1.2E+01	--	8.1E+01	--	8.5E+00	1.7E+01	6.5E+01	6.5E+01	6.5E+01	5.0E+02	1.0E+03	1.0E+03	2.7E+00	Canc-Risk
DDE	72-55-9	1.8E+00	--	8.3E+00	--	5.7E+01	--	3.3E-01	6.5E-01	2.9E+01	2.9E+01	2.9E+01	5.0E+02	1.0E+03	1.0E+03	3.3E-01	Terr Habitat
DDT	50-29-3	1.9E+00	3.7E+01	8.5E+00	5.2E+02	5.7E+01	1.4E+02	1.1E-03	7.8E+00	5.6E+00	5.6E+00	5.6E+00	5.0E+02	1.0E+03	1.0E+03	1.1E-03	Terr Habitat
1,1-Dichloroethane	75-34-3	3.6E+00	1.6E+04	1.6E+01	2.3E+05	3.7E+02	7.1E+04	1.1E+01	2.1E+01	2.0E-01	3.1E-01	1.7E+03	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
1,2-Dichloroethane	107-06-2	4.7E-01	3.2E+01	2.1E+00	1.4E+02	4.5E+01	1.3E+02	2.9E+01	2.9E+01	7.0E-03	3.1E-02	3.0E+03	1.0E+02	5.0E+02	5.0E+02	7.0E-03	Leaching
1,1-Dichloroethene	75-35-4	--	8.3E+01	--	3.5E+02	--	3.5E+02	4.3E+01	1.3E+02	5.4E-01	4.2E+00	1.2E+03	5.0E+02	1.0E+03	1.0E+03	5.4E-01	Leaching
cis-1,2-Dichloroethene	156-59-2	--	1.9E+01	--	8.5E+01	--	7.8E+01	8.4E+01	9.4E+02	1.9E-01	1.6E+00	2.4E+03	1.0E+02	5.0E+02	5.0E+02	1.9E-01	Leaching
trans-1,2-Dichloroethene	156-60-5	--	1.3E+02	--	6.0E+02	--	5.7E+02	8.4E+01	9.4E+02	6.5E-01	1.4E+01	1.9E+03	5.0E+02	1.0E+03	1.0E+03	6.5E-01	Leaching
2,4-Dichlorophenol	120-83-2	--	2.3E+02	--	3.5E+03	--	1.1E+03	2.1E+00	--	7.5E-03	7.5E-02	5.6E+03	5.0E+02	1.0E+03	1.0E+03	7.5E-03	Leaching
1,2-Dichloropropane	78-87-5	1.0E+00	1.6E+01	4.4E+00	6.6E+01	9.9E+01	6.6E+01	3.1E+01	6.3E+01	6.5E-02	6.5E-02	1.4E+03	1.0E+02	5.0E+02	5.0E+02	6.5E-02	Leaching
1,3-Dichloropropene	542-75-6	5.7E-01	7.2E+01	2.5E+00	3.1E+02	5.3E+01	3.0E+02	3.1E+01	6.3E+01	1.7E-02	4.0E-02	1.6E+03	5.0E+02	1.0E+03	1.0E+03	1.7E-02	Leaching
Dieldrin	60-57-1	3.7E-02	3.5E+00	1.6E-01	4.8E+01	1.1E+00	1.2E+01	9.6E-04	1.1E-01	4.6E-04	6.3E-03	2.4E+01	5.0E+02	1.0E+03	1.0E+03	4.6E-04	Leaching
Diethyl phthalate	84-66-2	--	5.1E+04	--	6.6E+05	--	1.5E+05	1.3E+01	2.7E+01	2.5E-02	2.5E-02	7.7E+02	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
Dimethyl phthalate	131-11-3	--	--	--	--	--	--	2.1E+01	4.2E+01	3.5E-02	3.5E-02	4.7E+03	5.0E+02	1.0E+03	1.0E+03	3.5E-02	Leaching
2,4-Dimethylphenol	105-67-9	--	1.6E+03	--	2.3E+04	--	7.1E+03	--	--	8.1E+00	8.9E+00	2.4E+04	1.0E+02	5.0E+02	5.0E+02	8.1E+00	Leaching
2,4-Dinitrophenol	51-28-5	--	1.6E+02	--	2.3E+03	--	7.1E+02	--	--	3.0E+00	5.7E+00	8.0E+03	5.0E+02	1.0E+03	1.0E+03	3.0E+00	Leaching
2,4-Dinitrotoluene	121-14-2	2.2E+00	1.6E+02	1.1E+01	2.3E+03	7.9E+01	7.1E+02	--	--	2.3E-02	1.1E+01	7.2E+02	5.0E+02	1.0E+03	1.0E+03	2.3E-02	Leaching
1,4-Dioxane	123-91-1	4.7E+00	8.1E+02	2.2E+01	4.5E+03	2.1E+02	3.4E+03	1.8E+00	1.8E+00	1.7E-04	8.4E-01	1.2E+05	5.0E+02	1.0E+03	1.0E+03	1.7E-04	Leaching
Dioxin (2,3,7,8-TCDD)	1746-01-6	4.8E-06	5.1E-05	2.2E-05	7.2E-04	1.5E-04	2.0E-04	1.3E-05	9.9E-05	3.0E-01	3.0E-01	3.0E-01	5.0E+02	1.0E+03	1.0E+03	4.8E-06	Canc-Risk
Endosulfan	115-29-7	--	4.2E+02	--	5.8E+03	--	1.5E+03	2.3E-02	3.8E-01	9.8E-03	9.8E-03	1.3E+01	5.0E+02	1.0E+03	1.0E+03	9.8E-03	Leaching
Endrin	72-20-8	--	2.1E+01	--	2.9E+02	--	7.4E+01	1.1E-03	1.1E-03	7.6E-03	7.6E-03	3.0E+01	5.0E+02	1.0E+03	1.0E+03	1.1E-03	Terr Habitat
Ethylbenzene	100-41-4	5.9E+00	3.4E+03	2.6E+01	2.1E+04	5.4E+02	1.5E+04	9.0E+01	4.3E+02	4.3E-01	4.3E-01	4.9E+02	5.0E+02	1.0E+03	1.0E+03	4.3E-01	Leaching
Fluoranthene [PAH]	206-44-0	--	2.4E+03	--	3.0E+04	--	6.7E+03	6.9E-01	1.2E+05	8.6E+01	8.6E+01	8.6E+01	5.0E+02	1.0E+03	1.0E+03	6.9E-01	Terr Habitat
Fluorene [PAH]	86-73-7	--	2.4E+03	--	3.0E+04	--	6.7E+03	--	--	6.0E+00	6.0E+00	9.4E+01	5.0E+02	1.0E+03	1.0E+03	6.0E+00	Leaching
Heptachlor	76-44-8	1.2E-01	3.5E+01	5.3E-01	4.8E+02	3.7E+00	1.2E+02	2.5E-01	5.0E-01	4.4E+01	4.4E+01	4.4E+01	1.0E+03	2.5E+03	2.5E+03	1.2E-01	Canc-Risk
Heptachlor epoxide	1024-57-3	6.2E-02	9.1E-01	2.8E-01	1.3E+01	1.9E+00	3.2E+00	--	--	1.8E-04	6.0E-03	1.2E+01	1.0E+03	2.5E+03	2.5E+03	1.8E-04	Leaching
Hexachlorobenzene	118-74-1	1.8E-01	5.6E+01	7.8E-01	7.7E+02	7.7E+00	2.0E+02	1.3E+02	2.5E+02	8.0E-04	8.2E-02	2.3E-01	5.0E+02	1.0E+03	1.0E+03	8.0E-04	Leaching
Hexachlorobutadiene	87-68-3	1.2E+00	7.8E+01	5.3E+00	1.2E+03	1.0E+02	3.5E+02	--	--	2.8E-02	6.2E-02	1.7E+01	5.0E+02	1.0E+03	1.0E+03	2.8E-02	Leaching
g-Hexachlorocyclohexane (Lindane)	58-89-9	5.5E-01	2.1E+01	2.5E+00	2.9E+02	1.6E+01	7.4E+01	7.4E+00	1.5E+01	7.4E-03	7.4E-03	1.2E+02	5.0E+02	1.0E+03	1.0E+03	7.4E-03	Leaching
Hexachloroethane	67-72-1	1.8E+00	3.8E+01	7.8E+00	3.7E+02	1.3E+02	1.2E+02	--	--	1.9E-02	9.2E-02	6.7E+01	5.0E+02	1.0E+03	1.0E+03	1.9E-02	Leaching
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	1.1E+00	--	2.1E+01	--	1.1E+02	--	4.8E-01	9.5E-01	1.6E+01	3.2E+01	2.3E+00	5.0E+02	1.0E+03	1.0E+03	4.8E-01	Terr Habitat
Lead	7439-92-1	8.2E+01	8.0E+01	3.8E+02	3.2E+02	2.7E+03	1.6E+02	3.2E+01	3.2E+01	--	--	--	--	--	--	3.2E+01	Terr Habitat
Mercury (elemental)	7439-97-6	--	1.3E+01	--	1.9E+02	--	4.4E+01	1.5E+01	2.0E+01	--	--	--	5.0E+02	1.0E+03	1.0E+03	1.3E+01	NC-Hazard
Methoxychlor	72-43-5	--	3.5E+02	--	4.8E+03	--	1.2E+03	1.3E-01	4.1E+03	1.3E-02	1.3E-02	1.6E+01	5.0E+02	1.0E+03	1.0E+03	1.3E-02	Leaching
Methylene chloride	75-09-2	1.9E+00	3.1E+02	2.5E+01	2.5E+03	4.9E+02	1.4E+03	9.8E-01	2.0E+00	1.2E-01	1.9E-01	3.3E+03	5.0E+02	1.0E+03	1.0E+03	1.2E-01	Leaching
Methyl ethyl ketone	78-93-3	--	2.7E+04	--	2.0E+05	--	1.2E+05	4.4E+01	8.8E+01	6.1E+00	1.5E+01	2.8E+04	5.0E+02	1.0E+03	1.0E+03	6.1E+00	Leaching
Methyl isobutyl ketone	108-10-1	--	3.4E+04	--	1.4E+05	--	1.4E+05	--	--	3.6E-01	5.1E-01	3.4E+03	1.0E+02	5.0E+02	5.0E+02	3.6E-01	Leaching
Methyl mercury	22967-92-6	--	6.3E+00	--	8.2E+01	--	1.9E+01	3.4E-02	3.4E-02	--	--	--	1.0E+02	5.0E+02	5.0E+02	3.4E-02	Terr Habitat
2-Methylnaphthalene	91-57-6	--	2.4E+02	--	3.0E+03	--	6.7E+02	--	--	8.8E-01	8.8E-01	3.8E+02	5.0E+02	1.0E+03	1.0E+03	8.8E-01	Leaching
Methyl tertiary butyl ether (MTBE)	1634-04-4	4.7E+01	1.6E+04	2.1E+02	6.6E+04	4.1E+03	6.5E+04	3.1E+01	6.3E+01	2.8E-02	2.5E+00	9.0E+03	1.0E+02	5.0E+02	5.0E+02	2.8E-02	Leaching

2019 (Rev. 2)		Summary of Vapor ESLs													
		Subslab/ Soil Gas (µg/m^3)							Indoor Air (µg/m^3)						
Chemicals	CAS No.	Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels (Table SG-1)				Subslab/ Soil Gas Vapor Intrusion: Odor Nuisance Levels (Table SG-2)	Tier 1 ESL	Basis	Direct Exposure Human Health Risk Levels (Table IA-1)				Odor Nuisance Levels (Table IA-2)	Tier 1 ESL	Basis
		Residential		Commercial/ Industrial					Residential		Commercial/ Industrial				
		Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard				Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard			
Dioxin (2,3,7,8-TCDD)	1746-01-6	2.5E-06	1.4E-03	1.1E-05	5.8E-03	--	2.5E-06	Canc-Risk	7.4E-08	4.2E-05	3.2E-07	1.8E-04	--	7.4E-08	Canc-Risk
Endosulfan	115-29-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	72-20-8	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	3.7E+01	3.5E+04	1.6E+02	1.5E+05	6.7E+04	3.7E+01	Canc-Risk	1.1E+00	1.0E+03	4.9E+00	4.4E+03	2.0E+03	1.1E+00	Canc-Risk
Fluoranthene [PAH]	206-44-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene [PAH]	86-73-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	76-44-8	7.2E-02	--	3.1E-01	--	1.0E+04	7.2E-02	Canc-Risk	2.2E-03	--	9.4E-03	--	3.0E+02	2.2E-03	Canc-Risk
Heptachlor epoxide	1024-57-3	3.6E-02	--	1.6E-01	--	1.0E+04	3.6E-02	Canc-Risk	1.1E-03	--	4.7E-03	--	3.0E+02	1.1E-03	Canc-Risk
Hexachlorobenzene	118-74-1	1.8E-01	--	8.0E-01	--	--	1.8E-01	Canc-Risk	5.5E-03	--	2.4E-02	--	--	5.5E-03	Canc-Risk
Hexachlorobutadiene	87-68-3	4.3E+00	--	1.9E+01	--	4.0E+05	4.3E+00	Canc-Risk	1.3E-01	--	5.6E-01	--	1.2E+04	1.3E-01	Canc-Risk
g-Hexachlorocyclohexane (Lindane)	58-89-9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	67-72-1	8.5E+00	1.0E+03	3.7E+01	4.4E+03	--	8.5E+00	Canc-Risk	2.6E-01	3.1E+01	1.1E+00	1.3E+02	--	2.6E-01	Canc-Risk
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	7439-92-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury (elemental)	7439-97-6	--	1.0E+00	--	4.4E+00	--	1.0E+00	NC-Hazard	--	3.1E-02	--	1.3E-01	--	3.1E-02	NC-Hazard
Methoxychlor	72-43-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	75-09-2	3.4E+01	1.4E+04	4.1E+02	5.8E+04	1.9E+07	3.4E+01	Canc-Risk	1.0E+00	4.2E+02	1.2E+01	1.8E+03	5.6E+05	1.0E+00	Canc-Risk
Methyl ethyl ketone	78-93-3	--	1.7E+05	--	7.3E+05	1.1E+06	1.7E+05	NC-Hazard	--	5.2E+03	--	2.2E+04	3.2E+04	5.2E+03	NC-Hazard
Methyl isobutyl ketone	108-10-1	--	1.0E+05	--	4.4E+05	1.4E+04	1.4E+04	Odor/Nuis	--	3.1E+03	--	1.3E+04	4.2E+02	4.2E+02	Nuis/Odor
Methyl mercury	22967-92-6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	--	--	--	--	2.3E+03	2.3E+03	Odor/Nuis	--	--	--	--	6.8E+01	6.8E+01	Nuis/Odor
Methyl tertiary butyl ether (MTBE)	1634-04-4	3.6E+02	1.0E+05	1.6E+03	4.4E+05	1.8E+04	3.6E+02	Canc-Risk	1.1E+01	3.1E+03	4.7E+01	1.3E+04	5.3E+02	1.1E+01	Canc-Risk
Molybdenum	7439-98-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene [PAH]	91-20-3	2.8E+00	1.0E+02	1.2E+01	4.4E+02	1.5E+04	2.8E+00	Canc-Risk	8.3E-02	3.1E+00	3.6E-01	1.3E+01	4.4E+02	8.3E-02	Canc-Risk
Nickel	7440-02-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	7790-98-9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Petroleum - Gasoline	--	--	2.0E+04	--	8.3E+04	3.3E+03	3.3E+03	Odor/Nuis	--	6.0E+02	--	2.5E+03	1.0E+02	1.0E+02	Nuis/Odor
Petroleum - Stoddard Solvent	--	--	1.1E+04	--	4.6E+04	3.3E+04	1.1E+04	NC-Hazard	--	3.3E+02	--	1.4E+03	1.0E+03	3.3E+02	NC-Hazard
Petroleum - Jet Fuel	--	--	1.1E+04	--	4.6E+04	3.3E+04	1.1E+04	NC-Hazard	--	3.3E+02	--	1.4E+03	1.0E+03	3.3E+02	NC-Hazard
Petroleum - Diesel	--	--	8.9E+03	--	3.7E+04	3.3E+04	8.9E+03	NC-Hazard	--	2.7E+02	--	1.1E+03	1.0E+03	2.7E+02	NC-Hazard
Petroleum - HOPs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Petroleum - Motor Oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

From: Michael Schaller
To: Janneth Lujan
Cc: Steve Monowitz
Subject: Fw: Item 4. PLN2018-00264
Date: Monday, June 8, 2020 11:05:26 AM

Hello Janneth,

This e-mail just arrived. Please forward onto the commissioners and add to the file. Thanks.

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: Buffy Bunting <babunting10@gmail.com>
Sent: Monday, June 8, 2020 11:02 AM
To: Michael Schaller <mschaller@smcgov.org>
Subject: Item 4. PLN2018-00264

MidPen has put forward new information for building "affordable" housing Moss Beach. MidPen has yet to seriously address matters related to density. Either they don't understand how traffic density affects a community or they are choosing to ignore the overwhelming evidence supporting the consequences of traffic density.

According to a recent report from the California Public Utilities Commission, there is just one road in and out of the proposed site, with no alternate routes and goes on to state that, "*Extreme and elevated wildfire risk is a new reality for the coast. In 2019 the California Public Utilities Commission released updated fire threat maps for the unincorporated Midcoast* ***that classify surrounding areas of Moss Beach and Montara as extreme high fire risk - the highest possible fire risk rating.*** *MidPen's application does not evaluate this risk nor does the County's draft of a Comprehensive Traffic Management Plan (CTMP)."*

"Density" is frequently associated with "nuisance" activities. There are two types of nuisance activities – private and public. "Public nuisance" covers a wide range of issues that may threaten public health and safety, including the welfare of a community and "obstructing a highway or creating a condition to make travel unsafe", among others. Supervisor Horsley has a background in law enforcement and has most likely dealt with the consequences of density and the "nuisance" issues associated with traffic congestion.

The MidPen / Moss Beach development will create major traffic congestion which

will increase accidents/injuries/ and fatalities.

Buffy Bunting
Moss Beach resident 1985 - 2020

--
Buffy

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: Support- 71 Affordable Miss Beach Homes
Date: Tuesday, June 9, 2020 4:15:10 PM

Another one

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: Nancy Saavedra <snancy264@icloud.com>
Sent: Tuesday, June 9, 2020 4:04 PM
To: mschaller@smcgov.org. <mschaller@smcgov.org.>
Subject: Support- 71 Affordable Miss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

I love this community, and it would make me incredibly upset if one day I couldn't be able to afford living here anymore. I've lived here for over 15 years and affordable housing is very limited to the community. I hope in the near future, affordable housing is more available to more families .

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

The more homes we can build, the more neighbors and diversity we'll have, the better off we'll be, as a community. Thank you for your courage and leadership on this proposal.

Respectfully yours,

Nancy Saavedra

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: SUPPORT - 71 Affordable Moss Beach Homes
Date: Tuesday, June 9, 2020 4:06:07 PM

And this one as well.

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: JOANNE M ROKOSKY <joanne.rokosky@comcast.net>
Sent: Tuesday, June 9, 2020 11:11 AM
To: Planning_Commission <Planning_Commission@smcgov.org>; Michael Schaller <mschaller@smcgov.org>
Subject: SUPPORT - 71 Affordable Moss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

The Coastside, from Montera to Pescadero, suffers from the lack of available housing for residents whose income is limited to low income jobs. This includes farmworkers and those in service occupations. The housing crisis has been true for a long time, but the COVID-19 crisis has made it all the more acute. In many instances, people in our Coastside communities are suffering from food shortages so that they can continue to pay their rent.

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

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Respectfully yours,

Joanne Rokosky

[Your Name]

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: SUPPORT - 71 Affordable Moss Beach Homes
Date: Tuesday, June 9, 2020 4:04:39 PM

Just making sure you got this.

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: Daisy Sarabia Medina <daisy358@icloud.com>
Sent: Tuesday, June 9, 2020 4:01 PM
To: Planning_Commission <Planning_Commission@smcgov.org>; Michael Schaller <mschaller@smcgov.org>
Subject: SUPPORT - 71 Affordable Moss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

Half Moon Bay is important to me because it is my home. I grew up here and I feel safe. As a teenager i'm scared that I won't be able to raise my future children here due to the fact that it is only getting more expensive.

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

The more homes we can build, the more neighbors and diversity we'll have, the better off we'll be, as a community. Thank you for your courage and leadership on this proposal.

Respectfully yours,
Daisy Sarabia

Sent from my iPhone

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: SUPPORT - 71 Affordable Moss Beach Homes
Date: Tuesday, June 9, 2020 4:15:33 PM

And one more

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: Margarita Vasquez <mvmvasquez123@gmail.com>
Sent: Tuesday, June 9, 2020 4:14 PM
To: Planning_Commission <Planning_Commission@smcgov.org>; Michael Schaller <mschaller@smcgov.org>
Subject: SUPPORT - 71 Affordable Moss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.
Half Moon Bay has been my home, I don't want to leave because of high housing costs

Half Moon Bay has been my home, I don't want to leave because of high housing costs. I want to be able to live with my family here. However, the longer we go without affordable housing the less likely it is for my family to stay here locally.

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

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Respectfully yours,

Margarita Vasquez

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: SUPPORT - 71 Affordable Moss Beach Homes
Date: Tuesday, June 9, 2020 4:06:07 PM

And this one as well.

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: JOANNE M ROKOSKY <joanne.rokosky@comcast.net>
Sent: Tuesday, June 9, 2020 11:11 AM
To: Planning_Commission <Planning_Commission@smcgov.org>; Michael Schaller <mschaller@smcgov.org>
Subject: SUPPORT - 71 Affordable Moss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

The Coastside, from Montera to Pescadero, suffers from the lack of available housing for residents whose income is limited to low income jobs. This includes farmworkers and those in service occupations. The housing crisis has been true for a long time, but the COVID-19 crisis has made it all the more acute. In many instances, people in our Coastside communities are suffering from food shortages so that they can continue to pay their rent.

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

The more homes we can build, the more neighbors and diversity we'll have, the better off we'll be, as a community. Thank you for your courage and leadership on this proposal.

Respectfully yours,

Joanne Rokosky

[Your Name]

From: Michael Schaller
To: Janneth Lujan
Subject: Fw: SUPPORT-71 Affordable Moss Beach Homes
Date: Tuesday, June 9, 2020 4:05:01 PM

And another one.

Michael Schaller
Senior Planner
San Mateo County Planning & Building Department

From: Johana Soto <johanasoto722@gmail.com>
Sent: Tuesday, June 9, 2020 4:01 PM
To: Planning_Commission <Planning_Commission@smcgov.org>; Michael Schaller <mschaller@smcgov.org>
Subject: SUPPORT-71 Affordable Moss Beach Homes

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can. Half Moon Bay is a great community and I love this small community because it is very tight knit and at times in need we all come together and help each other.

The affordable housing shortage is real and you have a unique opportunity, right now, to make a difference. There is a severe shortage of affordable homes on the coast and yet there is a concentration of lower income jobs. The live-work preference will help alleviate long-distance commuting and overcrowding as local workers and residents will have affordable, stable housing near their jobs. The variety of options, including one, two and three bedrooms, also provides flexibility for families.

The more homes we can build, the more neighbors and diversity we'll have, the better off we'll be, as a community. Thank you for your courage and leadership on this proposal.

Respectfully yours,
Johana Soto

HOUSING
LEADERSHIP
COUNCIL

May 29, 2020

Chair Federick Hansson
Vice Chair Mario Santacruz
Commissioner Manuel Ramirez Jr.
Commissioner Kumkum Gupta
Commissioner Lisa Ketcham

San Mateo County Planning Commission
455 County Center, 2nd Floor
Redwood City, CA 94063

Re: Support - Midpen's 71 affordable homes in Moss Beach

Dear San Mateo County Planning Commission,

On behalf of the **Housing Leadership Council of San Mateo County (HLC)**, I am writing to express our support for Midpen's 71 affordables homes in Moss Beach. The Housing Leadership Council of San Mateo County works with communities and their leaders to create and preserve quality affordable homes. These proposed affordable homes have our full support and are critical to the midcoast community of San Mateo County.

We need to provide housing at all income levels so that we can preserve our community and protect our most vulnerable residents. However there is currently no deed-restricted affordable housing in the mid-coast of San Mateo County. Midpen's Cypress Point can provide those desperately needed affordable homes with dignity and privacy. Moss Beach can continue to benefit from diversity and inclusion with these proposed homes.

Cypress Point's 71 affordable homes have been in the planning process for quite some time. Many residents facing rent burdens and those living in their cars do not have any time to spare. Vulnerable coastside individuals and families desperately needed these homes yesterday. Our public health crisis has highlighted how housing is healthcare. **We urge the San Mateo County Planning Commission to approve the amendment in the LCP, as soon as possible, to make these affordable homes feasible.**

Sincerely,

Alexander Melendrez
Organizer, Housing Leadership Council

Housing Leadership Council of San Mateo County
2905 S. El Camino Real, San Mateo, CA 94403 • (650) 242-1764 • hlcsmc.org

LAW OFFICES OF BRIAN GAFFNEY, A Professional Corporation
446 Old County Road, Suite 100-310
Pacifica, California 94044
(650) 219 3187 Phone
brian@gaffneylegal.com

June 8, 2020

Via Email

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

RE: MidPen Housing proposed Cypress Point project
PLN2018-00264

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

This office represents Resist Density regarding the proposed Cypress Point project in Moss Beach. This office submitted comments to the Planning Commission regarding the proposed project on January 22, 2020. Below are additional comments upon our review of the June 3, 2020 San Mateo County Staff Report ("Staff Report") addressing the following:

1. The Staff Report does not respond to substantial expert comments regarding the project, its impacts and mitigations;
2. The Staff Report "piecemeals" the project to avoid environmental review at the earliest possible stage in the County's review;
3. The Staff Report improperly defers until after project approval the formulation of mitigation measures;
4. Setbacks, lot coverage, and floor area are based on plans not made available to the public;
5. The Staff Report uses an improper environmental baseline in regards to traffic safety and circulation impacts;
6. The project description continues to change and there has been no analysis of the potential environmental impacts of these changes.

Thank you for your careful consideration of these comments..

Sincerely,

Brian Gaffney

Brian Gaffney

1. The Staff Report does not acknowledge or respond to the substantial comments submitted to the Planning Commission and the Planning Department on April 9, 2020 by Matt Hagemann / SWAPE regarding project hazards and hazardous materials impacts and regarding hydrology and water quality impacts. Nor does the Staff Report acknowledge or respond to the substantial comments submitted on May 7, 2020 by Pang Engineers, Inc. regarding traffic comments impacts and mitigations. Additional comments were submitted on June 8, 2020 by BioMaAs regarding biological impacts and by Robert W. Emerick regarding sewage impacts.

In addition, the Staff Report does not attempt to refute Resist Density's comments that the proposed project is inconsistent with the Coastal Act and the San Mateo County LCP.

2. The Staff Report reveals that San Mateo County will avoid analysis of the reasonable foreseeable impacts of the proposed project and intends to "piecemeal" the project to avoid environmental review at the earliest possible stage in the County's review.

Yet, the stated purpose of the LCP Amendment is "in preparation for the future submittal of a coastal development permit application." P.2. "[A]pprovals that require CCC approval will be processed first, and the County-specific approvals including the General Plan amendment and site specific approvals will be processed thereafter. The accompanying change to the General Plan Land Use Designation will be resubmitted for Planning Commission consideration, along with an environmental document that addresses CEQA requirements, if the proposed LCP Amendments are certified by the CCC." P. 3. This ignores that the Cypress Point Project Executive Summary (April 2019) already described the requested approvals as including amending the San Mateo County's General Plan. Likewise, the January 22, 2020 Staff Report described the issue before the Planning Commission as including "Consideration of a General Plan Land Use Map Amendment." And, the approval before the Planning Commission is a proposed discretionary action to add PUD-140.

In so doing, the Staff Report fails to address Commissioner Ketcham's concern that specific findings on the precise plan would normally be informed by full CEQA review. P. 7. Nor does Staff contend that there is adequate analysis of impacts, only that "Staff believes there is sufficient detail within the submitted plans to do this analysis" later after approval of the LCP Amendment and PUD designation for the site. P. 7.

Nor does the Staff Report respond to Commissioner Ketcham request for examples of other use of this "reverse 2-step approval process." P. 8. Tellingly, Staff asserts the Applicant's cost (ie invest) is more important to Staff than either plan specificity or analysis of impacts prior to project approval. Staff does not provide any reference to the Coastal Act, the LCP, or other law to support its assertion that the "reverse 2-step process" is appropriate. P. 8.

Likewise, the Staff Report does not address Commissioner Ketcham's comment about the need for analysis of the impacts of 692 haul truck trips. Instead, Staff impermissibly defers analysis to the "development review process." p. 12. Because these trips are a reasonable foreseeable result of the LCP and amendment and PUD-140 creation, environmental review must be conducted before project approval.

The Staff also does not agree to require additional soil sampling, as recommended in the Phase 2 report and requested by Commissioner Ketcham, to assess the horizontal extent of lead-impacted surface soils." P. 13. Instead Staff improperly defers analysis of both likely hazardous and asbestos impacts and mitigations until the "development review process (Phase 2 of this project)."[1]

3. The Staff Report improperly defers until after project approval the formulation of mitigation measures with specific performance criteria in regards to traffic circulation mitigation measures (pp. 4 & 5), does not explain undefined "contributions" to the installation of an intersection control within the Highway One Moss Beach corridor[2] (p. 5), fails to analyze the feasibility of roundabouts as potential traffic mitigations (p. 5), assumes without analysis that hazards mitigation will "eliminate any health risks" (p. 9), and defers mitigations for construction fill and traffic. P. 12.

In regards to the "Preliminary Circulation Improvement Plan," (pp. 37 – 39) there is no analysis of the potential adverse impacts of each component of this proposed plan, there is no analysis of whether and to what extent pedestrian and bicycle access plans will reduce potentially significant traffic impacts, there is no definition of what constitutes "Fair share contribution" for accessible bus stops or "Fair share contribution" to intersection control at Highway 1, there is no explanation of what "if feasible" means in the context of "Fair share contribution," there is no performance standards for the deferred maintenance of "suite of transportation demand management strategies," and the Plan says not that MidPen will be required to implement or pay for subsidies - only that MidPen will "consider" them. Thus, the traffic mitigations are vague and unenforceable.

4. Regarding Setbacks, the Staff Report claims that "the applicant has revised the site plan so that no buildings will be closer than 20-feet from the Carlos Street right-of-way." The Ordinance, however, does not support this assertion. The proposed PUD-140 (Ordinance Section F) instead states only that "The minimum setbacks of the proposed buildings shall conform to those shown on the plans reviewed by the Planning Commission on June 10, 2020, or as modified by Coastal Development Permit conditions of approval." There is no reference to a 20-foot setback. Moreover, those plans have not been made available to the public, thus thwarting public review.

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[1] There is a reasonable argument that, by contributing $4.5 Million in funding to Cypress Point, San Mateo County has already approved the proposed project prior to conducting proper environmental review.

[2] Does one dollar constitute an adequate contribution, and why ?

Further, those setbacks may be changed in applicant-driven CDP conditions of approval.

Nor is the public able to adequately comment on either the lot coverage or the permissible floor areas - as these too are based on plans not made available to the public.

5. The Staff Report continues to use an improper baseline in regards to traffic safety and circulation impacts by comparing the proposed project to PUD-124. P. 4.

6. The project continues to change. Thus the project description is not stable.

For the first time, the project will include "removal of dead trees and other highly flammable vegetation." (P. 5.) In contrast, MidPen's Biological Resource Assessment (May 2018) stated that "The dense cypress habitat along the northern property boundary is not proposed for removal/disturbance." Despite this change in the project, there is no analysis of the biological impacts of this tree/vegetation removal.

Similarly, the project will now include more than 142 parking spaces. A minimum of 142 parking spaces is envisioned with the possibility of more if the "applicant wished to create more parking spaces." Not only is this a change in the project, but there has been no analysis of the impacts on traffic.

June 8, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

RE: MidPen Housing Cypress Point Housing Project, Moss Beach CA
Wastewater Impact Analysis

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

I write regarding the Wastewater Impact Analysis for the proposed MidPen Cypress Point project.

I am a registered Civil Engineer (State of California License No. 58914) experienced in wastewater treatment and disposal. I received my Ph.D. in Civil and Environmental Engineering from the University of California at Davis in 1999 where I majored in wastewater treatment with doctoral minors in ecology and stochastic modeling. I have taught wastewater treatment process design courses for the State Water Resources Control Board and owned a 150-person engineering firm specializing in municipal infrastructure permitting, planning, design, and operation (ECO:LOGIC Engineering, Roseville, CA) prior to its sale to Stantec in 2011. My CV is attached.

To prepare these comments I reviewed the following documents:

- Cypress Point Project MidPen Housing, Public Services and Utilities (Stevens Consulting, July 2018)
- Cypress Point Project Cumulative Impacts Analysis (2nd County Review Draft, April 2019)
- Cypress Point Project Preliminary Environmental Evaluation Report (2nd County Review Draft, April 2019)
- Carollo Engineers (1999) Sewer Authority Mid-Coastside Wet Weather Flow Management Program Facility Plan Report DRAFT
- Sewer Authority Mid-Coastside Infrastructure Plan: FY17/18 –FY21/22
- Sewer Authority Mid Coastside (April, 2018) DRAFT 20-Year Capitol Improvement Plan
- Consent Judgment, *Ecological Rights Foundation v. Sewer Authority Mid-Coastside*, Northern District of California Case No. 3:18-CV-04413
- San Mateo County Local Coastal Plan, Table 2.3, 2.4 & 2.7, Estimate Of Midcoast Sewage Generation

Based on my review of the above documents and my background and experience, I offer my professional opinion on the following three issues: (1) the current condition of the wastewater conveyance system to transport sewage generated by MidPen's project to the Sewer Authority Mid-Coastside (SAM) wastewater treatment facility and the history of sewage spills, (2) the potential adverse impacts from construction of the new sewage collection system

for the proposed MidPen development, and (3) the completeness of MidPen's assessment of project-specific and cumulative wastewater impacts.

Existing Conveyance System & History of Sewage Spills

As background, I understand that the SAM operates an Intertie Pipeline System (IPS) for conveying wastewater from its member agencies to the SAM wastewater treatment plant. The IPS consists of pump stations, force mains (i.e., pipelines operating under pressure), and gravity flow pipelines. The totality of these systems must operate in a manner that does not allow sewage to overflow into homes, onto streets, or into waters of the United States. Any sewage that overflows the sewerage collection and conveyance system is unlawful and is called a sanitary sewer overflow (SSO).

The proposed MidPen development is located within the Montara Water & Sanitary District (MWSD), which is located at the furthest end of the IPS from the SAM wastewater treatment plant. All of the Montara sewage is pumped through the IPS by SAM's northern pump station, the Montara Pump Station, to the sewage treatment plant located in Half Moon Bay (MWSD 2018). Wastewater generated by the proposed MidPen project must necessarily be conveyed by the IPS through segments also serving Montara, Princeton by the Sea, El Granada, and the City of Half Moon Bay. SAM's Intertie Pipeline System has had at least 65 separate discharges of inadequately treated or raw sewage since 2013 alone. Over 557,103 gallons of sewage have been illegally released, the vast majority of it released into the Pacific Ocean and Half Moon Bay. In addition, SAM's operation of the wastewater sewage collection systems has resulted in tens of thousands of gallons of raw or inadequately treated sewage being released onto streets in residential neighborhoods. Sewage contains human waste, viruses, protozoa, mold spores, bacteria, and chemical contaminants. Many of the pollutants found in raw and/or inadequately treated sewage are acutely toxic.

The inadequacy of the wastewater sewage collection system and the serious ecological problems resulting therefrom have been known to SAM for decades. As far back as 1999 SAM's consultants recognized that the IPS had not been maintained in a manner to prevent regular occurrences of SSOs.[1] During wet weather, the IPS receives its highest flows owing to Inflow and Infiltration (I/I) (i.e., surface runoff and water from saturated soil that enters the IPS through system defects such as cracked pipes, separated pipe joints, and illegal cross connections to roof and yard drains).

About 18 years after the need for improvements was first identified by Carollo Engineers, SAM prepared an Infrastructure Plan to work toward eliminating SSOs.[2] That plan has not been followed in its entirety. I understand that litigation regarding the SAM system ultimately resulted in a Consent Decree being issued in 2019.[3] Pertinent elements of the

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[1] Carollo Engineers (1999) Sewer Authority Mid-Coastside Wet Weather Flow Management Program Facility Plan Report DRAFT

[2] Sewer Authority Mid-Coastside Infrastructure Plan: FY17/18 –FY21/22

[3] *Ecological Rights Foundation v. Sewer Authority Mid-Coastside*, Case No. 3:18-CV-04413

Consent Decree include completing the replacement of Granada Force Main Segment 4 by June 30, 2020, implementing the feasible recommendations of a Princeton Force Main condition assessment and pump station feasibility study by June 30, 2024, and completing replacement of the Montara Force Main by June 30, 2024 to prevent SSOs. Therefore, the system used to accommodate the proposed MidPen Cypress Point wastewater will not be able to guarantee compliance with Regional Water Quality Control Board regulatory requirements associated with SSOs until June 30, 2024 at the earliest.

Additionally, a draft Capitol Improvement Plan was issued as recently as April 2018 describing maintenance and upgrades needed through 2038.[4] The Capitol Improvement Plan describes Category 1 improvements (i.e., items requiring attention to address full regulatory compliance) and Category 2 improvements (i.e., maintenance items for existing infrastructure to assure compliant operation). Not all of these designated Category 1 and Category 2 improvements have been completed per the plan.

Given the above, an adequate analysis of MidPen's wastewater impacts must include evaluation of potential project impacts in light of this history of sewage spills, the SAM Infrastructure Plan, the Force Main segment replacements and Pump Station noted above, as well as the status of each program element described within the Capitol Improvement Plan.

That analysis has not been completed or released to the public to date, and thus there is an insufficient basis to assess whether there is adequate capacity to serve existing commitments with the addition of the proposed MidPen development, or cumulative development.

New Conveyance System & Potential for Adverse Impacts

The Cypress Point Project Public Services and Utilities Analysis (Stevens Consulting, July 2018) conclusion - that there will be a less than significant sewer services impact[5] - suffers from a number of inadequacies and omissions. First, "no utility plans have been completed for the proposed project." Therefore, what actually is proposed is not adequately described. Steven's Consulting does reveal that there is no existing sanitary sewer infrastructure on the project site, and new sewer pipelines will be needed to connect the project site with the existing MWSD sewer lines in adjacent roadways. Further, while MidPen vaguely acknowledges that "MWSD transmission facilities" may need to be upgraded in the vicinity of the project site," specific sanitary sewer infrastructure plans should be provided for review prior to making a determination that the project has a less than significant wastewater impact.

Second, it is reasonably likely that a pump station will be needed for the project and if improperly designed could result in spills of sewage to waters of the United States. At its closest point, the project site is located about 750 feet from the coastline of the Pacific Ocean. Elevations of the project site range from 77 feet at the northwest corner to 189 feet along the

[4] Sewer Authority Mid Coastside (April, 2018) DRAFT 20-Year Capitol Improvement Plan
[5] Cypress Point Project MidPen Housing (July, 2018) Public Services and Utilities

easterly boundary. A perennial stream (Montara Creek) is located approximately 50 to 250 feet to the northwest of the project site and runs parallel to the northern border prior to reaching the Pacific Ocean. There is a 100 foot elevation change moving away from the Pacific Ocean and a stream at the northern boundary. Given this geography and in the absence of utility plans, it is reasonably likely that a new pump station will be required to adequately remove wastewater from the MidPen project site to a neighboring sewerage conveyance system. Pump stations have the potential to overflow into waters of the United States if not adequately designed and maintained. Thus, there is a potentially significant adverse wastewater impact that should be evaluated further before project approval.

Assessment of Treatment Facility Capacity and Pollutant Loads

Stevens Consulting Wastewater Analysis (July 2018) claims that the SAM wastewater treatment system and IPS has adequate capacity for growth anticipated in the region - based entirely on "[c]onsidering dry weather flows." It appears that MidPen has not evaluated capacity with wet weather flows. Average Dry Weather Flow (ADWF) is a regularly used term with regards to regulating wastewater treatment facilities, but it has essentially no basis in assessing adequate design and operation of wastewater treatment facilities.[6] Important wastewater treatment facility design parameters must account for both wet weather flows and peak pollutant loads. It appears that MidPen has not evaluated either peak wet weather flows or pollutant loads.

The most critical flow parameter in assessing adequate capacity is instantaneous peak flow, because that parameter determines whether there will be spills or overflows within the conveyance or treatment facilities, as well as adequate disinfection. As described above, the sewage collection system is currently unable to fully handle peak I/I flows without occasional SSOs.

Loads constitute the pollutants present in wastewater and are the basis of regulating the discharge. Although there has been discussion regarding a decrease in flows owing to water conservation, MidPen has not evaluated potentially significant impacts related to pollutant loads.

It is misleading to suggest in the planning documents that because water conservation has reduced flows to the wastewater treatment facility that there necessarily remains adequate treatment capacity. Water is simply a carrier for the pollutant loads. It is instructive to note that if the amount of water discharged by residences is halved owing to water conservation, it does not free up capacity that can be used by others. Rather, the concentration of pollutants in the water will instead double (i.e., the mass of pollutants remains constant when diluted in half the amount of water). In some instances treatment processes must be modified to adapt to

[6] Current treatment plant loading should instead be compared to wastewater treatment plant design criteria in lieu of the average dry weather flow presentations currently used to assess capacity.

the concurrent higher pollutant concentrations combined with lower flows. In no case is treatment capacity ever increased by reducing water volume alone.

Pollutant loads should be considered when determining whether there is adequate treatment capacity to accommodate current obligations. Two issues are entirely missing from the MidPen's analysis of wastewater impacts: (1) impacts associated with constructing accessory dwelling units (ADUs) throughout the District and (2) sludge processing and disposal needs associated with the treatment facility.

Accessory Dwelling Units

Stevens Consulting reports that even without construction of the proposed MidPen project, there are already 22,000 coastal residents discharging to the wastewater treatment plant. The San Mateo Local Coastal Plan describes the need to account for 466 second units and 45 caretaker's quarters at the residential buildout served by the sewers.[7] In addition, the California Legislature recently approved an increase in pollutant loads to the wastewater treatment plant from existing developed sites (e.g., Assembly Bills 68, 881 and Senate Bill 13). The legislation allows for increasing the number of habitable dwellings discharging into existing wastewater treatment plants.

MidPen's wastewater analysis fails to evaluate the impact on wastewater treatment facility capacity of the proposed MidPen project in combination with the second units contemplated in the LCP and the impact of adding these additional ADUs.

Also, MidPen does not consider whether the expanded sewage line and potential pump station for the project will increase the development intensity or off-site development by facilitating such second units or ADUs in the project vicinity.

Analysis of Cumulative Wastewater Impacts

The Cypress Point Cumulative Impacts Analysis (April, 2019) concludes that the Cypress Point project would make a less than cumulatively considerable contribution - based on its assumptions that "the proposed project would not require or result in the construction of new wastewater treatment facilities, or the expansion of existing treatment facilities" and that "SAM has sufficient capacity." However, as discussed above these cumulative impact conclusions are suspect given that MWSD transmission facilities may need to be upgraded in the vicinity of the project site, specific sanitary sewer infrastructure plans has not been provided, an improperly designed pump station could result in spills of sewage to waters of the United States, and to date MidPen has not evaluated either peak wet weather flows or pollutant loads from the proposed project.

The Cypress Point Cumulative Impacts Analysis (April, 2019) at Table 3 describes reasonably forseeable residential projects. The report predicts 19 accessory dwelling units

[7] San Mateo County Local Coastal Plan, Table 2.3 Estimate Of Midcoast Sewage Generation

within El Granada (10 units), Half Moon Bay (1 unit), Montara (5 units), and Moss Beach (3 units) with no units forecast for Miramar, Pacifica, and Princeton. The projection of only 19 accessory dwelling units in a system accommodating at least 22,000 coastal residents appears low and is unsubstantiated. Insofar as (1) housing is already generally scarce throughout California and the scarcity was the basis for passing the legislation, (2) the legislation results in reduced impact fees associated with constructing on already developed lots, and (3) the cost of constructing ADUs is expected to be far less than constructing residences on new lots owing to the presence of existing infrastructure, it does not appear reasonable to suggest that only 19 ADUs will be constructed within District limits. An adequate cumulative impact analysis would consider the ultimate potential for ADUs following the recently enacted legislation within existing lots and develop pollutant loading criteria accordingly when assessing how much treatment capacity remains at the wastewater treatment plant.

Sludge Production.

As stated above, MidPen's Public Services and Utilities (Stevens Consulting, July 2018) does not address pollutant loads. As stated above, pollutant loads ultimately become sludge that requires its own treatment and disposal. It is appropriate to include analysis pertaining to sludge treatment capacity and long-term sludge disposal capacity when assessing the ability of the wastewater treatment plant to treat to meet existing commitments, including those the proposed MidPen project as well as associated with likely ADUs.

Thank you for considering these project comments.

Sincerely,

Robert W. Emerick Ph.D., P.E.

Robert W. Emerick Ph.D., P.E.

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(916)826-6990

Dr. Emerick was a principal owner of ECO:LOGIC Engineering, a 150+ person engineering firm specializing in design, permitting, operation, and management of water/wastewater infrastructure. The firm was sold to Stantec, Inc. in 2011, with Dr. Emerick leaving the firm in 2015 to aid in the redevelopment of downtown Sacramento and to work as a private engineering consultant. Dr. Emerick has 25 years of civil engineering/water quality experience, including teaching at the undergraduate and graduate level, research, engineering management, regulatory permitting, environmental studies, regulatory enforcement, and water/wastewater treatment process development, design and operation. He is an acknowledged leading expert in obtaining waste discharge permits for private and public agencies and developing treatment processes for the removal of trace contaminants from wastewater discharges.

EDUCATION

B.S., Civil Engineering, University of California, Davis, California, 1992

M.S., Civil and Environmental Engineering, University of California, Davis, California, 1993

Ph.D., Civil and Environmental Engineering, University of California, Davis, California, 1998

REGISTRATIONS

Professional Engineer #58914, State of California

PROJECT EXPERIENCE

Teaching

State Water Resources Control Board

Instructor (via role as Adjunct Professor at UC Davis). Responsible for wastewater process design, operation, and troubleshooting course development and presentation. This project involves a series of classes presented to all State of California regulators, fund reviewers, policy makers, and facility inspectors. Courses are intermittently on-going and include (1) Disposal of Non-Designated Waste to Land, (2) Wastewater Facility Inspection and Monitoring, (3) Introduction to Wastewater and Its Treatment, and (4) Wastewater Engineering 2 "The Advanced Class." Courses have been video recorded for archival at the State Water Resources Control Board. Courses have been translated into Spanish and have been presented to operators in Mexico.

University of California at Davis, California State University Sacramento

Teaching Assistant and Adjunct Professor. Courses were aimed at (1) retraining nuclear engineers after the closure of Mare Island Naval Shipyard for civilian practice, and (2) undergraduate and graduate civil engineering education. Taught wastewater treatment design for UC Davis to aid in their accreditation process. Served on the review panel for UC Davis civil engineering accreditation.

Redevelopment

Sacramento, CA

Owner and Engineer. Restored and recently completed redevelopment/construction of 35,000 square feet of historic commercial property for contemporary uses. Started businesses as part of the redevelopment effort, including Crest Theatre (950 seat venue for concerts, movies, community events), Empress Tavern (7500 square foot fine dining restaurant), and Mother (1500 square foot casual vegetarian restaurant).

Permitting, Compliance, Auditing

Facility Improvements, Ione, California

Project Manager for developing facility improvements needed for compliance with Reclamation permit limitations associated with Castle Oaks Golf Course (Ione, CA).

Robert Emerick Ph.D., P.E.

Lincoln, Rio Vista, Merced, Dixon, Donner Summit, Reno

Project Manager/Engineer responsible for negotiating permits for (1) land discharge of secondary effluent for Lincoln, CA (2) land discharge of secondary effluent for Dixon, CA, (3)master reclamation permit for Lincoln, CA., (4) surface water discharge of secondary and tertiary effluent for Lincoln, CA, (5) surface water discharge of secondary and tertiary effluent for Rio Vista, CA., (6) surface water discharge of secondary and tertiary effluent for City of Merced, CA., (7) surface water discharge for Donner Summit Public Utility District, (8) aquifer storage and recovery project for Reno, NV.

North Lake Tahoe Public Utilities District Potable

Project Manager/Engineer responsible for negotiating a the nation's first permit and designing improvements to produce potable water on an unfiltered drinking water supply using UV disinfection technology for North Lake Tahoe Public Utilities District.

Research

City of Reno, NV

Developing a membrane/ozone/biologically active activated carbon treatment process for the removal of trace emerging contaminants of concern for a groundwater aquifer storage and recovery project.

City of Dixon, CA

Responsible for analyzing groundwater and effluent quality for determining the presence of and/or extent of groundwater degradation. Project involves the application of tracers for determining origin and fate of wastewater contaminants.

Lincoln, CA and Rio Vista, CA

Investigating the partitioning of priority pollutant contaminants and wastewater treatment process impacts on the removal/reduction of priority pollutants for Lincoln, CA and Rio Vista, CA. Developed methodology for determining the correct hardness when applying CTR metals criteria.

Caltrans

Investigating/developing new treatment processes for removing iron, nitrogen, phosphorous, and turbidity from stormwater for Caltrans to aid in compliance with discharge restrictions into Lake Tahoe. Project involved development, construction, and operation of pilot treatment facilities treating highway runoff in the Lake Tahoe basin.

Sacramento Regional Wastewater Treatment Plant Coliform Bacteria Study

Investigated the physical parameters influencing the development of coliform bacteria associated with wastewater particles. Research involved developing an oligonucleotide probe specific to the family Enteriobacterioceae for visual identification of coliform bacteria within wastewater particles.

Sacramento Regional Wastewater Treatment Plant UV Disinfection Performance

Investigated the impact of particle size distribution impacts on UV disinfection performance for Sacramento Regional Wastewater Treatment Plant. Research involved developing a new computer aided photographic method of determining the particle size distribution of wastewater.

Sacramento Regional Wastewater Treatment Plant Tertiary Process Development

Aided in the development of a pilot facility to investigate removal of trace contaminants from the discharge into the Sacramento River. Provided professional peer-review of study results.

UV Equipment Validation Testing

Designed and operated a pilot testing facility for approval of UV disinfection system by the State of California Department of Health for use on recycled effluents. UV disinfection systems tested include (1) the Trojan Technologies Swift 4L12 UV disinfection system, (2) the Trojan Technologies UV 3000+ UV disinfection system (3) Trojan Technologies UV 2000 disinfection system, (4) Fisher Porter UV disinfection systems, (5) WEDECO TAK55 spot check validation for City of Lincoln, CA, (6) Trojan Technologies UV 3000+ spot check validation for City of Yucaipa, CA., (7) ENAQUA low pressure high output UV disinfection system.

Title 22 Filtration Validation Testing

Designed and operated a pilot testing facility testing for approval of filtration systems by the State of California Department of Health for use on recycled effluents. Filtration systems tested include (1) Nordic Water Products Disc Filter, (2) Parkson Disc Filter, and (3) AMIAD Screen Filter.

* denotes projects completed with other firms

Robert Emerick Ph.D., P.E.

Biological Virus Removal Within Intermittently Dosed Fixed Growth Filters
Academic project involved development of a biological virus degradation process for the production of unrestricted recycled water for on-site reuse (UC Davis).

Water Environment Research Foundation (Project 96-CTS-3) Impact of Upstream Wastewater Treatment Process Type on Downstream UV Disinfection Performance
Project involved determining wastewater treatment process impacts and developing a fundamental stochastic model describing the ability of UV disinfection to inactivate pathogens.

Water Environment Research Foundation (Project No. 91-WWD-1) Comparison of UV Irradiation to Chlorination for Achieving Optimal UV Performance
Project involved developing an empirical mathematical model for predicting UV disinfection performance.

Stormwater Management

State of California Department of Transportation (Caltrans) Stormwater BMP Pilot Program (Peer Reviewer)
This study was directed at reviewing, critiquing, and developing solutions associated with the BMP pilot research program.

San Francisco-Oakland Bay Bridge Storm Water Detention Basin Treatment Best Management Practice (BMP) Feasibility Study (Project Manager/ Engineer)
This study, for Caltrans, was directed at determining and comparing the environmental benefits derived from implementing stormwater treatment for the bridge expansion in relation to the costs related to stormwater treatment.

Caltrans Maximum Extent Practicable Analysis for Storm Water Detention Basins Associated with Highway Runoff (Project Manager and Project Engineer)
This study was directed at determining and comparing the environmental benefits associated with implementing stormwater detention basins statewide as part of all new and retrofit roadway expansions/improvements.

Lake Tahoe Basin New Stormwater Treatment Processes (Project Engineer)
The development of new stormwater treatment processes for implementation within the Lake Tahoe Basin. This pilot study investigates treatment trains to remove nutrients, iron, turbidity, and narrative toxicity for compliance with the nation's most stringent effluent limits associated with stormwater runoff.

Sacramento County Stormwater BMP Review Program (Project Manager)
This project was directed toward developing approval criteria for the selection of stormwater Best Management Practices (BMPs) for installation within Sacramento County.

Wastewater Treatment

State of Nevada Department of Environmental Protection
Responsible for summarizing reclamation policy and groundwater recharge policy nationwide and developing a unified reclamation policy for the State of Nevada that integrates the findings of ozonation/biological activated carbon adsorption research conducted concurrently for the City of Reno.

Donner Summit Public Utility District, CA
Responsible for permitting and process development for nutrient removal treatment process upgrades, mixing zones, and associated regulatory permitting.

City of Reno, NV
Responsible for treatment process development for removing emerging contaminants of concern to non-detectable levels as part of a groundwater aquifer storage and recovery project.

City of Davis, CA (Process Design Manager)
In charge of developing treatment and disposal options for compliance with effluent dominated stream regulatory requirements.

* *denotes projects completed with other firms*

Robert Emerick Ph.D., P.E.

City of Lincoln, Midwestern Placer Regional Sewer Project Environmental Impact Report (EIR), Lincoln, California (Process Design Manager)
In charge of process development for a tertiary (Title 22 unrestricted reuse) wastewater treatment and reclamation facility for the City of Lincoln. This treatment facility is the first in Northern California to be designed specifically to comply with California Toxics Rule Regulatory requirements (toxic contaminant limitations) and receiving water limits related to effluent dominated streams. The treatment process consists of a headworks, nitrification/ denitrification, clarification, priority pollutant maturation ponds, dissolved air flotation algae removal, coagulation/flocculation, granular medium filtration, UV disinfection, and effluent reaeration.

City of Ceres Wastewater Treatment Plant Expansion, Ceres, California (Project Engineer)
The design of a tertiary (Title 22 unrestricted reuse) wastewater treatment plant. This facility consisted of headworks, nitrifying oxidation ditches, clarification, coagulation/flocculation, granular medium filtration, and UV disinfection.

Salt Accumulation Analysis, City of Ceres, California (Project Manager/Engineer)
A salt accumulation analysis related to land discharge of effluent for Ceres, CA. This analysis consisted of developing a groundwater hydraulic model for determining long-term salt impacts to groundwater related to a proposed groundwater replenishment project.

Priority Pollutant Characterization (Project Engineer)
Responsible for priority pollutant characterization for (1) Brentwood, CA (2) Mountain House, CA (3) Lincoln, CA (4) Rio Vista, CA, and (5) La Contenta Golf Course.

UV Disinfection Feasibility Study (Project Engineer)
Responsible for determining the feasibility of applying UV disinfection to (1) Manteca, CA (2) Sacramento Regional Wastewater Treatment Plant, CA, (3) Woodland, CA, (4) Rio Vista, CA, and (5) Auburn, CA.

Water Treatment

North Lake Tahoe Public Utility District UV Disinfection System
Process Design Manager/Engineer for a UV disinfection system on an unfiltered water supply for the North Lake Tahoe Public Utility District, CA. This UV disinfection system is the first in California to be permitted for the production of potable water, and the first nationally to be permitted for use on an unfiltered drinking water supply.

Groundwater Desalinization Project, Sparks, Nevada
Project Engineer responsible for analyzing the feasibility of groundwater desalinization.

UV Disinfection System for Third World Environments
Project Manager/Engineer for product review of a new UV disinfection system for application in Third World environments for the inactivation of Cryptosporidium and Giardia (Core Resources; Water Health UV Disinfection System).

Pulsed Light UV Disinfection System
Project Manager/Engineer for product review of a new pulsed light UV disinfection system for application on drinking water treatment (New Star Lazers).

Steiger Hills, CA Master Water Plan
Project Engineer responsible for master-planning a water supply and distribution system for Steiger Hills, CA.

* *denotes projects completed with other firms*

Robert Emerick Ph.D., P.E.

PUBLICATIONS

Contributing author to Potable Reuse Research Compilation: Synthesis of Findings, Water Environment and Research Foundation, 2016.

Contributing author to Wastewater Engineering, Treatment, Disposal, Reuse. *Metcalf and Eddy, Fourth Edition*, 2010.

Presentation. Emerick, R. W., Sundaram, V., Borroum, Y., Shumaker, S. Cost Effectiveness and Environmental Benefits of Combined Ozonation – UV System for Water Reclamation and Surface Water Discharge. *WEFTEC*, 2008.

Presentation. Borroum, Y., Emerick, R.W., Pedri, J. Development of Site-Specific Metal Translators. *WEFTEC*, 2008.

Presentation. Emerick, R. W., Borroum, Y., Pedri, J. Development of Protective Hardness-Based Metal Limitations. *WEFTEC*, 2006.

Presentation. Emerick, R.W., Borroum, Y., Pedri, J. Bioassay Comparison of Similar Pilot- and Full-Scale UV Disinfection Systems. Validation of the Scale-up Relationship Recommended by the NWRI UV Disinfection Guidelines. *WEFTEC*, 2005.

Emerick, R. W., Swift, J., Sakaji, R. Treat, Disinfect, Reuse – Part II.. *Water Environment and Technology, Vol. 15, No. 3*, 2003.

Swift, J., Emerick, R. W., Scheible, K., Soroushian, F., Putnam, L. R., and Sakaji, R. Treat, Disinfect, Reuse. *Water Environment and Technology, Vol. 14, No. 11*, 2002.

Loge, F. J., Emerick, R. W., Ginn, T. R., and Darby, J. L. Association of Coliform Bacteria with Wastewater Particles: Impact of Operational Parameters of the Activated Sludge Process. *Water Research, 36(2002):41-48*, 2001.

Loge, F. J., K. Bourgeous, R. W. Emerick, and J. L. Darby. Variations in the Water Quality Parameters Influencing UV Disinfection Performance: Relative Impact of Filtration. *Journal of Environmental Engineering, 127(9): 832-837*, 2001.

Presentation. Emerick, R.W., Soroshian, F., Tchobanoglous, G. Standardizing UV Equipment Performance Validation, Proceedings of UV 2000. *A Technical Symposium*, 2000.

Blatchley, E. R., Emerick, R. W., Hargy, T., Hoyer, O., Hultquist, R. H., Sakaji, R. H., Scheible, O. K., Schmelling, D. C., Soroushian, F., and Tchobanoglous, G., Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse. *National Water Research Institute, American Water Works Association Research Foundation*, 2000.

Emerick, R.W., Loge, F.J., Ginn, T., and Darby, J. Modeling the Inactivation of Coliform Bacteria Associated with Particles. *Water Environment Research, 72:4, 432-438*, 2000.

Emerick, R. W., Manning, J., Tchobanoglous, G., and Darby, J. Impact of Bacteria and Dosing Frequency on the Removal of Virus Within Intermittently Dosed Biological Filters. *The Small Flows Journal, 1:1, 36-41*, 2000.

Robert Emerick Ph.D., P.E.

Presentation. Loge, F. J., Emerick, R. W., Tchobanoglous, G., and Darby, J. Design and Optimization of Upstream Treatment Processes to Improve the Performance of Ultraviolet Disinfection Facilities at Sacramento Regional Wastewater Treatment Plant. *Publication of the Center For Environmental and Water Resources Engineering, UC Davis No. 99-1*, 1999.

Presentation. Tchobanoglous, G., Emerick, R.W., Loge, F., and Darby, J. Recent Developments in Ultraviolet Disinfection. *United States Environmental Protection Agency 6th National Drinking Water and Wastewater Treatment Technology Transfer Workshop*, 1999.

Presentation. Emerick, R.W., Darby, J., and Tchobanoglous, G. Impact of Bacteria and Dosing Frequency on the Removal of Virus Within Intermittently Dosed Biological Filters. *Water Reuse Foundation's Annual Water Reuse Research Conference*, 1999.

Emerick, R. W., Loge, F. J., Thompson, D. E., and Darby, J. L. Factors Influencing UV Disinfection Performance - Part II: Association of Coliform Bacteria with Wastewater Particles. *Water Environment Research, 71:6, 1178-1187*, 1999.

Loge, F. J., Emerick, R. W., Thompson, D. E., Nelson, D. C., and Darby, J. L. Factors Influencing UV Disinfection Performance - Part I:Light Penetration into Wastewater Particles. *Water Environment Research, 71:3, 377-381*, 1999.

Loge F. J., Emerick, R. W., Thompson, D. E., Nelson, D. C., and Darby, J. L. Development and Application of a Fluorescent 16S rRNA Oligonucleotide Probe Specific to the Family Enterobacteriaceae. *Water Environment Research, 71:1, 75-83*, 1999.

Emerick, R.W., Loge, F.J., Tchobanoglous, G., and Darby, J. Impact of Upstream Wastewater Treatment Process Type on Downstream UV Disinfection Performance. *Water Environment Research Foundation, Project 96-CTS-3*, 1999.

Presentation. Emerick, R.W., Loge, C., Williams, C., and Darby, J. Modeling the Inactivation of Particle Associated Coliform Bacteria Exposed to UV Light. *Water Environment Federation 72nd Annual Conference and Exposition*, 1999.

Presentation. Emerick, R.W., Tchobanoglous, G. Secondary Effluent Compliance with Contemporary Effluent Limitations. *California Water Environment Federation Northern Regional Training Conference*, 1999.

Presentation. Emerick, R.W., Loge, F.L., Darby, J. L., and Tchobanoglous, G., Impact of Particles with Embedded Coliform Bacteria on Ultraviolet Light Disinfection. *Water Environment Federation 71th Annual Conference and Exposition*, 1998.

Presentation. Emerick, R.W., Loge, F.L., Darby, J. L., and Tchobanoglous, G., Proposed UV Disinfection Equipment Testing Protocol to Demonstrate Compliance with the California Reclamation Criteria. *Proceedings of the Water Reuse Annual Conference*, 1998.

Presentation. Tchobanoglous, G., Emerick, R.W., Loge, F., and Darby, J.. *Seeing the Light, Environmental Protection*, 1998.

Presentation. Loge, F. J., Emerick, R. W., Darby, J. L., and Tchobanoglous, G. Factors Influencing the Performance of a UV Disinfection System in Reclaimed Wastewater Effluent. *Water Reuse Annual Conference*, 1998.

Robert Emerick Ph.D., P.E.

Emerick, R. W., Test, R., Tchobanoglous, G., and Darby, J. L. Shallow Intermittent Sand Filtration: Microorganism Removal. *The Small Flows Journal, 3:1, 12-22*, 1997.

Presentation. Tchobanoglous, G., Loge, F., Emerick, R., and Darby J. L. Application of the WERF Model for Designing a UV System for Disinfecting Wastewater. *UV Disinfection Workshop at the Water Environment Federation 70th Annual Conference and Exposition*, 1997.

Presentation. Loge, F. J., Emerick, R. W., Williams, C., Kido, W., Tchobanoglous, G., and Darby J. L. Impact of Particle Associated Coliform on UV Disinfection Performance. *Proceedings of the Water Environment Federation 70th Annual Conference and Exposition*, 1997.

Presentation. Emerick, R. W., Tchobanoglous, G., and Darby, J. L. (1997) Use of Sintered Glass as a Medium in Intermittently Dosed Wastewater Filters: Removal and Fate of Virus. *Proceedings of the Water Environment Federation 70th Annual Conference and Exposition*, 1997.

Loge, F. J., Emerick, R. W., Heath, M., Jacangelo, J., Tchobanoglous, G., and Darby, J. Ultraviolet Disinfection of Secondary Wastewater Effluents: Prediction of Performance and Design. *Water Environment Research, 68:5, 900-916*, 1996.

Presentation. Heath, M., Swaim, P., Jacangelo, J., Loge, F., Emerick, R., and Tchobanoglous, G. Comparative Costs of Chlorination/Dechlorination and UV Radiation. *Proceedings of the Water Environment Federation Annual Conference*, 1995.

Presentation. Emerick, R. W., and Darby, J. L. Ultraviolet Light Disinfection of Secondary Effluents: Predicting Performance based on Water Quality Parameters. *WEF Disinfection Spec. Conf. Proc., Whippany, NJ, pp. 175-186*, 1993.

Midcoast Community Council

An elected Advisory Council to the San Mateo County Board of Supervisors

representing Montara, Moss Beach, El Granada, Princeton, and Miramar

P.O. Box 248, Moss Beach, CA 94038-0248 | midcoastcommunitycouncil.org

Date: February 26, 2020

To: San Mateo County Planning Commission

Cc: Michael Schaller, Project Planner

Steve Monowitz, Community Development Director

Stephanie Rexing, North Central District Supervisor, California Coastal Commission

Erik Martinez, Coastal Program Analyst, California Coastal Commission

From: Midcoast Community Council

Subject: **Cypress Point PUD-140/CD Zoning and LCP Amendment** (PLN2018-0264)

The majority of the Midcoast Community Council, as well as community members who have spoken at recent public meetings, continue to oppose the Cypress Point project. The primary reasons cited include lack of access to amenities such as shopping, roads, and transit, and the increased traffic, both in the local neighborhood, and on Highway 1. Concern has also been expressed about lack of resources to support the development, particularly water, sewer, and fire, as well as strong interest in an environmental impact report.

The scope of this letter is limited to the PUD-140/CD amendment. The Midcoast Community Council requests three changes to the proposed amendment, as detailed below.

Building Height:

The MCC requests that the amendment for PUD-140/CD Zoning for this project be changed to have a maximum height of 28 feet, using the measurement methodology for the R-1/S-17 zoning. The PUD-140/CD zoning change should also mention the R-1/S-17 height measurement methodology.

We suggest that this be done by adding the following to the PUD-140CD amendment:

> *Buildings shall be a maximum of two stories, with a maximum height of 28 feet. The building height shall be measured as the vertical distance from the lowest of natural or finished grade to the topmost point of the building immediately above.*

We request this height limit to maintain harmony with the zoning in the nearby unincorporated residential community, and to reduce the visual mass of the buildings in this project. LCP Policy 3.13 says:

Require that new development providing significant housing opportunities for low and moderate income persons contribute to maintaining a sense of community character by being of compatible scale, size and design.

The height could be reduced by changing roof slope, or by incorporating secondary roof forms, maintaining the steeper pitch over only a portion of the building width. Other methods are also possible.

Building Setbacks:

The proposed PUD-140/CD amendment would reduce the building setback on the West side of the property near Carlos Street from 20 to 11 feet. The Midcoast Community Council requests that the setback remain at 20 feet, to maintain consistency with the adjacent R-1/S-17 zoning district.

Project Density:

Although the proposed zoning amendment would reduce the project density from Medium High Density to Medium Density, the 71 affordable housing units proposed would be concentrated within a 5.39 acre area on the parcel, representing a density of 13.17 units per acre. We therefore request that the total number of housing units for the site be reduced further to 46 units, representing a density of 8.53 units per developed acre, or 4.23 units per total acre of the parcel.

This further reduction in density would preserve the community character of the neighborhood, and help alleviate the impact on traffic and local resources that Midcoast constituents care about deeply.

Conclusion:

In summary, the Midcoast Community Council requests the following changes to the PUD-140/CD Zoning and LCP amendment:

- Restrict maximum building height to 28 feet, measured as the vertical distance from the lowest of natural or finished grade to the topmost point of the building immediately above.
- Maintain building setback of 20 feet along the West side of the property.
- Reduce the total number of units to 46 affordable housing units.

In addition to our concerns specific to the amendment expressed in this letter, we are attaching three previous letters detailing the broader concerns of the Midcoast Community Council and the community we represent surrounding the Cypress Point project. We request that the Project Planner respond to the concerns raised in our previous letters, and specifically to the comprehensive letter dated 8/22/18. Thank you for considering the people most affected by this project as you evaluate the amendment and the project as a whole.

MIDCOAST COMMUNITY COUNCIL

s/Len Erickson Chair

Midcoast Community Council

representing Montara, Moss Beach, El Granada, Princeton, and Miramar
P.O. Box 248, Moss Beach, CA 94038-0248 - www.MidcoastCommunityCouncil.org

Dave Olson . Claire Toutant . Lisa Ketcham . Dan Haggerty . Chris Johnson . Brandon Kwan . Barbra Mathewson
Chair Vice-Chair Secretary Treasurer

Date: August 22, 2018

To: Michael Schaller, Project Planner
cc: Supervisor Don Horsley
Steve Monowitz, Community Development Director
Renée Ananda, CCC Coastal Program Analysist

From: Midcoast Community Council/ Dave Olson, Chair

Subject: **Proposed 71-Unit Cypress Point Affordable Housing Community on Carlos St, Moss Beach** – PLN2018-00264, APN 037-022-070

Wide public opposition to this project continues unabated, as demonstrated at MCC standing-room-only meeting 8/22/18 to consider this referral.

MCC 9/27/17 comments[1] on the pre-application for this project focused on the many long-standing community concerns regarding traffic, transit, and bike/pedestrian safety & mobility that are the subject of the Highway 1 Safety & Mobility Improvement Studies (Mobility Study), the Midcoast Highway 1 Crossings Project and the soon-to-be-released final draft of Connect the Coastside's Comprehensive Transportation Management Plan. Many years of Midcoast growth without much-needed and long-identified bike/ped safety and mobility improvements have caught up with us now with too many people dependent on their cars and stuck in traffic without safe and convenient alternative transportation. The key challenge to this project is the isolated rural site without adequate transit or bike/ped facilities, leaving residents dependent on their automobiles to reach jobs and services on already congested roads.

Midcoast Residential Build-out

MCC has consistently advocated for the need to significantly reduce Midcoast residential build-out. The proposed LCP amendment would reduce land use density for this 11-acre parcel from medium-high to medium. Residential build-out numbers currently allocated to the parcel would be reduced by more than half, from 148 to 71 units.

Affordability and Residency Preference for Local Workers

A stated project objective is to improve the jobs-housing balance in the Midcoast region; however, Midcoast housing far exceeds local jobs. The applicant has stated they would not be legally allowed to restrict housing to those with local jobs, but that a portion of the units will include a preference for households who already live or work in the region. MCC would prefer that the preference apply to all units. Every new residential unit that does not provide affordable housing for our local workforce, adds to our coastal jobs-housing imbalance and traffic congestion.

[1] http://www.midcoastcommunitycouncil.org/storage/mtgs-com2017/2017-09-27-MidPen-pre-app-MCC-com.pdf

The requested amendment to LCP Policy 3.15(d) calls for all units, apart from resident manager's, to serve low- or moderate-income households. Elsewhere in the submittal the project consistently proposes all units restricted to low income (less than 80% AMI). MCC requests that the proposed LCP amendment match the rest of the submittal regarding low income affordability.

San Mateo County AMI is significantly higher than what local Coastside jobs provide. In Half Moon Bay one quarter of households earns less than $50,000 per year. Please clarify how the proposed income restrictions would provide a Coastside jobs-housing fit.

Construction Phasing

Construction is proposed in one phase, over approximately 18 months. If built in two phases, would there be more opportunity for residents with Coastside jobs to receive preference? Approving more than the annual limit of 40 residential units/year cannot be justified if many of those units will go to residents commuting to jobs out of the area.

Public Transit

The project site is located on the Hwy 1 corridor adjacent to SamTrans Route 17 bus stops at 14th & 16th. Route 17 directly reaches Coastside job hubs in Half Moon Bay, Princeton, and Pacifica (10 minutes to Linda Mar and 25 minutes to downtown HMB). Current #17 service is hourly on weekdays, and every two hours on weekends. However, on weekdays at this location there is no southbound AM or northbound PM service when #17 is routed via Sunshine Valley Road (SVR). Route #18 has limited weekday service to Middle and High School in HMB but is also routed via SVR. Outside those hours, ridership utilizing SVR bus stops is very low and the more direct route on Etheldore and Highway 1 better serves other riders.

Mitigation TRAF-5B: The applicant proposes to address the safety of pedestrians crossing to the adjacent southbound bus stop at the lighthouse hostel by eliminating it and re-routing all buses via SVR. That would also eliminate the Hwy 1 bus stop at 14th, and Etheldore stops at California and Vermont. The closest bus stops to the project would then be 1/2 mile to 7th/Main or 3/4 mile to Etheldore/SVR, well outside the 1/4 mile range of convenience.

This proposal ignores the need for safe crossing at lighthouse/16th for the Coastal Trail, and inefficiency of SVR during non-school hours and travel direction. In order to serve the project, it would be better to keep the adjacent bus stop at the lighthouse hostel and explore re-routing all Route 17 trips to Hwy 1 and Etheldore, and leaving Route 18 to serve school riders on SVR.

This project highlights the urgent need for expanded Coastside public transit. Without convenient school and commuter bus service at this location on the highway corridor, or a project-sponsored shuttle to and from local jobs, this project cannot be justified.

Bike/Pedestrian Safety & Mobility

For pedestrian safety, Mitigation TRAF-5A proposes a sidewalk connection between the project entrance on Carlos to the north side of Sierra Street.

The need for safe highway crossing at the lighthouse/16th cannot be brushed aside by saying there is no need for residents to cross the highway because the bus stop has

been removed. East side residents, workers and visitors all need to be able to conveniently walk or bike to the west side for recreation. Two crossing concepts for the lighthouse/16th were included in the 2012 Mobility Study – a raised median refuge island for 2-stage crossing and an overcrossing to the south where the road cut makes that feasible. The proposed project, with a significant number of new bike/ped/transit users, makes a safe crossing urgent.

If this housing project is to proceed, the Parallel Trail segment in this area must be prioritized and implemented, at a minimum between downtown Moss Beach and 14th St. Creating a bike/pedestrian-friendly community and calming highway traffic will help draw the kind of neighborhood commercial businesses needed to serve existing and future residents.

Vehicle Highway Access & Safety

Carlos: Mitigation TRAF-2B proposes to decrease hazards by closing Carlos St north of the project entrance to all vehicles except emergency services. The Mobility Study and Connect the Coastside show this intersection as right turn only entering the highway and continued use of the center left turn lane eastbound into Carlos. Traffic counts show significant existing peak hour traffic from Sierra and Stetson using this route, which should remain available. Feasibility of re-routing Carlos to 16th for safer vehicle highway access needs further analysis. It is insufficient to say it is not feasible due to grading requirements and Level of Service (LOS) impact on 16th St, which has only three residences.

Vallemar/Etheldore and lighthouse/16th: Mitigation TRAF-3B proposes to address LOS by restricting peak hour left turns entering the highway at Etheldore/Vallemar. Left turns would be reassigned to Calif/Wienke. This would be a significant re-route for Vallemar which does not connect directly to Wienke and would add trips to that complicated 5-way intersection. As long as there is lane space on Vallemar so that left-turning vehicles do not block those turning right, turning movements should not be restricted simply to achieve a better LOS rating. A similar right-turn-only restriction proposed for lighthouse/16th during PM peak period seems unnecessary to address LOS at that very lightly used intersection.

California/Wienke: Mitigation TRAF-1A proposes to address LOS by converting intersection control at California/Wienke to roundabout or signal, to be determined by ICE study required by Caltrans. California meets the signal warrant under existing conditions. Additional project trips at this intersection should be re-calculated for keeping Carlos open and should also consider that all new and re-assigned traffic will not necessarily use California for highway access. When a queue builds, motorists often choose among the three other adjacent intersections to spread out the wait time to enter the highway.

MCC and the community are adamantly opposed to any more traffic signals in the Midcoast. A signal at California, stopping highway traffic, and added pollution-spewing stacking lanes further splitting our town, would destroy the community vision for a context appropriate village circulation plan as was outlined in the Safety & Mobility Study. A roundabout at each end of Moss Beach would calm traffic without stopping it, provide safe pedestrian crossings, and convenient U-turns to avoid making left turns onto the highway, improving LOS at all intersections.

Discrepancies in submittal documents

Consistency Evaluation
Table 1, LCP Policies:
Policy 3.16(a)

- *"limits the number of building permits in any 12-month period to 60"*.
  Correction: not building permits, but affordable housing units.

Policy 3.3:

- "*A portion of units in the project will include a preference for households who already live or work in the region.*"
  Other references in the application make no mention of limiting this preference to a portion of the units. Please clarify.
- *"According to census data compiled in 2016, the three adjacent communities of Montara, Moss Beach, and El Granada – all of which are within 6 miles of the project site – contain 1,364 jobs."*
  Does this include jobs in Princeton and unincorporated Miramar?
- *"The project is within 1/4 mile walking distance of the Coastside Market grocery, Moss Beach Park, Farallone View Elementary School, and the Seton Coastside Medical Center."*
  Correction: Coastside Market (a liquor/convenience store) and Moss Beach Park 1/2 mile, Farallone View School 1 mile, Seton Medical Center 1.2 miles.

Table 4 Community Plan 7.2(b):

- *"The project would consist of two-story buildings with roof heights varying between 32 and 36 ft.*"
  This conflicts with PUD-124, #5: "*No structure shall exceed two stories or an average height of 25 ft*."
  Adherence to the lower height limit will help with neighborhood visual compatibility.

Cumulative Impacts Analysis
Table 3 – List of Reasonably Foreseeable Projects

- HMB and Pacifica included comprehensive list with single-family dwellings. SMC unincorporated Midcoast includes only Big Wave, Harbor Village RV, 7th St Hotel, Main St Hotel. The mixed-use building at Hwy 1/Virginia and the many Midcoast single-family dwellings in the permitting process should be included.

Table 4&5 -- Population & Housing Units

- Pacifica and HMB are included, but the MIdcoast is represented by only Montara and Moss Beach. El Granada, Princeton, and Miramar should be included.

Hwy 1 Moss Beach 50 mph speed limit is consistently misreported:
Responses to Workshop Comments
#3 Traffic: "*combination of conditions that include 55 mph speed limits…*"
#8 Pedestrian Traffic: "*operational challenges due to the 55 mph speed limit…"*
Traffic Impact Analysis, p.33: *"a 55-mph facility such as Highway 1"*

Thank you for the opportunity to comment.

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Dave Olson . Claire Toutant . Lisa Ketcham . Dan Haggerty . Chris Johnson . Brandon Kwan . Barbra Mathewson
Chair Vice-Chair Secretary Treasurer

Date: September 26, 2018

To: Michael Schaller, Project Planner
cc: Supervisor Don Horsley
Steve Monowitz, Community Development Director
Renée Ananda, CCC Coastal Program Analyst

From: Midcoast Community Council/ Dave Olson, Chair

Subject: **Proposed 71-Unit Cypress Point Affordable Housing Community on Carlos St, Moss Beach** – PLN2018-00264, APN 037-022-070

Thank you for the additional time to comment on this project referral. The following comments are in addition to those MCC submitted on August 22, 2018 (attached).

Hazardous Materials

- Additional soil sampling should be performed, as recommended in the Phase 2 report, to assess the horizontal extent of lead-impacted surface soils.
- Remnants of 1940's-era buildings should be assessed for asbestos-containing materials, and surface soils should be analyzed for elevated levels of asbestos fibers.

Traffic Impacts and the Comprehensive Transportation Management Plan (CTMP)

It does not serve the community or the project, to attempt to determine key circulation elements for Moss Beach absent an approved long-range Comprehensive Transportation Management Plan (CTMP), aka Connect the Coastside.

- Project traffic impacts and proposed mitigations are analyzed based on existing LOS standards, whereas the March 2016 draft of the long-delayed CTMP proposes a significant revision of LOS standards.
- Project traffic mitigations propose re-routing peak-hour Vallemar highway access to Wienke, whereas the 2016 draft CTMP clearly states Wienke highway access would have to be restricted and an alternate route identified. Vallemar or Wienke are the only access points for a neighborhood of about 75 homes.
- The 2016 CTMP draft proposal of two Hwy 1 traffic signals at California and Cypress galvanized a strong MIdcoast preference for roundabouts, which has since been partially addressed with a feasibility study for Cypress. At California/Wienke the 2016 draft CTMP (p. 25) balks at doing any significant study for a roundabout due to the complication of the 5-way intersection, but then acknowledges that a signalized intersection would require re-routing Wienke Way! The community has heard no more on the matter until the Community Development Director's 8/16/18 email which does not bode well: "From our analysis to date, the project will necessitate the installation of a signal and improved crossing at California Ave."

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Date: May 22, 2019

To: Michael Schaller, Project Planner

Cc: Supervisor Don Horsley

Steve Monowitz, Community Development Director

From: Midcoast Community Council/ Claire Toutant, Chair

Subject: Cypress Point LCP Amendment and PUD zoning change – PLN2018-00264, APN 037-022-070

The following comments are made with respect to the updated application documents, submitted on April 15, 2019. They are a followup to comments submitted on August 22, 2018 and September 26, 2018.

In the updated Cover Letter, in response to earlier MCC comments, it states:

> The proposed live-work preference for the project will ultimately be determined by San Mateo County.

In earlier meetings and documents, the preference for renters who work in the area was said to be part of the MidPen Housing application process. Please clarify how the County will determine this, and under what process.

In the Policy Consistency Evaluation document, it states:

> The project would consist of two-story buildings with roof heights varying between 32 and 36 feet. Considering the elevation of the project site and existing on site trees to be retained, the project would not appear out of scale with the community.

Related statements are made in the Aesthetic Visual Resources document in sections 2 and 6, with both sections stating “Less than Significant Impact”.

The MCC disagrees, and regards this as a Significant Impact.

As the MCC has stated many times in the past, we believe that building heights above 28 feet are a problem for the Midcoast, impacting views, and increasing perception of high mass in developments. This is particularly true with 18 buildings in close proximity.
We request that the maximum height be limited to 28 feet to be consistent with existing Midcoast standards. This could easily be done by having a lower pitched roof than is shown in the preliminary design drawings. There is no need for a 4 in 12 slope roof in this area, and many homes have

HOUSING
LEADERSHIP
COUNCIL

May 29, 2020

Chair Federick Hansson
Vice Chair Mario Santacruz
Commissioner Manuel Ramirez Jr.
Commissioner Kumkum Gupta
Commissioner Lisa Ketcham

San Mateo County Planning Commission
455 County Center, 2nd Floor
Redwood City, CA 94063

Re: Support - Midpen's 71 affordable homes in Moss Beach

Dear San Mateo County Planning Commission,

On behalf of the **Housing Leadership Council of San Mateo County (HLC)**, I am writing to express our support for Midpen's 71 affordables homes in Moss Beach. The Housing Leadership Council of San Mateo County works with communities and their leaders to create and preserve quality affordable homes. These proposed affordable homes have our full support and are critical to the midcoast community of San Mateo County.

We need to provide housing at all income levels so that we can preserve our community and protect our most vulnerable residents. However there is currently no deed-restricted affordable housing in the mid-coast of San Mateo County. Midpen's Cypress Point can provide those desperately needed affordable homes with dignity and privacy. Moss Beach can continue to benefit from diversity and inclusion with these proposed homes.

Cypress Point's 71 affordable homes have been in the planning process for quite some time. Many residents facing rent burdens and those living in their cars do not have any time to spare. Vulnerable coastside individuals and families desperately needed these homes yesterday. Our public health crisis has highlighted how housing is healthcare. **We urge the San Mateo County Planning Commission to approve the amendment in the LCP, as soon as possible, to make these affordable homes feasible.**

Sincerely,

Alexander Melendrez
Organizer, Housing Leadership Council

Housing Leadership Council of San Mateo County
2905 S. El Camino Real, San Mateo, CA 94403 • (650) 242-1764 • hlcsmc.org

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June 8, 2020

Via Email

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

RE: MidPen Housing proposed Cypress Point project
PLN2018-00264

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

This office represents Resist Density regarding the proposed Cypress Point project in Moss Beach. This office submitted comments to the Planning Commission regarding the proposed project on January 22, 2020. Below are additional comments upon our review of the June 3, 2020 San Mateo County Staff Report ("Staff Report") addressing the following:

1. The Staff Report does not respond to substantial expert comments regarding the project, its impacts and mitigations;
2. The Staff Report "piecemeals" the project to avoid environmental review at the earliest possible stage in the County's review;
3. The Staff Report improperly defers until after project approval the formulation of mitigation measures;
4. Setbacks, lot coverage, and floor area are based on plans not made available to the public;
5. The Staff Report uses an improper environmental baseline in regards to traffic safety and circulation impacts;
6. The project description continues to change and there has been no analysis of the potential environmental impacts of these changes.

Thank you for your careful consideration of these comments..

Sincerely,

Brian Gaffney

Brian Gaffney

1. The Staff Report does not acknowledge or respond to the substantial comments submitted to the Planning Commission and the Planning Department on April 9, 2020 by Matt Hagemann / SWAPE regarding project hazards and hazardous materials impacts and regarding hydrology and water quality impacts. Nor does the Staff Report acknowledge or respond to the substantial comments submitted on May 7, 2020 by Pang Engineers, Inc. regarding traffic comments impacts and mitigations. Additional comments were submitted on June 8, 2020 by BioMaAs regarding biological impacts and by Robert W. Emerick regarding sewage impacts.

In addition, the Staff Report does not attempt to refute Resist Density's comments that the proposed project is inconsistent with the Coastal Act and the San Mateo County LCP.

2. The Staff Report reveals that San Mateo County will avoid analysis of the reasonable foreseeable impacts of the proposed project and intends to "piecemeal" the project to avoid environmental review at the earliest possible stage in the County's review.

Yet, the stated purpose of the LCP Amendment is "in preparation for the future submittal of a coastal development permit application." P.2. "[A]pprovals that require CCC approval will be processed first, and the County-specific approvals including the General Plan amendment and site specific approvals will be processed thereafter. The accompanying change to the General Plan Land Use Designation will be resubmitted for Planning Commission consideration, along with an environmental document that addresses CEQA requirements, if the proposed LCP Amendments are certified by the CCC." P. 3. This ignores that the Cypress Point Project Executive Summary (April 2019) already described the requested approvals as including amending the San Mateo County's General Plan. Likewise, the January 22, 2020 Staff Report described the issue before the Planning Commission as including "Consideration of a General Plan Land Use Map Amendment." And, the approval before the Planning Commission is a proposed discretionary action to add PUD-140.

In so doing, the Staff Report fails to address Commissioner Ketcham's concern that specific findings on the precise plan would normally be informed by full CEQA review. P. 7. Nor does Staff contend that there is adequate analysis of impacts, only that "Staff believes there is sufficient detail within the submitted plans to do this analysis" later after approval of the LCP Amendment and PUD designation for the site. P. 7.

Nor does the Staff Report respond to Commissioner Ketcham request for examples of other use of this "reverse 2-step approval process." P. 8. Tellingly, Staff asserts the Applicant's cost (ie invest) is more important to Staff than either plan specificity or analysis of impacts prior to project approval. Staff does not provide any reference to the Coastal Act, the LCP, or other law to support its assertion that the "reverse 2-step process" is appropriate. P. 8.

Likewise, the Staff Report does not address Commissioner Ketcham's comment about the need for analysis of the impacts of 692 haul truck trips. Instead, Staff impermissibly defers analysis to the "development review process." p. 12. Because these trips are a reasonable foreseeable result of the LCP and amendment and PUD-140 creation, environmental review must be conducted before project approval.

The Staff also does not agree to require additional soil sampling, as recommended in the Phase 2 report and requested by Commissioner Ketcham, to assess the horizontal extent of lead-impacted surface soils." P. 13. Instead Staff improperly defers analysis of both likely hazardous and asbestos impacts and mitigations until the "development review process (Phase 2 of this project)."[1]

3. The Staff Report improperly defers until after project approval the formulation of mitigation measures with specific performance criteria in regards to traffic circulation mitigation measures (pp. 4 & 5), does not explain undefined "contributions" to the installation of an intersection control within the Highway One Moss Beach corridor[2] (p. 5), fails to analyze the feasibility of roundabouts as potential traffic mitigations (p. 5), assumes without analysis that hazards mitigation will "eliminate any health risks" (p. 9), and defers mitigations for construction fill and traffic. P. 12.

In regards to the "Preliminary Circulation Improvement Plan," (pp. 37 – 39) there is no analysis of the potential adverse impacts of each component of this proposed plan, there is no analysis of whether and to what extent pedestrian and bicycle access plans will reduce potentially significant traffic impacts, there is no definition of what constitutes "Fair share contribution" for accessible bus stops or "Fair share contribution" to intersection control at Highway 1, there is no explanation of what "if feasible" means in the context of "Fair share contribution," there is no performance standards for the deferred maintenance of "suite of transportation demand management strategies," and the Plan says not that MidPen will be required to implement or pay for subsidies - only that MidPen will "consider" them. Thus, the traffic mitigations are vague and unenforceable.

4. Regarding Setbacks, the Staff Report claims that "the applicant has revised the site plan so that no buildings will be closer than 20-feet from the Carlos Street right-of-way." The Ordinance, however, does not support this assertion. The proposed PUD-140 (Ordinance Section F) instead states only that "The minimum setbacks of the proposed buildings shall conform to those shown on the plans reviewed by the Planning Commission on June 10, 2020, or as modified by Coastal Development Permit conditions of approval." There is no reference to a 20-foot setback. Moreover, those plans have not been made available to the public, thus thwarting public review.

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[1] There is a reasonable argument that, by contributing $4.5 Million in funding to Cypress Point, San Mateo County has already approved the proposed project prior to conducting proper environmental review.

[2] Does one dollar constitute an adequate contribution, and why ?

Further, those setbacks may be changed in applicant-driven CDP conditions of approval.

Nor is the public able to adequately comment on either the lot coverage or the permissible floor areas - as these too are based on plans not made available to the public.

5. The Staff Report continues to use an improper baseline in regards to traffic safety and circulation impacts by comparing the proposed project to PUD-124. P. 4.

6. The project continues to change. Thus the project description is not stable.

For the first time, the project will include "removal of dead trees and other highly flammable vegetation." (P. 5.) In contrast, MidPen's Biological Resource Assessment (May 2018) stated that "The dense cypress habitat along the northern property boundary is not proposed for removal/disturbance." Despite this change in the project, there is no analysis of the biological impacts of this tree/vegetation removal.

Similarly, the project will now include more than 142 parking spaces. A minimum of 142 parking spaces is envisioned with the possibility of more if the "applicant wished to create more parking spaces." Not only is this a change in the project, but there has been no analysis of the impacts on traffic.

June 8, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org

RE: MidPen Housing Cypress Point Housing Project, Moss Beach CA
Wastewater Impact Analysis

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

I write regarding the Wastewater Impact Analysis for the proposed MidPen Cypress Point project.

I am a registered Civil Engineer (State of California License No. 58914) experienced in wastewater treatment and disposal. I received my Ph.D. in Civil and Environmental Engineering from the University of California at Davis in 1999 where I majored in wastewater treatment with doctoral minors in ecology and stochastic modeling. I have taught wastewater treatment process design courses for the State Water Resources Control Board and owned a 150-person engineering firm specializing in municipal infrastructure permitting, planning, design, and operation (ECO:LOGIC Engineering, Roseville, CA) prior to its sale to Stantec in 2011. My CV is attached.

To prepare these comments I reviewed the following documents:

- Cypress Point Project MidPen Housing, Public Services and Utilities (Stevens Consulting, July 2018)
- Cypress Point Project Cumulative Impacts Analysis (2nd County Review Draft, April 2019)
- Cypress Point Project Preliminary Environmental Evaluation Report (2nd County Review Draft, April 2019)
- Carollo Engineers (1999) Sewer Authority Mid-Coastside Wet Weather Flow Management Program Facility Plan Report DRAFT
- Sewer Authority Mid-Coastside Infrastructure Plan: FY17/18 –FY21/22
- Sewer Authority Mid Coastside (April, 2018) DRAFT 20-Year Capitol Improvement Plan
- Consent Judgment, *Ecological Rights Foundation v. Sewer Authority Mid-Coastside*, Northern District of California Case No. 3:18-CV-04413
- San Mateo County Local Coastal Plan, Table 2.3, 2.4 & 2.7, Estimate Of Midcoast Sewage Generation

Based on my review of the above documents and my background and experience, I offer my professional opinion on the following three issues: (1) the current condition of the wastewater conveyance system to transport sewage generated by MidPen's project to the Sewer Authority Mid-Coastside (SAM) wastewater treatment facility and the history of sewage spills, (2) the potential adverse impacts from construction of the new sewage collection system

for the proposed MidPen development, and (3) the completeness of MidPen's assessment of project-specific and cumulative wastewater impacts.

Existing Conveyance System & History of Sewage Spills

As background, I understand that the SAM operates an Intertie Pipeline System (IPS) for conveying wastewater from its member agencies to the SAM wastewater treatment plant. The IPS consists of pump stations, force mains (i.e., pipelines operating under pressure), and gravity flow pipelines. The totality of these systems must operate in a manner that does not allow sewage to overflow into homes, onto streets, or into waters of the United States. Any sewage that overflows the sewerage collection and conveyance system is unlawful and is called a sanitary sewer overflow (SSO).

The proposed MidPen development is located within the Montara Water & Sanitary District (MWSD), which is located at the furthest end of the IPS from the SAM wastewater treatment plant. All of the Montara sewage is pumped through the IPS by SAM's northern pump station, the Montara Pump Station, to the sewage treatment plant located in Half Moon Bay (MWSD 2018). Wastewater generated by the proposed MidPen project must necessarily be conveyed by the IPS through segments also serving Montara, Princeton by the Sea, El Granada, and the City of Half Moon Bay. SAM's Intertie Pipeline System has had at least 65 separate discharges of inadequately treated or raw sewage since 2013 alone. Over 557,103 gallons of sewage have been illegally released, the vast majority of it released into the Pacific Ocean and Half Moon Bay. In addition, SAM's operation of the wastewater sewage collection systems has resulted in tens of thousands of gallons of raw or inadequately treated sewage being released onto streets in residential neighborhoods. Sewage contains human waste, viruses, protozoa, mold spores, bacteria, and chemical contaminants. Many of the pollutants found in raw and/or inadequately treated sewage are acutely toxic.

The inadequacy of the wastewater sewage collection system and the serious ecological problems resulting therefrom have been known to SAM for decades. As far back as 1999 SAM's consultants recognized that the IPS had not been maintained in a manner to prevent regular occurrences of SSOs.[1] During wet weather, the IPS receives its highest flows owing to Inflow and Infiltration (I/I) (i.e., surface runoff and water from saturated soil that enters the IPS through system defects such as cracked pipes, separated pipe joints, and illegal cross connections to roof and yard drains).

About 18 years after the need for improvements was first identified by Carollo Engineers, SAM prepared an Infrastructure Plan to work toward eliminating SSOs.[2] That plan has not been followed in its entirety. I understand that litigation regarding the SAM system ultimately resulted in a Consent Decree being issued in 2019.[3] Pertinent elements of the

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[1] Carollo Engineers (1999) Sewer Authority Mid-Coastside Wet Weather Flow Management Program Facility Plan Report DRAFT

[2] Sewer Authority Mid-Coastside Infrastructure Plan: FY17/18 –FY21/22

[3] *Ecological Rights Foundation v. Sewer Authority Mid-Coastside*, Case No. 3:18-CV-04413

Consent Decree include completing the replacement of Granada Force Main Segment 4 by June 30, 2020, implementing the feasible recommendations of a Princeton Force Main condition assessment and pump station feasibility study by June 30, 2024, and completing replacement of the Montara Force Main by June 30, 2024 to prevent SSOs. Therefore, the system used to accommodate the proposed MidPen Cypress Point wastewater will not be able to guarantee compliance with Regional Water Quality Control Board regulatory requirements associated with SSOs until June 30, 2024 at the earliest.

Additionally, a draft Capitol Improvement Plan was issued as recently as April 2018 describing maintenance and upgrades needed through 2038.[4] The Capitol Improvement Plan describes Category 1 improvements (i.e., items requiring attention to address full regulatory compliance) and Category 2 improvements (i.e., maintenance items for existing infrastructure to assure compliant operation). Not all of these designated Category 1 and Category 2 improvements have been completed per the plan.

Given the above, an adequate analysis of MidPen's wastewater impacts must include evaluation of potential project impacts in light of this history of sewage spills, the SAM Infrastructure Plan, the Force Main segment replacements and Pump Station noted above, as well as the status of each program element described within the Capitol Improvement Plan.

That analysis has not been completed or released to the public to date, and thus there is an insufficient basis to assess whether there is adequate capacity to serve existing commitments with the addition of the proposed MidPen development, or cumulative development.

New Conveyance System & Potential for Adverse Impacts

The Cypress Point Project Public Services and Utilities Analysis (Stevens Consulting, July 2018) conclusion - that there will be a less than significant sewer services impact[5] - suffers from a number of inadequacies and omissions. First, "no utility plans have been completed for the proposed project." Therefore, what actually is proposed is not adequately described. Steven's Consulting does reveal that there is no existing sanitary sewer infrastructure on the project site, and new sewer pipelines will be needed to connect the project site with the existing MWSD sewer lines in adjacent roadways. Further, while MidPen vaguely acknowledges that "MWSD transmission facilities" may need to be upgraded in the vicinity of the project site," specific sanitary sewer infrastructure plans should be provided for review prior to making a determination that the project has a less than significant wastewater impact.

Second, it is reasonably likely that a pump station will be needed for the project and if improperly designed could result in spills of sewage to waters of the United States. At its closest point, the project site is located about 750 feet from the coastline of the Pacific Ocean. Elevations of the project site range from 77 feet at the northwest corner to 189 feet along the

[4] Sewer Authority Mid Coastside (April, 2018) DRAFT 20-Year Capitol Improvement Plan
[5] Cypress Point Project MidPen Housing (July, 2018) Public Services and Utilities

easterly boundary. A perennial stream (Montara Creek) is located approximately 50 to 250 feet to the northwest of the project site and runs parallel to the northern border prior to reaching the Pacific Ocean. There is a 100 foot elevation change moving away from the Pacific Ocean and a stream at the northern boundary. Given this geography and in the absence of utility plans, it is reasonably likely that a new pump station will be required to adequately remove wastewater from the MidPen project site to a neighboring sewerage conveyance system. Pump stations have the potential to overflow into waters of the United States if not adequately designed and maintained. Thus, there is a potentially significant adverse wastewater impact that should be evaluated further before project approval.

Assessment of Treatment Facility Capacity and Pollutant Loads

Stevens Consulting Wastewater Analysis (July 2018) claims that the SAM wastewater treatment system and IPS has adequate capacity for growth anticipated in the region - based entirely on "[c]onsidering dry weather flows." It appears that MidPen has not evaluated capacity with wet weather flows. Average Dry Weather Flow (ADWF) is a regularly used term with regards to regulating wastewater treatment facilities, but it has essentially no basis in assessing adequate design and operation of wastewater treatment facilities.[6] Important wastewater treatment facility design parameters must account for both wet weather flows and peak pollutant loads. It appears that MidPen has not evaluated either peak wet weather flows or pollutant loads.

The most critical flow parameter in assessing adequate capacity is instantaneous peak flow, because that parameter determines whether there will be spills or overflows within the conveyance or treatment facilities, as well as adequate disinfection. As described above, the sewage collection system is currently unable to fully handle peak I/I flows without occasional SSOs.

Loads constitute the pollutants present in wastewater and are the basis of regulating the discharge. Although there has been discussion regarding a decrease in flows owing to water conservation, MidPen has not evaluated potentially significant impacts related to pollutant loads.

It is misleading to suggest in the planning documents that because water conservation has reduced flows to the wastewater treatment facility that there necessarily remains adequate treatment capacity. Water is simply a carrier for the pollutant loads. It is instructive to note that if the amount of water discharged by residences is halved owing to water conservation, it does not free up capacity that can be used by others. Rather, the concentration of pollutants in the water will instead double (i.e., the mass of pollutants remains constant when diluted in half the amount of water). In some instances treatment processes must be modified to adapt to

[6] Current treatment plant loading should instead be compared to wastewater treatment plant design criteria in lieu of the average dry weather flow presentations currently used to assess capacity.

the concurrent higher pollutant concentrations combined with lower flows. In no case is treatment capacity ever increased by reducing water volume alone.

Pollutant loads should be considered when determining whether there is adequate treatment capacity to accommodate current obligations. Two issues are entirely missing from the MidPen's analysis of wastewater impacts: (1) impacts associated with constructing accessory dwelling units (ADUs) throughout the District and (2) sludge processing and disposal needs associated with the treatment facility.

Accessory Dwelling Units

Stevens Consulting reports that even without construction of the proposed MidPen project, there are already 22,000 coastal residents discharging to the wastewater treatment plant. The San Mateo Local Coastal Plan describes the need to account for 466 second units and 45 caretaker's quarters at the residential buildout served by the sewers.[7] In addition, the California Legislature recently approved an increase in pollutant loads to the wastewater treatment plant from existing developed sites (e.g., Assembly Bills 68, 881 and Senate Bill 13). The legislation allows for increasing the number of habitable dwellings discharging into existing wastewater treatment plants.

MidPen's wastewater analysis fails to evaluate the impact on wastewater treatment facility capacity of the proposed MidPen project in combination with the second units contemplated in the LCP and the impact of adding these additional ADUs.

Also, MidPen does not consider whether the expanded sewage line and potential pump station for the project will increase the development intensity or off-site development by facilitating such second units or ADUs in the project vicinity.

Analysis of Cumulative Wastewater Impacts

The Cypress Point Cumulative Impacts Analysis (April, 2019) concludes that the Cypress Point project would make a less than cumulatively considerable contribution - based on its assumptions that "the proposed project would not require or result in the construction of new wastewater treatment facilities, or the expansion of existing treatment facilities" and that "SAM has sufficient capacity." However, as discussed above these cumulative impact conclusions are suspect given that MWSD transmission facilities may need to be upgraded in the vicinity of the project site, specific sanitary sewer infrastructure plans has not been provided, an improperly designed pump station could result in spills of sewage to waters of the United States, and to date MidPen has not evaluated either peak wet weather flows or pollutant loads from the proposed project.

The Cypress Point Cumulative Impacts Analysis (April, 2019) at Table 3 describes reasonably forseeable residential projects. The report predicts 19 accessory dwelling units

[7] San Mateo County Local Coastal Plan, Table 2.3 Estimate Of Midcoast Sewage Generation

within El Granada (10 units), Half Moon Bay (1 unit), Montara (5 units), and Moss Beach (3 units) with no units forecast for Miramar, Pacifica, and Princeton. The projection of only 19 accessory dwelling units in a system accommodating at least 22,000 coastal residents appears low and is unsubstantiated. Insofar as (1) housing is already generally scarce throughout California and the scarcity was the basis for passing the legislation, (2) the legislation results in reduced impact fees associated with constructing on already developed lots, and (3) the cost of constructing ADUs is expected to be far less than constructing residences on new lots owing to the presence of existing infrastructure, it does not appear reasonable to suggest that only 19 ADUs will be constructed within District limits. An adequate cumulative impact analysis would consider the ultimate potential for ADUs following the recently enacted legislation within existing lots and develop pollutant loading criteria accordingly when assessing how much treatment capacity remains at the wastewater treatment plant.

Sludge Production.

As stated above, MidPen's Public Services and Utilities (Stevens Consulting, July 2018) does not address pollutant loads. As stated above, pollutant loads ultimately become sludge that requires its own treatment and disposal. It is appropriate to include analysis pertaining to sludge treatment capacity and long-term sludge disposal capacity when assessing the ability of the wastewater treatment plant to treat to meet existing commitments, including those the proposed MidPen project as well as associated with likely ADUs.

Thank you for considering these project comments.

Sincerely,

Robert W. Emerick Ph.D., P.E.

Robert W. Emerick Ph.D., P.E.

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(916)826-6990

Dr. Emerick was a principal owner of ECO:LOGIC Engineering, a 150+ person engineering firm specializing in design, permitting, operation, and management of water/wastewater infrastructure. The firm was sold to Stantec, Inc. in 2011, with Dr. Emerick leaving the firm in 2015 to aid in the redevelopment of downtown Sacramento and to work as a private engineering consultant. Dr. Emerick has 25 years of civil engineering/water quality experience, including teaching at the undergraduate and graduate level, research, engineering management, regulatory permitting, environmental studies, regulatory enforcement, and water/wastewater treatment process development, design and operation. He is an acknowledged leading expert in obtaining waste discharge permits for private and public agencies and developing treatment processes for the removal of trace contaminants from wastewater discharges.

EDUCATION

B.S., Civil Engineering, University of California, Davis, California, 1992

M.S., Civil and Environmental Engineering, University of California, Davis, California, 1993

Ph.D., Civil and Environmental Engineering, University of California, Davis, California, 1998

REGISTRATIONS

Professional Engineer #58914, State of California

PROJECT EXPERIENCE

Teaching

State Water Resources Control Board

Instructor (via role as Adjunct Professor at UC Davis). Responsible for wastewater process design, operation, and troubleshooting course development and presentation. This project involves a series of classes presented to all State of California regulators, fund reviewers, policy makers, and facility inspectors. Courses are intermittently on-going and include (1) Disposal of Non-Designated Waste to Land, (2) Wastewater Facility Inspection and Monitoring, (3) Introduction to Wastewater and Its Treatment, and (4) Wastewater Engineering 2 "The Advanced Class." Courses have been video recorded for archival at the State Water Resources Control Board. Courses have been translated into Spanish and have been presented to operators in Mexico.

University of California at Davis, California State University Sacramento

Teaching Assistant and Adjunct Professor. Courses were aimed at (1) retraining nuclear engineers after the closure of Mare Island Naval Shipyard for civilian practice, and (2) undergraduate and graduate civil engineering education. Taught wastewater treatment design for UC Davis to aid in their accreditation process. Served on the review panel for UC Davis civil engineering accreditation.

Redevelopment

Sacramento, CA

Owner and Engineer. Restored and recently completed redevelopment/construction of 35,000 square feet of historic commercial property for contemporary uses. Started businesses as part of the redevelopment effort, including Crest Theatre (950 seat venue for concerts, movies, community events), Empress Tavern (7500 square foot fine dining restaurant), and Mother (1500 square foot casual vegetarian restaurant).

Permitting, Compliance, Auditing

Facility Improvements, Ione, California

Project Manager for developing facility improvements needed for compliance with Reclamation permit limitations associated with Castle Oaks Golf Course (Ione, CA).

Robert Emerick Ph.D., P.E.

Lincoln, Rio Vista, Merced, Dixon, Donner Summit, Reno

Project Manager/Engineer responsible for negotiating permits for (1) land discharge of secondary effluent for Lincoln, CA (2) land discharge of secondary effluent for Dixon, CA, (3)master reclamation permit for Lincoln, CA., (4) surface water discharge of secondary and tertiary effluent for Lincoln, CA, (5) surface water discharge of secondary and tertiary effluent for Rio Vista, CA., (6) surface water discharge of secondary and tertiary effluent for City of Merced, CA., (7) surface water discharge for Donner Summit Public Utility District, (8) aquifer storage and recovery project for Reno, NV.

North Lake Tahoe Public Utilities District Potable

Project Manager/Engineer responsible for negotiating a the nation's first permit and designing improvements to produce potable water on an unfiltered drinking water supply using UV disinfection technology for North Lake Tahoe Public Utilities District.

Research

City of Reno, NV

Developing a membrane/ozone/biologically active activated carbon treatment process for the removal of trace emerging contaminants of concern for a groundwater aquifer storage and recovery project.

City of Dixon, CA

Responsible for analyzing groundwater and effluent quality for determining the presence of and/or extent of groundwater degradation. Project involves the application of tracers for determining origin and fate of wastewater contaminants.

Lincoln, CA and Rio Vista, CA

Investigating the partitioning of priority pollutant contaminants and wastewater treatment process impacts on the removal/reduction of priority pollutants for Lincoln, CA and Rio Vista, CA. Developed methodology for determining the correct hardness when applying CTR metals criteria.

Caltrans

Investigating/developing new treatment processes for removing iron, nitrogen, phosphorous, and turbidity from stormwater for Caltrans to aid in compliance with discharge restrictions into Lake Tahoe. Project involved development, construction, and operation of pilot treatment facilities treating highway runoff in the Lake Tahoe basin.

Sacramento Regional Wastewater Treatment Plant Coliform Bacteria Study

Investigated the physical parameters influencing the development of coliform bacteria associated with wastewater particles. Research involved developing an oligonucleotide probe specific to the family Enteriobacterioceae for visual identification of coliform bacteria within wastewater particles.

Sacramento Regional Wastewater Treatment Plant UV Disinfection Performance

Investigated the impact of particle size distribution impacts on UV disinfection performance for Sacramento Regional Wastewater Treatment Plant. Research involved developing a new computer aided photographic method of determining the particle size distribution of wastewater.

Sacramento Regional Wastewater Treatment Plant Tertiary Process Development

Aided in the development of a pilot facility to investigate removal of trace contaminants from the discharge into the Sacramento River. Provided professional peer-review of study results.

UV Equipment Validation Testing

Designed and operated a pilot testing facility for approval of UV disinfection system by the State of California Department of Health for use on recycled effluents. UV disinfection systems tested include (1) the Trojan Technologies Swift 4L12 UV disinfection system, (2) the Trojan Technologies UV 3000+ UV disinfection system (3) Trojan Technologies UV 2000 disinfection system, (4) Fisher Porter UV disinfection systems, (5) WEDECO TAK55 spot check validation for City of Lincoln, CA, (6) Trojan Technologies UV 3000+ spot check validation for City of Yucaipa, CA., (7) ENAQUA low pressure high output UV disinfection system.

Title 22 Filtration Validation Testing

Designed and operated a pilot testing facility testing for approval of filtration systems by the State of California Department of Health for use on recycled effluents. Filtration systems tested include (1) Nordic Water Products Disc Filter, (2) Parkson Disc Filter, and (3) AMIAD Screen Filter.

* denotes projects completed with other firms

Robert Emerick Ph.D., P.E.

Biological Virus Removal Within Intermittently Dosed Fixed Growth Filters
Academic project involved development of a biological virus degradation process for the production of unrestricted recycled water for on-site reuse (UC Davis).

Water Environment Research Foundation (Project 96-CTS-3) Impact of Upstream Wastewater Treatment Process Type on Downstream UV Disinfection Performance
Project involved determining wastewater treatment process impacts and developing a fundamental stochastic model describing the ability of UV disinfection to inactivate pathogens.

Water Environment Research Foundation (Project No. 91-WWD-1) Comparison of UV Irradiation to Chlorination for Achieving Optimal UV Performance
Project involved developing an empirical mathematical model for predicting UV disinfection performance.

Stormwater Management

State of California Department of Transportation (Caltrans) Stormwater BMP Pilot Program (Peer Reviewer)
This study was directed at reviewing, critiquing, and developing solutions associated with the BMP pilot research program.

San Francisco-Oakland Bay Bridge Storm Water Detention Basin Treatment Best Management Practice (BMP) Feasibility Study (Project Manager/ Engineer)
This study, for Caltrans, was directed at determining and comparing the environmental benefits derived from implementing stormwater treatment for the bridge expansion in relation to the costs related to stormwater treatment.

Caltrans Maximum Extent Practicable Analysis for Storm Water Detention Basins Associated with Highway Runoff (Project Manager and Project Engineer)
This study was directed at determining and comparing the environmental benefits associated with implementing stormwater detention basins statewide as part of all new and retrofit roadway expansions/improvements.

Lake Tahoe Basin New Stormwater Treatment Processes (Project Engineer)
The development of new stormwater treatment processes for implementation within the Lake Tahoe Basin. This pilot study investigates treatment trains to remove nutrients, iron, turbidity, and narrative toxicity for compliance with the nation's most stringent effluent limits associated with stormwater runoff.

Sacramento County Stormwater BMP Review Program (Project Manager)
This project was directed toward developing approval criteria for the selection of stormwater Best Management Practices (BMPs) for installation within Sacramento County.

Wastewater Treatment

State of Nevada Department of Environmental Protection
Responsible for summarizing reclamation policy and groundwater recharge policy nationwide and developing a unified reclamation policy for the State of Nevada that integrates the findings of ozonation/biological activated carbon adsorption research conducted concurrently for the City of Reno.

Donner Summit Public Utility District, CA
Responsible for permitting and process development for nutrient removal treatment process upgrades, mixing zones, and associated regulatory permitting.

City of Reno, NV
Responsible for treatment process development for removing emerging contaminants of concern to non-detectable levels as part of a groundwater aquifer storage and recovery project.

City of Davis, CA (Process Design Manager)
In charge of developing treatment and disposal options for compliance with effluent dominated stream regulatory requirements.

* *denotes projects completed with other firms*

Robert Emerick Ph.D., P.E.

City of Lincoln, Midwestern Placer Regional Sewer Project Environmental Impact Report (EIR), Lincoln, California (Process Design Manager)
In charge of process development for a tertiary (Title 22 unrestricted reuse) wastewater treatment and reclamation facility for the City of Lincoln. This treatment facility is the first in Northern California to be designed specifically to comply with California Toxics Rule Regulatory requirements (toxic contaminant limitations) and receiving water limits related to effluent dominated streams. The treatment process consists of a headworks, nitrification/ denitrification, clarification, priority pollutant maturation ponds, dissolved air flotation algae removal, coagulation/flocculation, granular medium filtration, UV disinfection, and effluent reaeration.

City of Ceres Wastewater Treatment Plant Expansion, Ceres, California (Project Engineer)
The design of a tertiary (Title 22 unrestricted reuse) wastewater treatment plant. This facility consisted of headworks, nitrifying oxidation ditches, clarification, coagulation/flocculation, granular medium filtration, and UV disinfection.

Salt Accumulation Analysis, City of Ceres, California (Project Manager/Engineer)
A salt accumulation analysis related to land discharge of effluent for Ceres, CA. This analysis consisted of developing a groundwater hydraulic model for determining long-term salt impacts to groundwater related to a proposed groundwater replenishment project.

Priority Pollutant Characterization (Project Engineer)
Responsible for priority pollutant characterization for (1) Brentwood, CA (2) Mountain House, CA (3) Lincoln, CA (4) Rio Vista, CA, and (5) La Contenta Golf Course.

UV Disinfection Feasibility Study (Project Engineer)
Responsible for determining the feasibility of applying UV disinfection to (1) Manteca, CA (2) Sacramento Regional Wastewater Treatment Plant, CA, (3) Woodland, CA, (4) Rio Vista, CA, and (5) Auburn, CA.

Water Treatment

North Lake Tahoe Public Utility District UV Disinfection System
Process Design Manager/Engineer for a UV disinfection system on an unfiltered water supply for the North Lake Tahoe Public Utility District, CA. This UV disinfection system is the first in California to be permitted for the production of potable water, and the first nationally to be permitted for use on an unfiltered drinking water supply.

Groundwater Desalinization Project, Sparks, Nevada
Project Engineer responsible for analyzing the feasibility of groundwater desalinization.

UV Disinfection System for Third World Environments
Project Manager/Engineer for product review of a new UV disinfection system for application in Third World environments for the inactivation of Cryptosporidium and Giardia (Core Resources; Water Health UV Disinfection System).

Pulsed Light UV Disinfection System
Project Manager/Engineer for product review of a new pulsed light UV disinfection system for application on drinking water treatment (New Star Lazers).

Steiger Hills, CA Master Water Plan
Project Engineer responsible for master-planning a water supply and distribution system for Steiger Hills, CA.

* *denotes projects completed with other firms*

Robert Emerick Ph.D., P.E.

PUBLICATIONS

Contributing author to Potable Reuse Research Compilation: Synthesis of Findings, Water Environment and Research Foundation, 2016.

Contributing author to Wastewater Engineering, Treatment, Disposal, Reuse. *Metcalf and Eddy, Fourth Edition*, 2010.

Presentation. Emerick, R. W., Sundaram, V., Borroum, Y., Shumaker, S. Cost Effectiveness and Environmental Benefits of Combined Ozonation – UV System for Water Reclamation and Surface Water Discharge. *WEFTEC*, 2008.

Presentation. Borroum, Y., Emerick, R.W., Pedri, J. Development of Site-Specific Metal Translators. *WEFTEC*, 2008.

Presentation. Emerick, R. W., Borroum, Y., Pedri, J. Development of Protective Hardness-Based Metal Limitations. *WEFTEC*, 2006.

Presentation. Emerick, R.W., Borroum, Y., Pedri, J. Bioassay Comparison of Similar Pilot- and Full-Scale UV Disinfection Systems. Validation of the Scale-up Relationship Recommended by the NWRI UV Disinfection Guidelines. *WEFTEC*, 2005.

Emerick, R. W., Swift, J., Sakaji, R. Treat, Disinfect, Reuse – Part II.. *Water Environment and Technology, Vol. 15, No. 3*, 2003.

Swift, J., Emerick, R. W., Scheible, K., Soroushian, F., Putnam, L. R., and Sakaji, R. Treat, Disinfect, Reuse. *Water Environment and Technology, Vol. 14, No. 11*, 2002.

Loge, F. J., Emerick, R. W., Ginn, T. R., and Darby, J. L. Association of Coliform Bacteria with Wastewater Particles: Impact of Operational Parameters of the Activated Sludge Process. *Water Research, 36(2002):41-48*, 2001.

Loge, F. J., K. Bourgeous, R. W. Emerick, and J. L. Darby. Variations in the Water Quality Parameters Influencing UV Disinfection Performance: Relative Impact of Filtration. *Journal of Environmental Engineering, 127(9): 832-837*, 2001.

Presentation. Emerick, R.W., Soroshian, F., Tchobanoglous, G. Standardizing UV Equipment Performance Validation, Proceedings of UV 2000. *A Technical Symposium*, 2000.

Blatchley, E. R., Emerick, R. W., Hargy, T., Hoyer, O., Hultquist, R. H., Sakaji, R. H., Scheible, O. K., Schmelling, D. C., Soroushian, F., and Tchobanoglous, G., Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse. *National Water Research Institute, American Water Works Association Research Foundation*, 2000.

Emerick, R.W., Loge, F.J., Ginn, T., and Darby, J. Modeling the Inactivation of Coliform Bacteria Associated with Particles. *Water Environment Research, 72:4, 432-438*, 2000.

Emerick, R. W., Manning, J., Tchobanoglous, G., and Darby, J. Impact of Bacteria and Dosing Frequency on the Removal of Virus Within Intermittently Dosed Biological Filters. *The Small Flows Journal, 1:1, 36-41*, 2000.

Robert Emerick Ph.D., P.E.

Presentation. Loge, F. J., Emerick, R. W., Tchobanoglous, G., and Darby, J. Design and Optimization of Upstream Treatment Processes to Improve the Performance of Ultraviolet Disinfection Facilities at Sacramento Regional Wastewater Treatment Plant. *Publication of the Center For Environmental and Water Resources Engineering, UC Davis No. 99-1*, 1999.

Presentation. Tchobanoglous, G., Emerick, R.W., Loge, F., and Darby, J. Recent Developments in Ultraviolet Disinfection. *United States Environmental Protection Agency 6th National Drinking Water and Wastewater Treatment Technology Transfer Workshop*, 1999.

Presentation. Emerick, R.W., Darby, J., and Tchobanoglous, G. Impact of Bacteria and Dosing Frequency on the Removal of Virus Within Intermittently Dosed Biological Filters. *Water Reuse Foundation's Annual Water Reuse Research Conference*, 1999.

Emerick, R. W., Loge, F. J., Thompson, D. E., and Darby, J. L. Factors Influencing UV Disinfection Performance - Part II: Association of Coliform Bacteria with Wastewater Particles. *Water Environment Research, 71:6, 1178-1187*, 1999.

Loge, F. J., Emerick, R. W., Thompson, D. E., Nelson, D. C., and Darby, J. L. Factors Influencing UV Disinfection Performance - Part I:Light Penetration into Wastewater Particles. *Water Environment Research, 71:3, 377-381*, 1999.

Loge F. J., Emerick, R. W., Thompson, D. E., Nelson, D. C., and Darby, J. L. Development and Application of a Fluorescent 16S rRNA Oligonucleotide Probe Specific to the Family Enterobacteriaceae. *Water Environment Research, 71:1, 75-83*, 1999.

Emerick, R.W., Loge, F.J., Tchobanoglous, G., and Darby, J. Impact of Upstream Wastewater Treatment Process Type on Downstream UV Disinfection Performance. *Water Environment Research Foundation, Project 96-CTS-3*, 1999.

Presentation. Emerick, R.W., Loge, C., Williams, C., and Darby, J. Modeling the Inactivation of Particle Associated Coliform Bacteria Exposed to UV Light. *Water Environment Federation 72nd Annual Conference and Exposition*, 1999.

Presentation. Emerick, R.W., Tchobanoglous, G. Secondary Effluent Compliance with Contemporary Effluent Limitations. *California Water Environment Federation Northern Regional Training Conference*, 1999.

Presentation. Emerick, R.W., Loge, F.L., Darby, J. L., and Tchobanoglous, G., Impact of Particles with Embedded Coliform Bacteria on Ultraviolet Light Disinfection. *Water Environment Federation 71th Annual Conference and Exposition*, 1998.

Presentation. Emerick, R.W., Loge, F.L., Darby, J. L., and Tchobanoglous, G., Proposed UV Disinfection Equipment Testing Protocol to Demonstrate Compliance with the California Reclamation Criteria. *Proceedings of the Water Reuse Annual Conference*, 1998.

Presentation. Tchobanoglous, G., Emerick, R.W., Loge, F., and Darby, J.. *Seeing the Light, Environmental Protection*, 1998.

Presentation. Loge, F. J., Emerick, R. W., Darby, J. L., and Tchobanoglous, G. Factors Influencing the Performance of a UV Disinfection System in Reclaimed Wastewater Effluent. *Water Reuse Annual Conference*, 1998.

Robert Emerick Ph.D., P.E.

Emerick, R. W., Test, R., Tchobanoglous, G., and Darby, J. L. Shallow Intermittent Sand Filtration: Microorganism Removal. *The Small Flows Journal, 3:1, 12-22*, 1997.

Presentation. Tchobanoglous, G., Loge, F., Emerick, R., and Darby J. L. Application of the WERF Model for Designing a UV System for Disinfecting Wastewater. *UV Disinfection Workshop at the Water Environment Federation 70th Annual Conference and Exposition*, 1997.

Presentation. Loge, F. J., Emerick, R. W., Williams, C., Kido, W., Tchobanoglous, G., and Darby J. L. Impact of Particle Associated Coliform on UV Disinfection Performance. *Proceedings of the Water Environment Federation 70th Annual Conference and Exposition*, 1997.

Presentation. Emerick, R. W., Tchobanoglous, G., and Darby, J. L. (1997) Use of Sintered Glass as a Medium in Intermittently Dosed Wastewater Filters: Removal and Fate of Virus. *Proceedings of the Water Environment Federation 70th Annual Conference and Exposition*, 1997.

Loge, F. J., Emerick, R. W., Heath, M., Jacangelo, J., Tchobanoglous, G., and Darby, J. Ultraviolet Disinfection of Secondary Wastewater Effluents: Prediction of Performance and Design. *Water Environment Research, 68:5, 900-916*, 1996.

Presentation. Heath, M., Swaim, P., Jacangelo, J., Loge, F., Emerick, R., and Tchobanoglous, G. Comparative Costs of Chlorination/Dechlorination and UV Radiation. *Proceedings of the Water Environment Federation Annual Conference*, 1995.

Presentation. Emerick, R. W., and Darby, J. L. Ultraviolet Light Disinfection of Secondary Effluents: Predicting Performance based on Water Quality Parameters. *WEF Disinfection Spec. Conf. Proc., Whippany, NJ, pp. 175-186*, 1993.

From:
To: Planning_Commission
Subject: Item 4. PLN2018-00264 - MidPen Moss Beach Housing Project
Date: Monday, June 8, 2020 12:32:21 PM

My name is Rich Francis and I have lived here in Montara for 15 years.

This new project, called the MidPen Moss Beach Housing Project will seriously impact our way of life and it appears that the people in charge, you, are not adequately listening to our concerns.
As is evident in Montara, with minimal lot sizes and inappropriate house to lot to tree coverage requirement (unfortunately we're starting to look like El Granada...), the zoning laws and requirements within the moss Beach community have not been met in order to proceed with a project of this type and magnitude.

-This project is waaaaay too big for the infrastructure / area

-Traffic impacts are very significant and to date have remain unmitigated, unresolved, and inadequately planned for

-Connect the Coastside traffic management plan is being rushed and now when completed needs to be looked at by a unbiased Third Party for proper evaluation since the current administration has failed to meet its responsibilities in a timely fashion

-Peer Reviews of MidPen's Traffic Report and Hazardous materials are still not included in current staff reports and should be as a matter of public record.

-No Commitment to perform an Environmental Impact Report which is required by law not only by the County, but also by the Coastal Commission, as it is for private structures

-There will be a significant and cumulative impact on accessibility from El Granada, Half Moon Bay and Montara

-How many times do we have to yell this, there is one road in and one road out, no matter how manyu stop signs and turn abouts are installed and this project is a threat to coastal evacuation

Finally and in conclusion, this project/building is being seen as a cheap and easy appeasement to the lower income housing community and is being located in an inappropriate and much too isolated location. You should be asking the developer to spend their clients income and resources in finding a more appropriate place for such housing. The place is not in Moss Beach as it is not in Hillsboro or Tiburon, or Los Altos Hills or Atherton, if you understand what's being said here...QUIT TRYING TO DO WHAT'S EASY BUT INSTEAD DO WHAT'S RIGHT!

Rich Francis

From:
To: Planning_Commission
Subject: Item 4. PLN2018-00264
Date: Monday, June 8, 2020 12:07:31 PM

I have been concerned about the MidPen Moss Beach Housing Project since the beginning and have voiced my opinion several times in the past.

There is nothing new for me to say. My objection is based on the following: the current infrastructure can not handle this development; the traffic impact will create dangerous situations; no EIR has been completed yet; the location is isolated.

I won't say anymore. No doubt you have heard many concerns. Mine are the same as I have had since the beginning.

Thank you for including my voice in your decisions.

Sherry Kritzer

Moss Beach

June 7, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

RE: Vegetation Assessment of MidPen Housing Cypress Point Project Site
and California red-legged frog site adjacent to Montara Creek

Dear Commissioners and Mr. Schaller,

I write regarding the proposed Cypress Point project in Moss Beach.

I'm a professional forager, naturalist, and a plant and mushroom identification expert. I live in Montara, so I'm especially familiar with the plant communities of this area. I hike frequently, and identify plants on these walks. In 2015, I devoted myself to brokering and promoting wild foods full-time. I operate Morchella Wild Foods of California.

California's coastal fog belt is the most biodiverse part of our state, a narrow band of habitat that occurs only where summer fog brings moisture to the flora during otherwise dry months. The year-round moisture and mild temperatures result in thick vegetation, rich soil and a deep seed bank. Coastal forests here are comprised of Monterey pine and Monterey cypress, trees native to California and designated vulnerable/endangered by IUCN and the California Native Plant Society due to their small native ranges and susceptibility to disease and climate shifts. These forests are host to many native plant and mushroom communities.

The purpose of this letter is a concern I have with the planned development at Cypress Point. I attended the Planning Commission hearing in Half Moon Bay on January 22, 2020, where I was disappointed to hear the flora on the Cypress Point site described as "invasive grasslands," when it is in fact native forest. After the hearing I read MidPen's May 24, 2018 "Biological Resources Assessment," section Vegetation and found that this Assessment only discussed a fraction of the native vegetation I've observed on the project site and surrounding area. Even some of the most prominent plants were omitted from the list of species recorded during MidPen's survey in March 2017.

Some of the resources and reference guides I used in preparing this correspondence include:
Calflora database (https://www.calflora.org/)
iNaturalist database (https://www.inaturalist.org/)
Tending the Wild by Kat Anderson
California Foraging by Judith Lowry
California Native Plants for the Garden, by Carol Bornstein, David Fross, and Bart O'Brien
Mushrooms of the Redwood Coast by Noah Siegel and Christian Schwarz
Mushrooms Demystified by David Arora

Attached is a map of the project site and surrounding area with points of interest labeled 1-11 where I've observed native flora, and below I identify the plants I've observed in each specific area

1) A native plant community of coyote brush, beach and wood strawberry, yerba buena, yarrow, California mugwort, little western bittercress, oso berry, California bee plant, California everlasting, and coast angelica.
2) Mugwort, yerba buena, California bee plant, poison oak and coyote brush along northern edge of site.
3) Abundant mycorrhizal mushrooms occurring with Monterey pine here: Amanita muscaria, lactarius deliciosus, suillus spp., boletus edulis, russula queletii, and others.
4) Pacific aster, California coffeeberry, and Pacific sanicle are found throughout the site including here.
5) Beach sagewort.
6) Monterey cypress here host many native mushrooms including Agaricus bernardii, Agaricus brunneofibrillosus, Clitocybe nuda, and others.
7) Yarrow is found throughout the site, and in abundance here.
8) Coffeeberry, coyote brush, beach strawberry, Douglas iris, and checkerbloom can be found in the median between Carlos and Cabrillo Highway. In the Calflora database, there is an observation of rose leptosiphon, California Rare Plant (Rank 1B.1) being found at this location. A small and solitary plant, it would be difficult to find except when in bloom during a short period in May and June.
9) Pink honeysuckle and salt-loving agaricus mushrooms.
10) Watercress presence in Montara Creek is evidence of aquatic habitat which likely hosts red-legged frogs.
11) Single leaf onion, red flowering currant, red elderberry, arroyo willow and more can be found nearby in Montara Creek.

Of the many native plants omitted from MidPen's Biological Assessment, the most puzzling to me are the omission of California coffeeberry, yarrow, Pacific aster, Pacific sanicle, and California bee plant - because they are some of the most prominent vegetation throughout the site.

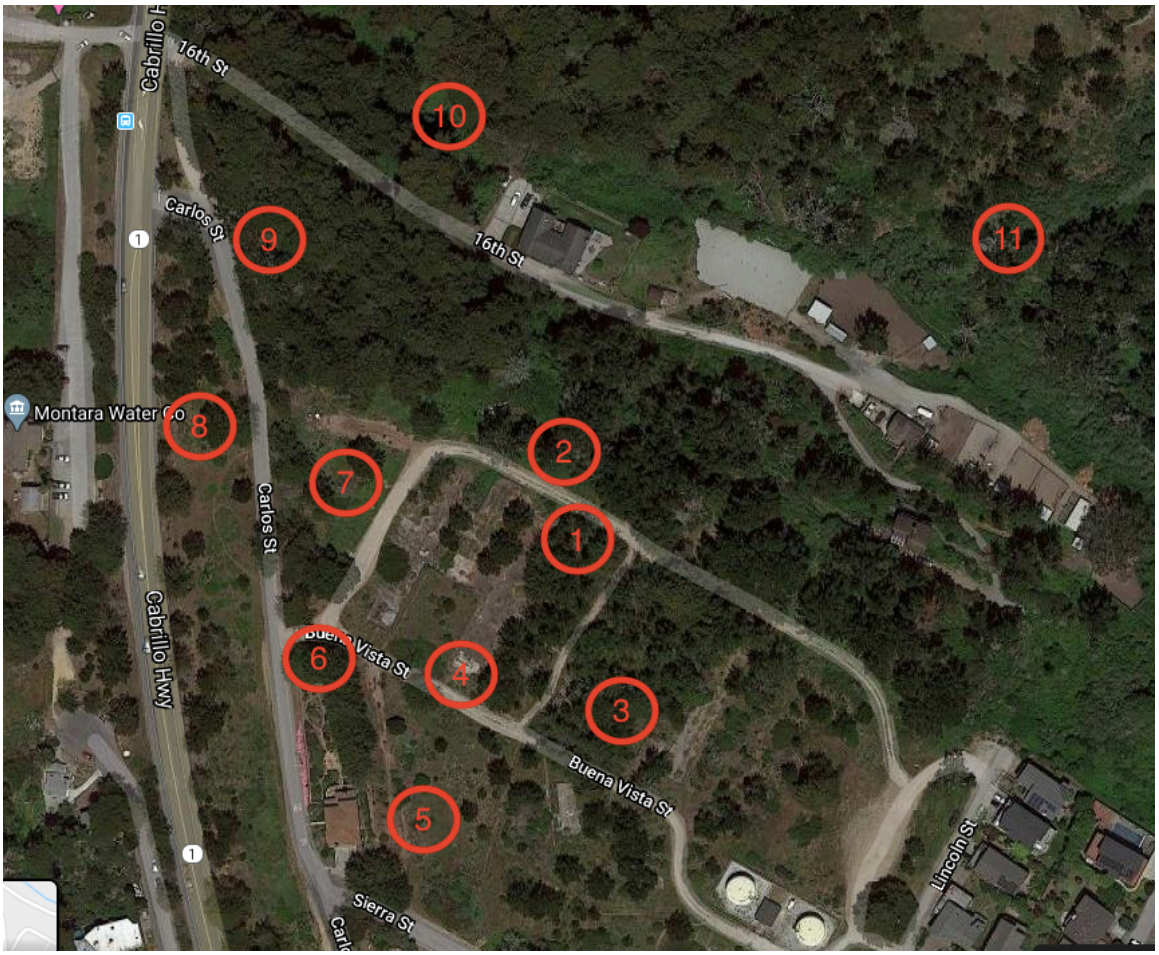
In addition, please consider that on April 12, 2020 I observed what I believe was a California red-legged frog adjacent to Montara Creek. The frog was on 14th Street, at the edge of the road, in a perennially wet spot created by a neighbor's groundwater drainage. I observed the frog about 100 yards north of Montara Creek. I understand that at this time of year this species roams from their aquatic breeding spots to upland areas during rainy periods like we had in early April this year. I have attached an image of the frog I observed. Although I am not an expert in herpetology, I understand that the prominent dorsolateral folds on the frog I observed are a key feature that distinguish California red-legged frogs from more common Pacific tree frogs. California red-legged frogs are our state amphibian, and designated a vulnerable species by IUCN due to habitat loss.

In conclusion, MidPen's Vegetation Assessment is clearly incomplete and understates the native flora that would be impacted by development here.

I urge you to postpone further consideration of this proposed project - until more a reliable biological assessment has been performed.

Sincerely,

Bryan Jessop


16th St
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10
Carlos St
9
16th St
11
Montara Water Co
8
2
7
Carlos St
1
Cabrillo Hwy
6
4
3
Buena Vista St
5
Sierra St
Lincoln St

PANG ENGINEERS, INC.
TRAFFIC AND TRANSPORTATION CONSULTANTS

GAY LAWRENCE PANG, C.E., T.E.

2020010 (2)
May 1, 2020

Law Offices of Brian Gaffney APC
446 Old County Rd, Suite 100-310
Pacifica, CA 94044
ATTN: Brian Gaffney
Attorney at Law

Re: Cypress Point TIA
Moss Beach
San Mateo County, California
PLN2018-00264

Dear Mr. Gaffney:

We have "peer reviewed" for the proposed Cypress Point "Affordable" Apartment Residential Development at the northeast corner of Carlos Street and Sierra Street in Moss Beach and San Mateo County, CA, the following documents:

1. Traffic Impact Analysis (TIA), dated April, 2019 by Kittelson & Associates, Inc. in Oakland, California;
2. State of California, Department of Transportation (CalTrans) letter response, dated April 9, 2018;
3. CalTrans letter response, dated August 29, 2018;
4. San Mateo County Civil Comments-Traffic, dated September 24, 2018;
5. Executive Summary of the "Connect The Coastside" Report, January 15, 2020.

Our comments, questions, concerns, TIA omissions, and/or constructive suggestions are to gain a better understanding of the project impacts for the Transportation and Traffic elements. Several items are enumerated, and include but are not limited to this partial list, e.g. Trip Generation, Trip Distribution and Assignments, count data, Level of Service (LOS) analysis, parking, access and circulation, proposed Mitigation Measures at the critical intersections, Vehicle Miles Traveled (VMT), and other miscellaneous items.

The proposed project is a 71 Dwelling Unit (DU) "affordable" apartment complex on 10.875 acres of vacant land. It is assumed that the development is "apartments", since the TIA utilizes Land Use 220 or "apartments" within the Institute of Transportation Engineers (ITE) Trip Generation Manual.

PO BOX 4255
MOUNTAIN VIEW
CA 94040

(650) 465-2006

1. TRIP GENERATION

The TIA project trip generation estimates referenced the 9th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual, which subsequently has been updated to the 10th Edition around April, 2018. As the TIA was initiated with critical intersection counts collected during April, 2017, it is understandable that the 9th Edition was utilized at that time. However, with the subsequent delay in the release of various draft versions of the TIA in January, 2018, as evidenced by the CalTrans comment letter of April 9, 2018, and the July 2018 Planning Permit Application Referral noted in the CalTrans letter of August 29, 2018, and then the release of the latest version of the TIA dated April, 2019, there is a concern about the accuracy of the TIA trip generation estimates given the lack of review for compatibility and comparison with the latest or 10th Edition.

The TIA omits the daily weekday trip generation estimates for the proposed project.

Here are other potential comparisons for weekday daily, AM and PM peak hours, and Saturday peak hours:
DAILY:
9th Edition Estimate = 473 trips (average method); missing from TIA;
9th Edition Estimate = 554 trips (with "equation");
10th Edition Estimate = 520 trips (average method);
10th Edition Estimate = 496 trips (with "equation");

AM:
9th Edition Estimate = 37 trips (average method); shown in TIA;
9th Edition Estimate = 39 trips (with "equation");
10th Edition Estimate = 33 trips (average method);
10th Edition Estimate = 35 trips (with "equation");

PM;
9th Edition Estimate = 45 trips (average method); shown in TIA;
9th Edition Estimate = 57 trips (with "equation");
10th Edition Estimate = 40 trips (average method);
10th Edition Estimate = 44 trips (with "equation");

SATURDAY Peak Hour:
9th Edition Estimate = 37 trips (average method); shown in TIA;
9th Edition Estimate = 49 trips (with "equation");
10th Edition Estimate = 54 trips (average method);
10th Edition Estimate = 44 trips (with "equation").

Best practice would have been for the TIA's AM peak hour estimate to utilize the higher of the average vs equation methods or 39 trips, to represent a conservative approach. However, the 37 AM peak hour trips in the TIA are slightly LESS than the 39 trips for the 9th Edition. The estimates could be slightly reduced if the 10th Edition is utilized from 37 in the TIA to 35.

The PM peak hour estimate should also have utilized the higher of the average vs equation methods or 57 trips. The 45 trips in the TIA are LESS than the 57 trips for the 9th Edition. The estimates could be reduced if the 10th Edition is utilized from 45 in the TIA to 44.

The Saturday peak hour estimate should have utilized the higher of the average vs equation method or 49 trips. The 37 trips in the TIA are LESS than the 49 trips for the 9th Edition. The estimates would be increased if the 10th Edition is utilized from the 37 in the TIA to 54.

The TIA's trip generation numbers are different from the ITE manual. The TIA analyses failed to: (1) include the estimated DAILY trips for the proposed project (an omission); (2) use the HIGHER of the average vs equation methods; and (3) use the updated 10th Edition from ITE.

Because of these errors and omissions, the TIA's estimates of Project trip generation are unreliable, and unless corrected, should not serve as the basis for conclusions about Project traffic impacts.

2. TRIP DISTRIBUTION AND ASSIGNMENTS

The Project Trip Distribution along State Route 1 is shown on Table 4, page 26 of the TIA. The TIA states that "the distribution of Project trips was derived from existing travel volume data and from knowledge of the local travel times". The problem with this statement is that there is no disclosure of the time frame of the CalTrans SR 1 "seasonally" adjusted volume estimates referenced. Thus, the peer reviewer does not know if trip volume estimates were based on the April, 2017 critical intersection counts, or something else, such as a travel demand model? That foundational information must be provided to properly assess the trip distribution.

Additionally, the TIA fails to provide a "Figure" which shows the percent of traffic distribution to the local streets. Table 4 only indicates the traffic distribution along SR 1.

Further, the TIA fails to disclose the project driveway volumes shown at an "unnumbered" intersection with Carlos Street. This is important information to assess the estimated trip generation percentages from the north and south on Carlos Street. While TIA Figure 7 on page 27 shows the estimated project trip distribution, there is no driveway "intersection" disclosure as previously noted. Thus, project traffic volumes on the local streets are impossible to discern without the percentages.

The potential redistribution of the estimated project trips, along with the desire to update or revise the trip generation estimates with new information, has a direct bearing on the trip assignments at the project driveway, as well as at all critical intersections.

Because of these omissions, the TIA's estimates of Project trip distribution are unreliable, and unless corrected should not serve as the basis for conclusions about Project traffic impacts.

3. COUNTS

Appendix 2 of the TIA contains the counts at the critical intersections which were collected during April, 2017. At this point, these traffic counts are three years old. Thus, they cannot be relied upon for assessments of traffic impacts.

Rather than reliance on outdated traffic counts to accurately estimate traffic impacts, the counts should be redone to reflect more typical current expected 2020 traffic patterns (excluding the coronavirus issues), and be conducted to reflect traffic when school is open as well as a typical Summer weekday and weekend day (Saturday) traffic. Along with the outdated counts, the "seasonally" adjusted volumes utilized in the TIA remains unclear as to how they were determined. Additional clarity is required to evaluate traffic impacts to also reflect the Summer months recreational traffic and school period traffic on certain movements.

Since there is the potential for a lot of variation in the actual counts, the TIA should include both a typical school day and a Summer day be counted to adequately assess the traffic impacts.

There were several Summer months over the last three years available for additional counts. There could have been selected counts performed, especially at the critical intersections that are shown in the TIA to be significantly impacted.

The school year and Summer month traffic volumes should be compared and the HIGHER one or "worst" case utilized for the Level of Service (LOS) calculations at the critical intersections.

4. LEVEL OF SERVICE (LOS)

The errors and omissions from the TIA's estimated project trip generation, omissions from the TIA's trip distribution and assignment discussion, the lack of any "growth" factors due to the delay of nearly 3 years for "existing" and Summer traffic counts, and the omission of an updated list of "approved" projects, all are factors which make the TIA's LOS calculations unreliable.

On that basis, ALL of the LOS calculations should be redone based on proper trip generation estimates, accurate trip distribution and assignments, and updated traffic counts as discussed above. In the absence of modified LOS calculations, the TIA's current LOS results should not serve as the basis for conclusions about Project traffic impacts.

Additional comments are provided in the Traffic Mitigation section.

Notwithstanding the above flaws, the LOS calculations shown in the TIA indicate significant traffic impacts at some of the critical intersections, and should not be ignored.

5. PARKING

The proposed on-site parking on the Site Plan indicates 142 stalls, or 2 stalls per apartment dwelling unit. That is 15 parking stalls in excess of the San Mateo County code requirement of 127 stalls. See TIA Table 18, page 60.

The TIA utilized the 4th Edition of the Parking Generation Manual. Since 2017 there is a 5th Edition released in April, 2019 available. What is troubling is that the TIA utilizes Land Use #221 and not Land Use #220 available in the 5th Edition. Thus, this portion of the TIA should be updated, e.g. Table 19, page 61.

Further analysis is required to include not only the average parking generation rates but also the 85th percentile values, and compare that with the San Mateo County code requirements.

Notably, if the goal is to reduce the project traffic impacts with less traffic, then the increase in the project parking supply above the San Mateo County code requirements will have the opposite effect.

6. ACCESS AND CIRCULATION

Based on the review of the Site Plan (page 12), we understand that only one driveway is proposed to provide project vehicular access to and from Carlos Street. The driveway is in close proximity to Intersection #3, SR-1/Carlos Street, as well as Intersection #4, Carlos Street/Sierra Street. There is an emergency access to Lincoln Street to the east (page 46).

A more detailed Driveway/Carlos Street intersection design or sketch is required to indicate how the project vehicular operations will be implemented.

There are likely to be significant adverse traffic impacts from the proposed project Driveway/Carlos Street intersection operations. These operational issues should be analyzed further before project approval. Currently, operational traffic issues from inadequate sight distance, inadequate turning radii, and others, have not been adequately analyzed, mitigated, or avoided.

7. MITIGATION MEASURES

The proposed Mitigation Measures are in the TIA starting on page 49.

In reference to the significant traffic impacts based on the LOS calculations for the Existing Conditions or TRAF-1, the TIA discusses mitigations TRAF-1A and TRAF-1B.

TRAF-1A
Intersection #7 or SR-1/California Avenue-Wienke Way for the PM peak hour and Saturday peak hour:

The conversion of the existing two-way STOP control into a roundabout or signalized intersection is the proposal with a determination upon the completion of the Intersection Control Evaluation (ICE) study required by CalTrans. This is an unresolved mitigation measure as there has not been a completion of the ICE study nor any information regarding the potential "fair share" cost sharing aspects with the proposed development. In the absence of this information about who will pay or the ICE results, the mitigation's feasibility is unknown.

The ICE study and the Connect to Coastside Study recommendations, when completed, should be included in an updated TIA analysis.

Without the ICE Study and without a "fair share" cost sharing agreement, this proposed mitigation measure is incomplete, unenforceable, and cannot be relied upon for a conclusion of a less than significant traffic impact.

TRAF-1B
"Develop a Transportation Demand Management (TDM) Plan for the review and approval by San Mateo County".

In the absence of a TDM Plan, it is impossible to assess its feasibility or how it will potentially mitigate acknowledged significant traffic impacts.

The TIA indicates that "the effectiveness of a TDM plan cannot be guaranteed" (page 50). CalTrans has also commented on this issue, as well as prior San Mateo County Civil (Traffic) responses and suggestions. Thus, the proposed mitigation measure does not resolve the significant traffic impacts that have been identified.

In reference is to the significant traffic impacts based on the LOS calculations for the Background Conditions or TRAF-2, the TIA discusses mitigations TRAF-2A and TRAF-2B.

TRAF-2A
Intersection #7 or SR-1/California Avenue-Wienke Way for the PM peak hour and Saturday peak hour:

Similar to TRAF-1A and 1B above, those comments are repeated herein.

TRAF 2B:
Intersection #3 or SR-1/Carlos Street for the Saturday peak hour.

Three potential mitigation measures were considered (page 52):
1. Closing Carlos Street between SR-1 and the Project to all but emergency vehicles;
2. Connecting Carlos Street with 16th Street instead of SR-1;
3. Grading the east side of SR-1 to provide clear sight distance.

The TIA does not identify "feasible" mitigation measures for Item #1 above.

Item #2 above has geometric and topographic challenges, and right of way issues, which remain unresolved.

Item #3 above is a challenge to obtain the clear sight distance requirements. However, merely stating that a topographic map will be required is insufficient. There are other CalTrans issues not studied nor adequately discussed including but not limited to a "fair share" agreement for the right of way, and intersection and street improvement costs.

The TIA has not identified cost sharing for any of the above three mitigations, and that undermines the feasibility of the proposed mitigation measures as discussed above.

Also, the TDM Plan is once again mentioned and the prior response stated above in TRAF 1B applies.

In reference to the significant traffic impacts based on the LOS calculations for the Cumulative Conditions or TRAF-3, the TIA discusses mitigations TRAF-3A, TRAF-3B, and TRAF-3C.

TRAF-3A
Intersection #3 or SR-1/Carlos Street for the AM, PM and Saturday peak hours.

The TIA proposes to implement the TDM program or TRAF-1B, which has not as yet been developed nor submitted, is an unacceptable mitigation measure for the reasons above.

TRAF-3B
Intersection #6 or SR-1/Vallemar Street-Etheldore Street for the Saturday peak hour.

The TIA proposes to implement the TDM program or TRAF-1B which has not as yet been developed nor submitted, is an unacceptable mitigation measure for the reasons above.

An additional mitigation measure of a new traffic signal was analyzed and the peak hour signal warrant was not satisfied. Therefore, this is NOT an adequate proposed mitigation measure.

TRAF-3C
Intersection #2 or SR-1/16th Street for the PM peak hour and Cumulative with Project Condition.

The TIA proposes to implement the TDM program or TRAF-1B which has not as yet been developed nor submitted, is an unacceptable mitigation measure. The traffic signal peak hour warrant is not satisfied. Therefore, there is no mitigation measure that reduces the traffic impacts to less than significant.

In reference to the significant traffic impacts based on Design Features or TRAF 4, the TIA discusses mitigation TRAF-4A.

TRAF 4A
The SR-1/Carlos Street intersection (#3) has restricted sight distance along the east side of SR-1.

The proposed mitigation measure of TRAF-1B or a TDM program is unacceptable for the reasons above. The TIA fails to provide a design of this intersection to resolve the sight distance issues, along with a "fair share" agreement as to the future costs of any proposed intersection improvements, and other sight distance and intersection street improvements.

In reference to the safety of public transit, bicycle and pedestrian facilities or TRAF-5, the TIA discusses mitigations TRAF-5A and TRAF-5B.

TRAF 5A
Sidewalk construction mitigation measure should be a condition of development.

TRAF-5B
The proposed mitigation measure of distributing information is a given and not a true mitigation measure. The TIA fails to provide a sketch detailing the bus stop locations with signing, crosswalk markings if deemed feasible, and the correction with actual physical improvements of the inadequate sight distance along SR-1.

Additional continuing collaborative efforts with Sam Trans at a minimum should be required for all project related bus route changes, and the TIA should include analysis of impacts on traffic of such bus-related mitigation measures.

8. VEHICLE MILES TRAVELED

The concept of Vehicle Miles Traveled (VMT) should either complement or replace the LOS analysis depending upon the transition by San Mateo County to this type of analysis. However, it is important to note that VMT analysis does not eliminate nor remove the significant traffic impacts already noted with the LOS calculations within the TIA.

To accurately analyze traffic impacts, the TIA should provide estimates of the VMT for this proposed project to complement the results and traffic impacts from the LOS calculations.

9. OTHER

A. Queues (TIA, page 63)

The TIA contains the queue calculations for the 95th percentile analysis at the request of CalTrans. It appears that the analyses are adequate assuming that the inputs were consistent. Nevertheless, there are issues previously mentioned with the trip generation, trip distribution and assignments, and "seasonally" adjusted counts that must be analyzed to properly reflect the project traffic impacts.

B. CalTrans Comments

Two CalTrans comment letters have been submitted regarding the proposed project. The first is dated April 9, 2018 and the second August 29, 2018. Our comments are as follows:

CalTrans April 9, 2018 Letter

This Caltrans letter raises the issue of Vehicle Miles Traveled (VMT) and its goal to reduce VMT while tripling bicycle, and doubling pedestrian and transit travel. Their comments are based on the January 2018 Draft Traffic Analysis.

CalTrans indicates that "improvements to SR-1 may be necessary to accommodate increased vehicle, transit, pedestrian, and bicycle trips associated with the project". There are many SR-1 challenges and multiple constraints affecting SR-1 which still MUST be evaluated before project approval. Some of the items raised by CalTrans, to the best of our knowledge, have NOT been adequately analyzed within the revised TIA of April, 2019. These include the following:

1. right of way (ROW) constraints and topography limit options for the Carlos Street/SR-1 intersection;
2. SR-1 has limited accommodations for transit users, cyclists, and pedestrians in his area;
3. sight distance and potential turning movement conflicts limit the options for intersection improvements;
4. accessing the coast or existing southbound SamTrans Route 17 bus stop, which runs on one-hour headways, requires crossing SR-1 at an unsignalized intersection;
5. accessing the northbound SamTrans Route 17 bus or the community of Montara requires walking along the shoulder of SR-1 for approximately 0.15 miles.

The TIA does not adequately address those issues. Not only should additional analyses be performed, e.g. a CalTrans ICE Study, but those items should be adopted prior to project approval.

The TIA still does not include an adequate nor detailed analysis for the issues such as the Carlos Street emergency vehicles only between project driveway and SR-1; 16th street, eastbound and westbound approaches, right turns only; and Vallemar Street/Etheldore Street, eastbound and westbound approaches, right turns only.

Also, the TIA proposes to convert the SR-1/California Avenue-Wienke Way intersection from a two-way STOP controlled into a roundabout or signalized intersection. However, while there are some LOS calculations in the Appendices of the TIA, an actual sketch or preliminary design for either a signalized intersection or roundabout has not been included within the revised TIA.

The TIA has however, included a queue analysis for vehicular storage as previously noted, but has NOT analyzed the truck U-Turn issue at critical intersections.

With respect to Multimodal Planning, Caltrans has identified a "Fair Share" contribution concept "toward multimodal and regional transit improvement to fully mitigate cumulative impacts to regional transportation". The "fair share" contribution concept has not been included within the revised April, 2019 TIA.

Additionally, CalTrans has suggested a Pedestrian Hybrid Beacon (PHB) be evaluated and considered with high visibility crosswalk at the SR-1/14th Street intersection, and the relocation of the SamTrans route 17 southbound bus stop to that location across from the existing northbound stop. Neither of those suggestions were adequately analyzed, with the PHB issue completely ignored within the revised April, 2019 TIA.

Primary and secondary effects on pedestrians, bicyclists, disabled traveler, and transit user have not been adequately analyzed within the revised TIA.

A robust TDM Program is suggested by CalTrans to reduce VMT. The revised TIA has not adequately analyzed the development of a TDM Program yet indicates that there are no guarantees involved in reducing traffic impacts.

CalTrans has noted that "any proposed non-standard design feature (such as inadequate sight distance) will have to be approved by a Fact Sheet for Exceptions to Mandatory and/or Advisory Design Standards prior to implementation." The revised TIA has not moved forward with any sketches regarding the sight distance inadequacy along SR-1.

CalTrans August 29, 2018 Letter

This Caltrans letter refers to the Application Referral. It duplicates the first letter with respect to the VMT issue, and multimodal planning. New issues include hydraulics, as well as the Travel Demand Analysis and Mitigation wherein "the July, 2018 TIA has not been updated to reflect CalTrans' comments on the January 2018 Draft Traffic Analysis". Nor has the "fair share" contribution concept been included within the revised TIA, and it is again mentioned herein.

The VMT reduction is once again mentioned and has not been analyzed within the revised TIA.

CalTrans has commented that "reducing parking supply can encourage active forms of transportation, reduce regional VMT, and lessen future transportation impacts on State facilities". Yet the proposed project has a parking supply of 142 stalls or 15 stalls ABOVE the San Mateo County code required amount of 127 stalls.

The revised TIA has failed to address many of the comments from CalTrans' two letters. This points to the TIA's continued failure to adequately analyze project impacts and feasible mitigation measures.

C. San Mateo County Comments

San Mateo County has provided Civil (Traffic) comments. Nine items were listed, and the key items are:

Item #4: "the proposed turn restrictions as mitigation measures are not acceptable. Please provide alternative mitigation measures to address project significant impact at Highway 1 and Vallemar/Etheldore and Highway 1 and 16th." (Not included within the revised TIA);

Item #5:"the closure of Carlos Street to all motor vehicles other than emergency vehicles is not acceptable as a mitigation measure. Please provide other mitigation measures to address the project's significant impacts." (Not included within the revised TIA).

Item #6: SamTrans bus stop relocation is not a County project. It is up to the applicant to coordinate with SamTrans and provide all the necessary approvals from SamTrans to the County for review and consideration before the TIA can be approved. Please provide alternate mitigation measures in case SamTrans does not approve the proposed rerouting." (Not included within the revised TIA).

Item #7: "Please provide documentation that supports the premise that a fully funded project is currently moving forward. Absent an assurance that a fully funded project is in the process of being implemented, the applicant will be responsible for mitigating the project's impacts." (Not included within the revised TIA).

Item #8: "If the applicant is proposing any TDM measures as mitigation, the measures need to be clearly defined and calculations shown as how many trips will be reduced by each measure and how that will impact the operations and LOS at the applicable intersections. In addition, please provide a monitoring measure to each of the TDM measures proposed and alternate measure in case the monitoring shows that TDM is not as effective as assumed."
(Not included within the revised TIA).

The revised TIA has failed to address many of the San Mateo County Civil (Traffic) comments. This points to the TIA's continued failure to adequately analyze project impacts and feasible mitigation measures.

D. Traffic Infusion on Residential Environment (TIRE)

The Executive Summary of the Connect The Coastside Report refers to the extensive community outreach program. Curiously, the TIA does not include mitigation measures for street segments e.g. along Carlos Street, as that street serves the proposed project and has a traffic impact on the existing residential developments. A Traffic Infusion on Residential Environmental (TIRE) analysis which requires Average Daily Traffic (ADT) volumes for both a typical weekday and weekend day for two scenarios i.e. during the school year and for a Summer day, should be performed. The analysis and evaluation would include the comparison of the TIRE Index and the change in the index with the proposed project. The potential traffic impacts on at least two segments along Carlos Street, e.g. near the project site north of Sierra Street, and also north of Etheldore Street should be included. This evaluation would reveal whether or not the Carlos Street segments would be adversely impacted on those two segments.

SUMMARY

This "peer review" of the April, 2019 TIA, CalTrans' two comment letters, and the San Mateo County Civil (Traffic) comments for the proposed 71 dwelling units "affordable" apartment residential development, included a summary review of the Traffic Impacts that were listed as significant and unavoidable.

Additional clarification is required as to how these Traffic impacts will be mitigated appropriately and conditioned as part of the approval of the proposed project, with the comments and concerns previously indicated.

The estimated trip generation, trip distribution and assignments, traffic counts, the Level of Service (LOS) calculations for several scenarios, parking, access and circulation, the TRAF Mitigation Measures, Vehicle Miles Traveled (VMT), and residential street segments, all have some errors and omissions as noted above, which require further evaluation/clarification and should be analyzed in more detail.

Of particular concern is that many of the comments from Caltrans and the San Mateo County Civil (Traffic) comments do not appear to have been included in the revised April, 2019 TIA.

Our review indicates that there are potentially significant deficiencies, omissions, and inaccuracies within the TIA. It is our opinion that the deficiencies, omissions, and inaccuracies would require revisions and amplifications to arrive at an acceptable and complete evaluation of the traffic and transportation issues within a subsequent and additional revised TIA.

Reasonable, appropriate, and updated potential mitigation measures, along with conditions of development, any "fair share" contributions, and with the appropriate findings and conclusions, should be included within any revised evaluations.

Very Truly Yours,

Gay Lawrence Pang
Civil Engineer #20,203
Traffic Engineer #073

Documents Reviewed

1. TIA dated April, 2019
2. CalTrans comment letter dated April 9, 2018
3. CalTrans comment letter dated August 29, 2018
4. San Mateo County Civil (Traffic) comments dated September 24, 2018
5. Executive Summary-Connect The Coastside, dated January 15, 2020

From:
To: midcoastcommunitycouncil@gmail.com
Cc: Michael Schaller; Planning_Commission; Lisa Ketcham PUD 140 Cypress Point Moss
Subject: Beach / MidPen - (APN 037-022-070)
Date: Wednesday, March 11, 2020 6:36:50 PM

Dear Midcoast Community Council members,

The proposed Cypress Point project includes proposed amendment to the San Mateo County General Plan to change the land use designation of APN 037-022-070, amendment to the County's Zoning Map, amendment of the County's zoning text, and creation of an entirely new Planned Unit Development (PUD -140) designation for the project site.

With this letter I want to iterate my concerns raised during the Feb 26 MCC meeting regarding the PUD -140. While PUD-140 contains a number of misleading statements, I'm especially concerned about the following two items:

1. Environmental impact due to proximity to an environmentally sensitive habitat areas (ESHA) – Montara Creek

The 1985 EIR for a different project on the same site found that Montara Creek is located approximately 50 feet north of the project site. The Montara Creek riparian corridor is an Environmentally Sensitive Habitat Area (ESHA) as defined by the San Mateo County LCP.

PUD-140 states on page 7:

No environmentally sensitive habitat areas (ESHA) have been identified on the project site. The closest ESHA is Montara Creek, which lies to the north of the project parcel.

And page 21 states:

Montara Creek, a perennial stream, is located approximately 250 feet to the northeast of the site, and runs parallel to the site's

northern border.

Question: Why does the EIR from 1985 state a distance of 50 feet to Montara Creek (ESHA) vs 250 feet in PUD-140? Did property boundaries or the location of Montara Creek change?

2. Updated liquefaction maps show that the named property (APN 037-022-070) is in a landslide zone and parts are in a liquefaction landslide overlap zone.

Source: The California Geological Survey released a series of new seismic hazard zones for parts of San Mateo and Contra Costa counties (April 2019) including Moss Beach.

https://www.mercurynews.com/2019/04/05/earthquake-maps-for-san-mateo-contra-costa-counties-show-vulnerable-areas/

PUD 140 Page 21 states:

Hazards Component Policy 9.1 (Definition of Hazard Areas) defines hazardous areas as “fault zones and land subject to dangers from liquefaction and other severe seismic impacts, unstable slopes, landslides, coastal cliff instability, flooding, tsunamis, fire, and steep slopes (over 30%).”

AND

The subject site is not within or immediately adjacent to a known fault zone, nor does it have steep or unstable slopes or soils subject to liquefaction.

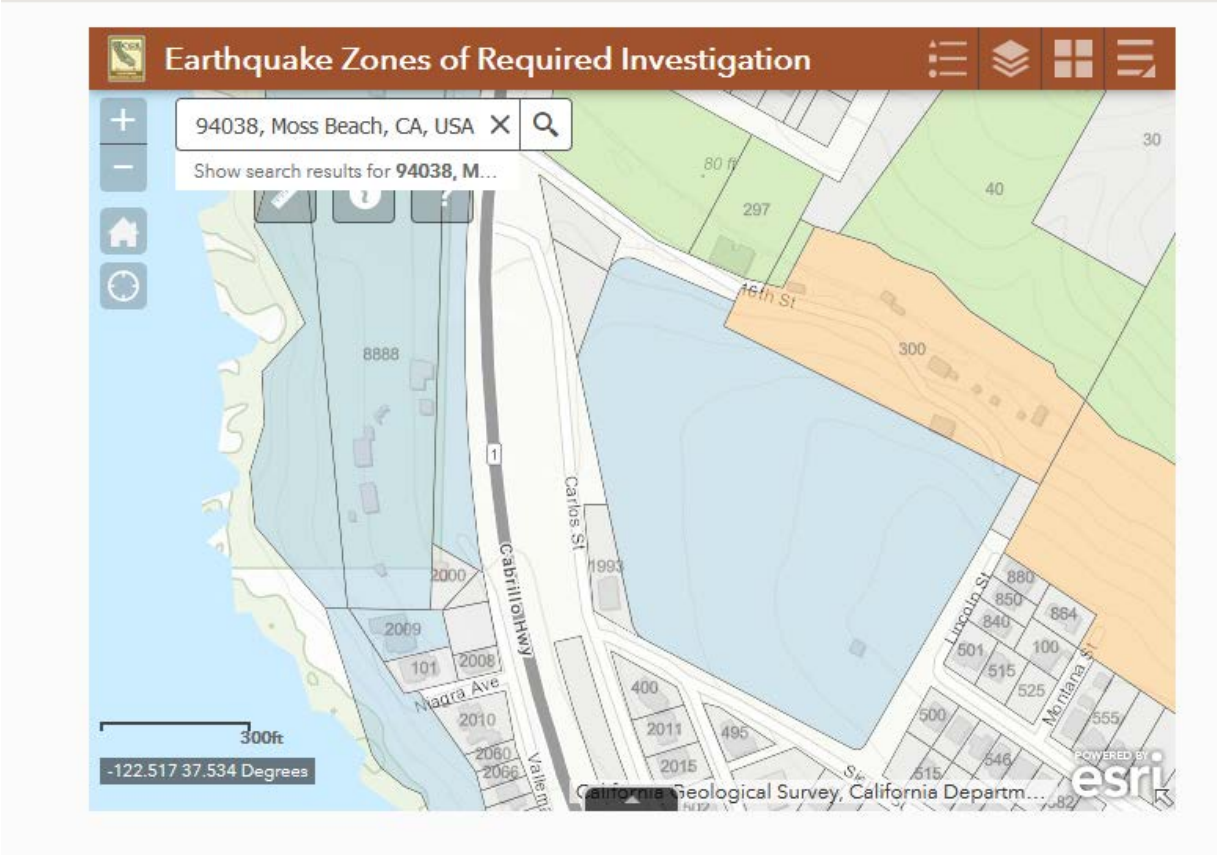
Question: What additional measures need be taken to build a large scale development in a landslide and liquefaction landslide overlap zone? This is especially important as this property has been extensively used by the Navy in the past and no records are available indicating that the site has been cleaned up.

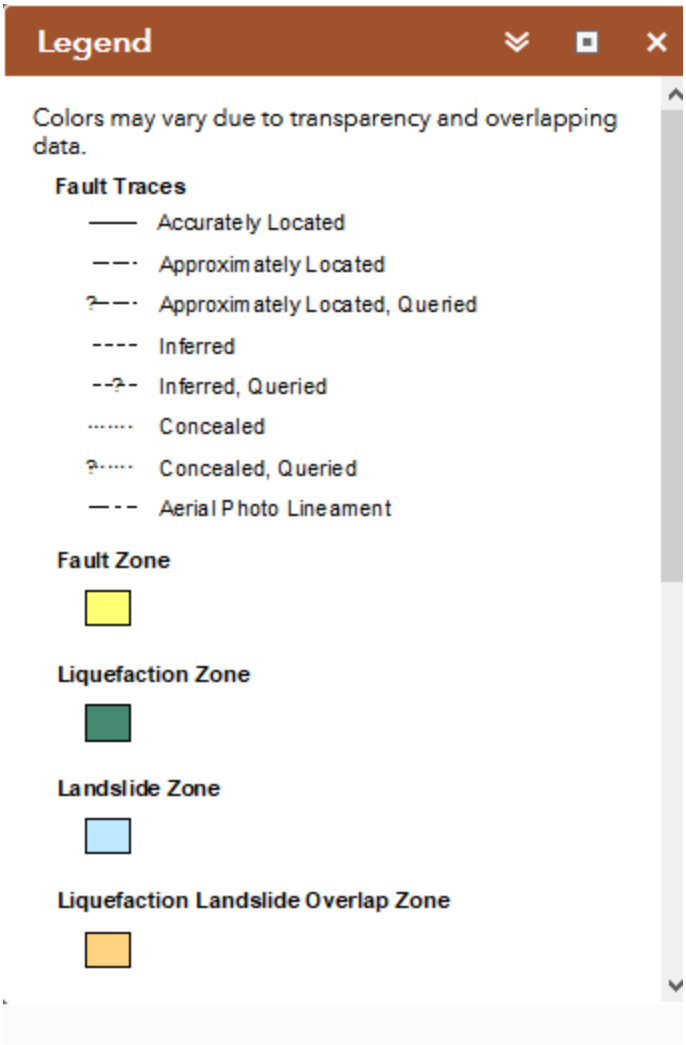
Thank you for all your work on the MCC.

Best regards,

Harold Herrman

SM MidCoast




Legend
Colors may vary due to transparency and overlapping data.
Fault Traces
Accurately Located
Approximately Located
Approximately Located, Queried
Inferred
Inferred, Queried
Concealed
Concealed, Queried
Aerial Photo Lineament
Fault Zone
Liquefaction Zone
Landslide Zone
Liquefaction Landslide Overlap Zone

From:
To: Planning_Commission
Subject: Wednesday June 10th meeting, regular agenda item #4
Date: Friday, May 29, 2020 5:00:20 PM

I'm writing in support of the MidPen project at Carlos and Sierra in Moss Beach. I have for years been a frequent patron of local businesses such as the Moss Beach Distillery, and various businesses down at Pillar Point. More housing in this area will mean that workers in these businesses will have more options to live locally, reducing commute times, traffic, and GHG emissions. Our county desperately needs more affordable housing. I hope you will be advancing this project without further delay.

Regards,
Auros Harman

From:
To: Planning_Commissio
Subject: Support 71 affordable homes in Moss Beach
Date: Friday, June 5, 2020 2:43:32 PM

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

I am a long-time resident of the Coastside and a homeowner in El Granada. We need affordable homes on the Coastside so that people who work in retail, hospitality, health care, services, and agriculture can live close to work. We also need affordable homes to achieve racial equity and economic inclusion.

I do not want to see the Coastside continue down a path of providing homes only for the wealthy. This trend is not only unjust but it is also contrary to community well-being The current pandemic has shown us exactly how much we depend every day on essential workers who would income-qualify for these homes. Let's show our gratitude to our essential workforce by approving housing that is truly affordable at their income level.

Respectfully yours,

Jan Stokley
Resident of El Granada

--

From:	Alexander Melendrez
To:	Planning_Commission
Cc:	Janneth Lujan
Subject:	Support - 71 Affordable Homes at Moss Beach
Date:	Friday, May 29, 2020 5:45:01 PM
Attachments:	_Support - Moss Beach Cypress Point - June 2020.pdf

Dear San Mateo County Planning Commission,

On behalf of the Housing Leadership Council of San Mateo County, I would like to reiterate our strong support for Midpen's Cypress Point. Please see attached our updated letter of support for these 71 affordable homes.

Additionally, we would like to share with the commission these three articles in the Half Moon Bay Review reflecting support for Midpen's Cypress Point in Moss Beach.

Letter to the Editor: We Need Cypress Point housing
Letter to the Editor: Coastside community depends on more than just homeowners
OP-ED: Supporting the people who support us

Thank you for the opportunity to comment and we wish you all good health.

Sincerely,

Alex Melendrez

--
#HousingIsHealthcare

Alexander Melendrez
Organizer
Housing Leadership Council of San Mateo County (HLC)
2905 S El Camino Real
San Mateo, CA 94403
(650) 242-1764 ext. 4 Linkedin
Pronouns: He, Him, His

HLC: Website | Facebook | Twitter | LinkedIn | Instagram | Become A Member!

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June 5, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

Subject: MidPen Housing Cypress Point Housing Project, Moss Beach CA
Biological Resources Assessment

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

BioMaAS peer reviewed the Biological Resources Assessment (BRA) for a proposed 71 affordable housing unit subdivision at the corner of Sierra and Carlos Streets, in Moss Beach, San Mateo County, California, prepared by De Novo Planning Group on May 24, 2018. Two additional documents, BKF's May 2, 2018 Cypress Point Hydromodification Management Memorandum, and the Stevens Consulting Cypress Point Project Public Services And Utilities Report, were utilized as references during our peer review of the BRA, but these documents were not peer reviewed for content.

My qualifications and experience are as follows.
Over 20 years of experience working throughout California on projects involving environmental consulting, biological assessments, special status species studies and management, environmental compliance, habitat restoration, and mitigation.

USFWS Section **10(a)(1)(A)** Recovery Permit holder for California red-legged frog, San Francisco garter snake, Alameda whipsnake, salt marsh harvest mouse and California tiger salamander.

A copy of my CV is attached.

General Comments

Based on our review, we believe that there are several sections of the BRA that should be clarified or expanded to include more pertinent information, and adequate analysis of project impacts and mitigations.

While the document lists various federal state and local regulations under the heading of regulatory setting, there is not much discussion as to how the listed regulations apply to this particular project, or what the implications of those regulations will be. The BRA entirely fails to analyze if the project will potentially violate the federal Endangered Species Act, the federal Clean Water Act, California's Fish & Game Code, California's Wetlands Conservation Policy, the Coastal Act or San Mateo County's Local Coastal Program. Further, while noting that there are 20 special-status plant species and 10 special status wildlife species within 5 miles of the project site, the BRA indicates that most species are "absent" (none observed during surveys), rather than giving a level of potential for their occurrence and gives little justification regarding those "absent" findings. An explanation for the rationale behind labeling of species as absent is warranted.

In addition, a more thorough discussion of potential mitigation measures, including agency consultation, should be included regarding some of these species.

Finally, as described further below, the BRA fails to adequately describe potential impacts to wetlands and how potential impacts could be mitigated.

Specific Comments

<u>Project Description</u>
An adequate analysis of biological impacts must be based on an adequate description of the project. Our review of the BRA reveals only that "the proposed project would result in construction activities that would change a portion of the 10.88-acre parcel into medium high-density housing, and that "the ground-disturbing activities on the site will consist of demolishing the existing foundations and grading the site."

The BRA should provide a description of all actions associated with the proposed project. Of particular concern to project impacts on wetlands and riparian habitat, the BRA makes only vague reference to drainage being "directed away from" the adjacent creek. This contrasts with BKF's May 2, 2018 Cypress Point Hydromodification Management Memorandum and the Stevens Consulting Cypress Point Project Public Services and Utilities Report which both state that excess stormwater runoff surface flows ultimately discharge to Montara Creek. The BRA should provide a more thorough description of the location, volume, and rate of drainage in order to adequately evaluate impacts to the adjacent Montara Creek. A map of the projected drainage should also be included.

<u>Environmental Setting</u>
As an initial observation, it has been almost 2 years since the project site was last surveyed by De Novo. Circumstances may have changed in this period and it would be prudent to re-survey the site and adjacent habitat.

The BRA states that based on field surveys the potential for each special-status species to occur within the project site was evaluated as either "No Potential," "Potential," or "Present." However, BRA's findings on species "presence" reported in Table 1 fails to use these classifications. This is more than just a technicality. For example, the BRA defines "Potential" as "Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable." By failing to use this classification system, the reader of the BRA is deprived an understanding of the survey findings and thus at a loss to understand project biological impacts.

Further, Table 1 simply lists many species as "absent" which can't be proven by lack of observation. The BRA - in many instances - fails to explain the justification for its determination of a species as absent. In addition, Table 1 identifies Fragrant fritillary as absent, but surveys were not conducted during the June to September period when this plant is in bloom.

The BRA's "California red-legged frog" section does not mention the relatively close proximity of the species occurrence within the adjacent Montara Creek. To adequately analyze project impacts, the BRA must explain why the proposed project site does not provide suitable upland habitat for the species.

Project Impacts

As noted above, the BRA entirely fails to analyze if the project will potentially violate the federal Endangered Species Act, the federal Clean Water Act, California's Fish & Game Code, California's Wetlands Conservation Policy, the Coastal Act or San Mateo County's Local Coastal Program. There are species protected by the federal Endangered Species Act and California's Fish & Game Code – including San Francisco garter snake, California red-legged frog, and birds of prey – that are noted in the BRA, which make analysis of potential violations of the regulations essential.

Table 1 mentions that the San Francisco garter snake is potentially present, and that the "drainage north of site provides limited habitat, cypress along northern boundary is potential upland." Given this, the BRA fails to adequately analyze potential impacts to this species.

In the "San Francisco dusky-footed woodrat" section, the BRA provides inadequate justification for its conclusion that construction activities would not impact this species. Because this species occurs in scrub habitats in addition to forest, it would be prudent for all vegetated areas within the proposed project area to be thoroughly surveyed. The BRA does not make it clear that this has been done, and thus its conclusion is suspect.

In regard to bats, the BRA states that no bats were observed during surveys, but does not specify if a bat survey was conducted. Trees provide potential bat habitat but were omitted from the BRA's discussion of suitable bat habitat.

For Impact BIO-3, the BRA states "The closest recognizable wetlands are approximately 350 feet to the north near 16th street, and approximately 600 feet to the west in the Pacific Ocean. Neither construction nor operation of the project would have a substantial adverse effect on these nearby wetlands, given the distance of these wetlands to the project site, and the fact that drainage from the site will be directed away from the adjacent stream." Yet, the BRA fails to provide a detailed description of the project drainage, which likely will adversely impact wetlands.

The BRA does not mention the retention ponds proposed as part of the site. In contrast, BKF's May 2, 2018 Cypress Point Hydromodification Management Memorandum states that there will be post-project drainage towards "the bioretention areas" which will have a "6,500 square foot footprint," and that "this configuration will be adjusted accordingly as ***more*** bioretention areas are introduced into the site plan."

The Stevens Consulting Cypress Point Project Public Services and Utilities Report at Section 7.4.1 reveals that the project site slopes range from 10 percent to 50 percent, there is no existing storm drain infrastructure on the property, and that "stormwater ultimately discharges to Montara Creek within the James V. Fitzgerald Area of Specific Biological Significance (ASBS) watershed area." In addition to stormwater from the 11-acre project site, there is an additional one (1) acre of offsite runoff that drains through the project site and contributes to the overall drainage area.

Drainage out of the retention ponds and stormwater runoff has the potential to adversely impact wetlands.

In addition, project retention ponds may function as habitat, or as an attractive nuisance, for California red-legged frogs by luring them to breed at a site where reproductive success is unlikely. The BRA omits the necessary analysis of these potential adverse impacts, and thus also omits any discussion of potential mitigation measures.

<u>Mitigation Measures</u>
The BRA's discussion of mitigation measures appears inadequate, as it includes no discussion with the US Fish & Wildlife Service or CDFW to avoid "take" of California red-legged frog, San Francisco garter snake, San Francisco dusky-footed woodrat, and bats.

Regarding Mitigation Measure Bio-2, the BRA fails to include surveys for all protected bird species. In addition to raptors, other native nesting birds should be protected from disturbance. Preconstruction surveys should be conducted and there should be communication with CDFW to avoid take of active nests if they are discovered.

The BRA fails to include an analysis of proposed methods to prevent adverse wetland impacts, including the methods to be used and their location, both during and after construction.

If you have any questions or comments, please feel free to contact Steve Powell, 510-734-7286.

Regards,

Steve Powell
BioMaAS Inc.
1278 Indiana St. #300
San Francisco, CA 94107

BioMaAS

Steve Powell, B.S.
Principal, Biologist

Years of Experience
23

Expertise
Senior Permitted Biologist

Education

B.S. (Biology) at California State University, Hayward, 1998.

Registrations/Certifications

Certified Marbled Murrelet Surveyor

Permits

USFWS Section **10(a)(1)(A)** Recovery Permit (**TE-107075-3**) for California red-legged frog, San Francisco garter snake, Alameda whipsnake, salt marsh harvest mouse and California tiger salamander.

Experience

Mr. Powell is a permitted biologist for San Francisco garter snake, California red-legged frog, California tiger salamander, salt marsh harvest mouse, and Alameda whipsnake. He has over 23 years of experience working on projects in endangered species habitat, dealing with issues of environmental compliance, endangered species management and habitat restoration.

With experience as a biologist, environmental inspector, researcher, consultant, project manager, and monitor, Mr. Powell has extensive field experience and has conducted numerous studies throughout a broad range of wildlife and biological communities in California. Mr. Powell is skilled in vertebrate identification, taxonomy, natural history, California special status species survey methods, and habitat assessments. Mr. Powell also has extensive experience in monitoring efforts, habitat preservation, mitigation, restoration, trapping and relocation for the California red-legged frog, foothill yellow-legged frog, California tiger salamander, salt marsh harvest mouse, San Francisco dusky-footed woodrat, Alameda whipsnake, San Francisco garter snake, Western pond turtle, and burrowing owl.

Mr. Powell has conducted surveys and habitat assessments for a variety of other species including California Ridgway's rail, California black rail, Swainson's hawk, Northern goshawk, California spotted owl, Western snowy plover, marbled murrelet, San Joaquin kit fox, bats, and valley elderberry longhorn beetle. Mr. Powell has also contributed to many fish surveying and relocation projects, which involved species such as steelhead and delta smelt.

His environmental document writing experience includes: Environmental Impact Reports, Management Plans, Invasive Plant Management Programs, Nesting Bird Reports, Habitat Conservation Plans, restoration plans, and Biological Assessments. Mr. Powell has managed many biological projects and performed functions such as oversight, training, deployment of personnel, and budget management.

Relevant Experience

Alameda Creek Diversion Dam – Fish Passage Facilities Project, Sunol, California
Owner: San Francisco Public Utilities Commission
Mr. Powell was an agency-approved monitor and environmental inspector. He performed preconstruction surveys for Alameda whipsnake, California tiger salamander, California red-legged frog, Foothill Yellow-legged frog (FYLF), Western pond turtle, bats, San Francisco dusky-footed woodrat, and nesting birds. He conducted surveys and relocation of several dozen FYLF egg masses and monitored their survival over three seasons. He relocated dozens of adult and juvenile FYLF as well. He also relocated dusky-footed woodrats, CRF, and AWS. He also conducted acoustic monitoring and exclusion for bats. His duties included construction access road inspections to minimize Take of special status species, wildlife exclusion fence inspection, daily compliance repots, environmental training, and speed limit enforcement on site.

Caltrans Devil's Slide Hwy 1 Tunnel Project, San Mateo County
Owner: Caltrans District 4
Mr. Powell was responsible for environmental and biological monitoring at three project sites, including quality assurance for contractor implementation of water quality measures, erosion control, spill and containment, SWPPP compliance inspection, water sampling, ESA and wildlife fence inspection, and biological monitoring for California red-legged frog, San Francisco garter snake, migratory birds, and San Francisco dusky-footed woodrat. Pre-construction work included trapping and relocation of California red-legged frogs and relocation of San Francisco dusky-footed woodrats outside of the construction area as well as nesting bird surveys. Mr. Powell functioned as the lead construction and biological monitor for south and north portal work on the Devil's Slide Hwy 1 Tunnel Project.

Calera Creek Wetland Restoration Project, San Mateo County, CA
Client: City of Pacifica Department of Public Works
Mr. Powell conducted trapping and visual surveys for San Francisco garter snake, Western pond turtle, California red-legged frog, and San Francisco dusky-footed woodrat. He also took samples and collected data on water quality. He compiled the data into a report and created a habitat management plan which improved and maintained habitat for California red-legged frog, San Francisco garter snake, western pond turtle, and San Francisco dusky-footed woodrat through control of invasive vegetation, and enhancement of upland and wetland vegetative cover.

Bean Hollow Ponds Management, Pescadero, CA
Client: San Mateo County Public Works Department
Mr. Powell is involved in the management of several wetland sites that provide habitat for San Francisco garter snake and CA red-legged frog. We are currently conducting nocturnal and diurnal surveys and are developing an on-site habitat enhancement plan to enhance and create more wetland habitat near the existing ponds.

San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project, Palo Alto, CA
Owner: San Francisquito Creek Joint Powers Authority
Mr. Powell was the USFWS approved permitted biologist and fisheries biologist for a levee improvement and salt marsh restoration project in salt marsh adjacent to San Francisco Bay. Mr. Powell's responsibilities included: preparing species avoidance plans for California Ridgway's rail, salt marsh harvest mouse, and anadromous fish, preparing environmental education program, identification of any salt marsh harvest mice and other rodents encountered within the project area, Resource Agency consultation, environmental compliance management and, compliance monitoring, pre/post construction surveys for saltmarsh harvest mouse and California Ridgway's rail, relocation of several thousand fish during dewatering, coordination of contractor and environmental monitors, and ensuring the integrity of the exclusion fencing. Mr. Powell identified Salt marsh harvest mice and western harvest mice on the project. Other special status species included California Ridgway's rail, California black rail, Western pond turtle, California red-legged frog, green sturgeon, and steelhead.

Tyler Ranch Caltrans Mitigation Site, Alameda Co., California
Owner: Caltrans District 4
Mr. Powell participated in the design and implementation of an Alameda whipsnake trapping program to determine the presence and distribution of this listed species within a proposed Caltrans mitigation site located on Tyler Ranch. Whipsnakes were marked and photographed as part of an effort to ascertain population size. He also conducted aquatic sampling to determine the presence of California tiger salamander and California red- legged frog within wetlands on and adjacent to the property. Mr. Powell captured and marked Alameda whipsnakes and trapped numerous California red-legged frogs during the project.

Biological Constraints Analysis for Proposed Crow Canyon Road Safety Improvement Project.
Owner: Alameda County Public Works
Mr. Powell conducted a biological constraints analysis for 13 proposed road improvements at a number of locations along Crow Canyon Road. The constraints analysis included a review of literature and field surveys to determine the extent of previous biological surveys and the species and habitats known or likely to occur along the segment. Special status species included: CA red-legged frog, CA tiger salamander, and western pond turtle

Old Niles Project, Alameda Co. CA
Owner: Caltrans District 4
Conducted pre-construction surveys prior to retaining wall installation on Niles Canyon Road adjacent to Alameda Creek. Special status species within the area included California red-legged frog, foothill yellow-legged frog, Alameda whipsnake, and Central Coast ESU steelhead. Conducted nesting bird surveys and mapped nests within and adjacent to the project area.

San Pedro Creek Bridge Replacement Project, Pacifica, CA
Owner: Caltrans District 4
As project manager, Mr. Powell performed nesting bird deterrence, listed species relocation, biological monitoring and environmental inspection during vegetation removal for a bridge replacement and dredging project in California red-legged frog (CRF) and steelhead habitat. He conducted daily bird surveys and bird deterrence during the nesting season to prevent nesting birds from delaying the start of the project. This work included removing nest-starts and installing deterrents to nesting. He conducted preconstruction surveys and a habitat assessment for CRF and steelhead and relocated numerous CRF egg masses and adults from the work area. He also relocated nests of San Francisco dusky-footed woodrats and monitored the removal of trees and other vegetation prior to the start of construction

Route 92 West Albert Canyon Mitigation Project, San Mateo Co.
Owner: Caltrans District 4
Mr. Powell was responsible for environmental and biological monitoring on a culvert repair and creek bank restoration project on highway 92. Special status species on

site included California red-legged frog, San Francisco dusky-footed woodrat, and central coast steelhead. Mr. Powell also conducted pre-construction surveys, nesting bird surveys, contractor education, completed daily reports, and removed wildlife from the construction area. After concrete was poured to line the inside of a culvert, a plastic detention basin surrounded by exclusion fence was constructed at the pipe outfall to prevent entry by California red-legged frog. Mr. Powell conducted daily water tests on the discharge from the pipe to check the pH and determine when it was safe to be released downstream. Until the proper pH levels were reached, water was pumped from the fenced detention basin and into a truck for disposal.

SMART CP4 Haystack Landing Bridge Replacement, Petaluma, CA
Owner: Sonoma Marin Area Rail Transit (SMART)
Mr. Powell was the Service-Approved lead biologist on a railroad bridge replacement project over the Petaluma River. His responsibilities included oversight of the biological monitors and contractor to ensure resource agency permit compliance with the federal Biological Opinion and all project permits. Of special interest on this project were water quality concerns due to working in a live river, impacts to fish during dewatering, and impacts to special status species during vegetation clearing and ground disturbance. Special status species in the area included salt marsh harvest mouse, California red-legged frog, California clapper rail, Delta smelt and green sturgeon.

Mare Island Salt Marsh Harvest Mouse Habitat Assessment, Vallejo, CA
Owner: U.S. Navy
Mr. Powell conducted habitat assessments for salt marsh harvest mouse (SMHM) at several sites throughout the Mare Island Naval Base. As a permitted SMHM biologist, he conducted site visits to multiple locations to assess the potential for SMHM to occur within proposed project areas and wrote reports detailing the results. He also reviewed reports of other biologists for accuracy.

I-680 Highway Widening, Pleasanton, CA
Owner: Caltrans District 4
As a CDFW/USFWS-approved biological monitor, Mr. Powell performed preconstruction surveys, camera trapping, live-trapping, and midden relocation for San Francisco dusky-footed woodrat next to the Bernal Ave. onramp on I-680. He assisted in the relocation of over a dozen woodrat middens. He inspected trapped adult woodrats to evaluate their reproductive status, lactating females were returned to their nests, other woodrats were relocated along with their middens

SFPUC Water System Improvement Program Crystal Springs-San Andres Pipeline Upgrade Project, San Mateo Co. CA
Owner: San Francisco Public Utilities Commission
Mr. Powell conducted environmental and biological inspection for compliance during a water pipeline improvement project. He monitored construction activities such as de-watering, excavation, rip-rap placement, drilling, and demolition of concrete structures. Special status species within the project area include; San Francisco garter snake, California red-legged frog, Western pond turtle, Central California Coast ESU steelhead, San Francisco Dusky-footed woodrat, and migratory

nesting birds. Mr. Powell also conducted preconstruction surveys, contractor education, filed daily reports documenting compliance, and relocated special status species.

Surveys and Exclusion Activities for the Permit-level Composting Facility at the Altamont Landfill and Resource Recovery Facility
Client: Waste Management of Alameda County
Mr. Powell conducted protocol-level surveys for the San Joaquin kit fox, CA red-legged frog, CA tiger salamander, and burrowing owl. Surveys included spot lighting, track dusting, and burrow surveys. Owls were found in the construction footprint, and coordination with CDFG biologists allowed for passive exclusion the owls from burrows so that construction could continue. Mr. Powell also conducted surveys for Alameda whipsnake.

PG&E Jefferson-Martin 230 kV Line Installation Project, San Mateo County
Owner: PG&E
Mr. Powell was responsible for permitted biological monitoring and conducting surveys for special-status species including the California red-legged frog, San Francisco garter snake, and San Francisco dusky-footed woodrat on the Jefferson-Martin 230 k-V Line Project adjacent to San Andreas Reservoir. Efforts included a capture and relocation program for these species to remove them from the construction zone and providing a permitted construction monitoring team as required by the project permits. He relocated many CRF and SFGS by hand and through trapping, and relocated woodrat middens.

PG&E San Francisquito Creek Emergency Pipeline Repair Project, Santa Clara County, CA
Mr. Powell provided project management, and environmental/biological monitoring during an emergency PG&E project that involved the dewatering of an approximate 100-foot stretch of stream to facilitate the repair of a 24-inch gas pipeline which crossed below the creek bed. Central coast ESU steelhead were relocated from the project area prior to pipeline repair. He conducted preconstruction surveys for CA red-legged frog and CA tiger salamander, and bats. After the completion of construction, he directed the installation of erosion control and the revegetation of the area with native plants. He conducted quarterly assessments of the revegetation and the status of the creek as suitable anadromous fish habitat over the course of 5 years.

Three-year fish survey of lower Delta marsh channels, Contra Costa County, CA
Client: Cal Fed
Mr. Powell conducted a three-year fish survey of restored lower Sacramento-San Joaquin Delta marsh channels to determine their use by native California species including the federally and state threatened Delta smelt (*Hypomesus transpacificus)*. We successfully adapted standard fish capture methods to function well in Delta marsh drainage channels with strong tidal flows. This permitted quarterly sampling of all fish entering and leaving restored and preserved marshes over a three-year period.

significantly lower slopes. The comparison to the height of the existing water tanks is not relevant, in our opinion.

Please list all the changes proposed to the PUD Zoning for this parcel.

In the Energy Report, in the Impact Analysis section, is this paragraph:

> CONSTRUCTION ENERGY USAGE
> Project construction would require site preparation, site grading and excavation, trenching, interior architectural finishing, paving and landscaping. Construction would be typical for the region and building type, and the project site does not include unusual building challenges that would require unusually high energy usage. The importation of a maximum of 7,000 cubic yards of fill material would be required, which would result in a maximum of 692 haul truck trips, as indicated in the California Emissions Estimator Model (CalEEMod) modeling estimates in the Air Quality Technical Report.

We are concerned about the amount of fill, and particularly the number of haul truck trips to bring it to the site. We would suggest a design change to minimize the amount of fill required for the project, and if at all possible, to use cut and fill methods, rather than importing fill.

In the Cumulative Impacts document, it appears that it is out of date, missing current and planned projects in Moss Beach. It also appears that the Big Wave project is not included. The lack of details makes it hard to check. It would be helpful if the projects in the Midcoast were listed in an appendix to this document.

With respect to the updated evaluation of traffic impact and mitigation, we appreciate the inclusion of transportation alternatives, and discussion of roundabouts, rather than just signals. The Council requests that the PUD zoning change not be approved until after Connect the Coastside is finalized and approved by the Coastal Commission.

We are also pleased to see that the development will design and build to LEED standards.

MIDCOAST COMMUNITY COUNCIL
s/Claire Toutant, Chair

From: Rich Francis
To: Planning_Commission
Subject: Item 4. PLN2018-00264 - MidPen Moss Beach Housing Project
Date: Monday, June 8, 2020 12:32:21 PM

My name is Rich Francis and I have lived here in Montara for 15 years.

This new project, called the MidPen Moss Beach Housing Project will seriously impact our way of life and it appears that the people in charge, you, are not adequately listening to our concerns.
As is evident in Montara, with minimal lot sizes and inappropriate house to lot to tree coverage requirement (unfortunately we're starting to look like El Granada...), the zoning laws and requirements within the moss Beach community have not been met in order to proceed with a project of this type and magnitude.

-This project is waaaaay too big for the infrastructure / area

-Traffic impacts are very significant and to date have remain unmitigated, unresolved, and inadequately planned for

-Connect the Coastside traffic management plan is being rushed and now when completed needs to be looked at by a unbiased Third Party for proper evaluation since the current administration has failed to meet its responsibilities in a timely fashion

-Peer Reviews of MidPen's Traffic Report and Hazardous materials are still not included in current staff reports and should be as a matter of public record.

-No Commitment to perform an Environmental Impact Report which is required by law not only by the County, but also by the Coastal Commission, as it is for private structures

-There will be a significant and cumulative impact on accessibility from El Granada, Half Moon Bay and Montara

-How many times do we have to yell this, there is one road in and one road out, no matter how manyu stop signs and turn abouts are installed and this project is a threat to coastal evacuation

Finally and in conclusion, this project/building is being seen as a cheap and easy appeasement to the lower income housing community and is being located in an inappropriate and much too isolated location. You should be asking the developer to spend their clients income and resources in finding a more appropriate place for such housing. The place is not in Moss Beach as it is not in Hillsboro or Tiburon, or Los Altos Hills or Atherton, if you understand what's being said here...QUIT TRYING TO DO WHAT'S EASY BUT INSTEAD DO WHAT'S RIGHT!

Rich Francis
650-201-0007

From: Sherry Kritzer
To: Planning_Commission
Subject: Item 4. PLN2018-00264
Date: Monday, June 8, 2020 12:07:31 PM

I have been concerned about the MidPen Moss Beach Housing Project since the beginning and have voiced my opinion several times in the past.

There is nothing new for me to say. My objection is based on the following: the current infrastructure can not handle this development; the traffic impact will create dangerous situations; no EIR has been completed yet; the location is isolated.

I won't say anymore. No doubt you have heard many concerns. Mine are the same as I have had since the beginning.

Thank you for including my voice in your decisions.

Sherry Kritzer
898 Etheldore Street
Moss Beach

June 7, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

RE: Vegetation Assessment of MidPen Housing Cypress Point Project Site
and California red-legged frog site adjacent to Montara Creek

Dear Commissioners and Mr. Schaller,

I write regarding the proposed Cypress Point project in Moss Beach.

I'm a professional forager, naturalist, and a plant and mushroom identification expert. I live in Montara, so I'm especially familiar with the plant communities of this area. I hike frequently, and identify plants on these walks. In 2015, I devoted myself to brokering and promoting wild foods full-time. I operate Morchella Wild Foods of California.

California's coastal fog belt is the most biodiverse part of our state, a narrow band of habitat that occurs only where summer fog brings moisture to the flora during otherwise dry months. The year-round moisture and mild temperatures result in thick vegetation, rich soil and a deep seed bank. Coastal forests here are comprised of Monterey pine and Monterey cypress, trees native to California and designated vulnerable/endangered by IUCN and the California Native Plant Society due to their small native ranges and susceptibility to disease and climate shifts. These forests are host to many native plant and mushroom communities.

The purpose of this letter is a concern I have with the planned development at Cypress Point. I attended the Planning Commission hearing in Half Moon Bay on January 22, 2020, where I was disappointed to hear the flora on the Cypress Point site described as "invasive grasslands," when it is in fact native forest. After the hearing I read MidPen's May 24, 2018 "Biological Resources Assessment," section Vegetation and found that this Assessment only discussed a fraction of the native vegetation I've observed on the project site and surrounding area. Even some of the most prominent plants were omitted from the list of species recorded during MidPen's survey in March 2017.

Some of the resources and reference guides I used in preparing this correspondence include:
Calflora database (https://www.calflora.org/)
iNaturalist database (https://www.inaturalist.org/)
Tending the Wild by Kat Anderson
California Foraging by Judith Lowry
California Native Plants for the Garden, by Carol Bornstein, David Fross, and Bart O'Brien
Mushrooms of the Redwood Coast by Noah Siegel and Christian Schwarz
Mushrooms Demystified by David Arora

Attached is a map of the project site and surrounding area with points of interest labeled 1-11 where I've observed native flora, and below I identify the plants I've observed in each specific area

1) A native plant community of coyote brush, beach and wood strawberry, yerba buena, yarrow, California mugwort, little western bittercress, oso berry, California bee plant, California everlasting, and coast angelica.
2) Mugwort, yerba buena, California bee plant, poison oak and coyote brush along northern edge of site.
3) Abundant mycorrhizal mushrooms occurring with Monterey pine here: Amanita muscaria, lactarius deliciosus, suillus spp., boletus edulis, russula queletii, and others.
4) Pacific aster, California coffeeberry, and Pacific sanicle are found throughout the site including here.
5) Beach sagewort.
6) Monterey cypress here host many native mushrooms including Agaricus bernardii, Agaricus brunneofibrillosus, Clitocybe nuda, and others.
7) Yarrow is found throughout the site, and in abundance here.
8) Coffeeberry, coyote brush, beach strawberry, Douglas iris, and checkerbloom can be found in the median between Carlos and Cabrillo Highway. In the Calflora database, there is an observation of rose leptosiphon, California Rare Plant (Rank 1B.1) being found at this location. A small and solitary plant, it would be difficult to find except when in bloom during a short period in May and June.
9) Pink honeysuckle and salt-loving agaricus mushrooms.
10) Watercress presence in Montara Creek is evidence of aquatic habitat which likely hosts red-legged frogs.
11) Single leaf onion, red flowering currant, red elderberry, arroyo willow and more can be found nearby in Montara Creek.

Of the many native plants omitted from MidPen's Biological Assessment, the most puzzling to me are the omission of California coffeeberry, yarrow, Pacific aster, Pacific sanicle, and California bee plant - because they are some of the most prominent vegetation throughout the site.

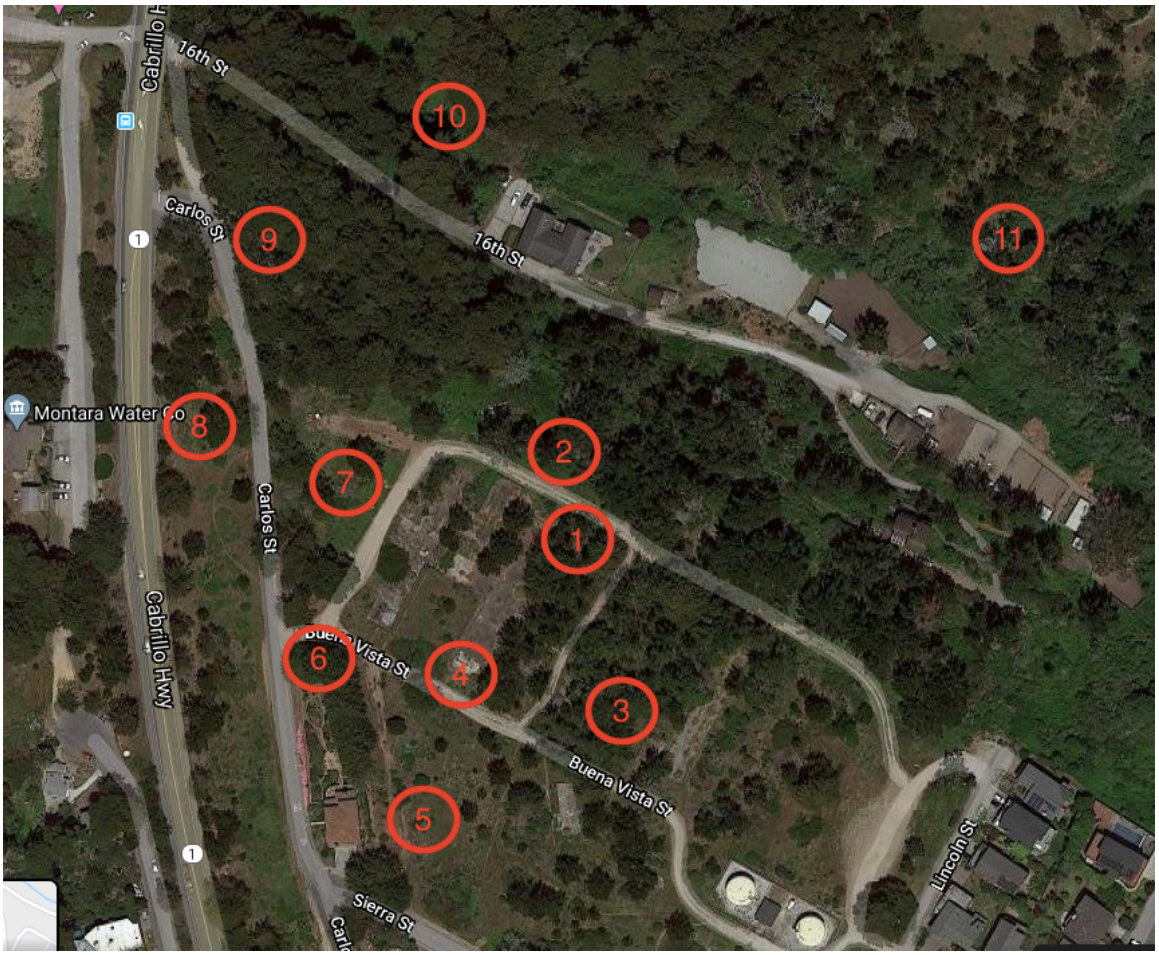
In addition, please consider that on April 12, 2020 I observed what I believe was a California red-legged frog adjacent to Montara Creek. The frog was on 14th Street, at the edge of the road, in a perennially wet spot created by a neighbor's groundwater drainage. I observed the frog about 100 yards north of Montara Creek. I understand that at this time of year this species roams from their aquatic breeding spots to upland areas during rainy periods like we had in early April this year. I have attached an image of the frog I observed. Although I am not an expert in herpetology, I understand that the prominent dorsolateral folds on the frog I observed are a key feature that distinguish California red-legged frogs from more common Pacific tree frogs. California red-legged frogs are our state amphibian, and designated a vulnerable species by IUCN due to habitat loss.

In conclusion, MidPen's Vegetation Assessment is clearly incomplete and understates the native flora that would be impacted by development here.

I urge you to postpone further consideration of this proposed project - until more a reliable biological assessment has been performed.

Sincerely,

Bryan Jessop


16th St
Cabrillo H
10
Carlos St
9
16th St
11
Montara Water Co
8
2
7
Carlos St
1
Cabrillo Hwy
6
4
3
Buena Vista St
5
Sierra St
Lincoln St

PANG ENGINEERS, INC.
TRAFFIC AND TRANSPORTATION CONSULTANTS

GAY LAWRENCE PANG, C.E., T.E.

2020010 (2)
May 1, 2020

Law Offices of Brian Gaffney APC
446 Old County Rd, Suite 100-310
Pacifica, CA 94044
ATTN: Brian Gaffney
Attorney at Law

Re: Cypress Point TIA
Moss Beach
San Mateo County, California
PLN2018-00264

Dear Mr. Gaffney:

We have "peer reviewed" for the proposed Cypress Point "Affordable" Apartment Residential Development at the northeast corner of Carlos Street and Sierra Street in Moss Beach and San Mateo County, CA, the following documents:

1. Traffic Impact Analysis (TIA), dated April, 2019 by Kittelson & Associates, Inc. in Oakland, California;
2. State of California, Department of Transportation (CalTrans) letter response, dated April 9, 2018;
3. CalTrans letter response, dated August 29, 2018;
4. San Mateo County Civil Comments-Traffic, dated September 24, 2018;
5. Executive Summary of the "Connect The Coastside" Report, January 15, 2020.

Our comments, questions, concerns, TIA omissions, and/or constructive suggestions are to gain a better understanding of the project impacts for the Transportation and Traffic elements. Several items are enumerated, and include but are not limited to this partial list, e.g. Trip Generation, Trip Distribution and Assignments, count data, Level of Service (LOS) analysis, parking, access and circulation, proposed Mitigation Measures at the critical intersections, Vehicle Miles Traveled (VMT), and other miscellaneous items.

The proposed project is a 71 Dwelling Unit (DU) "affordable" apartment complex on 10.875 acres of vacant land. It is assumed that the development is "apartments", since the TIA utilizes Land Use 220 or "apartments" within the Institute of Transportation Engineers (ITE) Trip Generation Manual.

PO BOX 4255
MOUNTAIN VIEW
CA 94040

(650) 465-2006

1. TRIP GENERATION

The TIA project trip generation estimates referenced the 9th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual, which subsequently has been updated to the 10th Edition around April, 2018. As the TIA was initiated with critical intersection counts collected during April, 2017, it is understandable that the 9th Edition was utilized at that time. However, with the subsequent delay in the release of various draft versions of the TIA in January, 2018, as evidenced by the CalTrans comment letter of April 9, 2018, and the July 2018 Planning Permit Application Referral noted in the CalTrans letter of August 29, 2018, and then the release of the latest version of the TIA dated April, 2019, there is a concern about the accuracy of the TIA trip generation estimates given the lack of review for compatibility and comparison with the latest or 10th Edition.

The TIA omits the daily weekday trip generation estimates for the proposed project.

Here are other potential comparisons for weekday daily, AM and PM peak hours, and Saturday peak hours:
DAILY:
9th Edition Estimate = 473 trips (average method); missing from TIA;
9th Edition Estimate = 554 trips (with "equation");
10th Edition Estimate = 520 trips (average method);
10th Edition Estimate = 496 trips (with "equation");

AM:
9th Edition Estimate = 37 trips (average method); shown in TIA;
9th Edition Estimate = 39 trips (with "equation");
10th Edition Estimate = 33 trips (average method);
10th Edition Estimate = 35 trips (with "equation");

PM;
9th Edition Estimate = 45 trips (average method); shown in TIA;
9th Edition Estimate = 57 trips (with "equation");
10th Edition Estimate = 40 trips (average method);
10th Edition Estimate = 44 trips (with "equation");

SATURDAY Peak Hour:
9th Edition Estimate = 37 trips (average method); shown in TIA;
9th Edition Estimate = 49 trips (with "equation");
10th Edition Estimate = 54 trips (average method);
10th Edition Estimate = 44 trips (with "equation").

Best practice would have been for the TIA's AM peak hour estimate to utilize the higher of the average vs equation methods or 39 trips, to represent a conservative approach. However, the 37 AM peak hour trips in the TIA are slightly LESS than the 39 trips for the 9th Edition. The estimates could be slightly reduced if the 10th Edition is utilized from 37 in the TIA to 35.

The PM peak hour estimate should also have utilized the higher of the average vs equation methods or 57 trips. The 45 trips in the TIA are LESS than the 57 trips for the 9th Edition. The estimates could be reduced if the 10th Edition is utilized from 45 in the TIA to 44.

The Saturday peak hour estimate should have utilized the higher of the average vs equation method or 49 trips. The 37 trips in the TIA are LESS than the 49 trips for the 9th Edition. The estimates would be increased if the 10th Edition is utilized from the 37 in the TIA to 54.

The TIA's trip generation numbers are different from the ITE manual. The TIA analyses failed to: (1) include the estimated DAILY trips for the proposed project (an omission); (2) use the HIGHER of the average vs equation methods; and (3) use the updated 10th Edition from ITE.

Because of these errors and omissions, the TIA's estimates of Project trip generation are unreliable, and unless corrected, should not serve as the basis for conclusions about Project traffic impacts.

2. TRIP DISTRIBUTION AND ASSIGNMENTS

The Project Trip Distribution along State Route 1 is shown on Table 4, page 26 of the TIA. The TIA states that "the distribution of Project trips was derived from existing travel volume data and from knowledge of the local travel times". The problem with this statement is that there is no disclosure of the time frame of the CalTrans SR 1 "seasonally" adjusted volume estimates referenced. Thus, the peer reviewer does not know if trip volume estimates were based on the April, 2017 critical intersection counts, or something else, such as a travel demand model? That foundational information must be provided to properly assess the trip distribution.

Additionally, the TIA fails to provide a "Figure" which shows the percent of traffic distribution to the local streets. Table 4 only indicates the traffic distribution along SR 1.

Further, the TIA fails to disclose the project driveway volumes shown at an "unnumbered" intersection with Carlos Street. This is important information to assess the estimated trip generation percentages from the north and south on Carlos Street. While TIA Figure 7 on page 27 shows the estimated project trip distribution, there is no driveway "intersection" disclosure as previously noted. Thus, project traffic volumes on the local streets are impossible to discern without the percentages.

The potential redistribution of the estimated project trips, along with the desire to update or revise the trip generation estimates with new information, has a direct bearing on the trip assignments at the project driveway, as well as at all critical intersections.

Because of these omissions, the TIA's estimates of Project trip distribution are unreliable, and unless corrected should not serve as the basis for conclusions about Project traffic impacts.

3. COUNTS

Appendix 2 of the TIA contains the counts at the critical intersections which were collected during April, 2017. At this point, these traffic counts are three years old. Thus, they cannot be relied upon for assessments of traffic impacts.

Rather than reliance on outdated traffic counts to accurately estimate traffic impacts, the counts should be redone to reflect more typical current expected 2020 traffic patterns (excluding the coronavirus issues), and be conducted to reflect traffic when school is open as well as a typical Summer weekday and weekend day (Saturday) traffic. Along with the outdated counts, the "seasonally" adjusted volumes utilized in the TIA remains unclear as to how they were determined. Additional clarity is required to evaluate traffic impacts to also reflect the Summer months recreational traffic and school period traffic on certain movements.

Since there is the potential for a lot of variation in the actual counts, the TIA should include both a typical school day and a Summer day be counted to adequately assess the traffic impacts.

There were several Summer months over the last three years available for additional counts. There could have been selected counts performed, especially at the critical intersections that are shown in the TIA to be significantly impacted.

The school year and Summer month traffic volumes should be compared and the HIGHER one or "worst" case utilized for the Level of Service (LOS) calculations at the critical intersections.

4. LEVEL OF SERVICE (LOS)

The errors and omissions from the TIA's estimated project trip generation, omissions from the TIA's trip distribution and assignment discussion, the lack of any "growth" factors due to the delay of nearly 3 years for "existing" and Summer traffic counts, and the omission of an updated list of "approved" projects, all are factors which make the TIA's LOS calculations unreliable.

On that basis, ALL of the LOS calculations should be redone based on proper trip generation estimates, accurate trip distribution and assignments, and updated traffic counts as discussed above. In the absence of modified LOS calculations, the TIA's current LOS results should not serve as the basis for conclusions about Project traffic impacts.

Additional comments are provided in the Traffic Mitigation section.

Notwithstanding the above flaws, the LOS calculations shown in the TIA indicate significant traffic impacts at some of the critical intersections, and should not be ignored.

5. PARKING

The proposed on-site parking on the Site Plan indicates 142 stalls, or 2 stalls per apartment dwelling unit. That is 15 parking stalls in excess of the San Mateo County code requirement of 127 stalls. See TIA Table 18, page 60.

The TIA utilized the 4th Edition of the Parking Generation Manual. Since 2017 there is a 5th Edition released in April, 2019 available. What is troubling is that the TIA utilizes Land Use #221 and not Land Use #220 available in the 5th Edition. Thus, this portion of the TIA should be updated, e.g. Table 19, page 61.

Further analysis is required to include not only the average parking generation rates but also the 85th percentile values, and compare that with the San Mateo County code requirements.

Notably, if the goal is to reduce the project traffic impacts with less traffic, then the increase in the project parking supply above the San Mateo County code requirements will have the opposite effect.

6. ACCESS AND CIRCULATION

Based on the review of the Site Plan (page 12), we understand that only one driveway is proposed to provide project vehicular access to and from Carlos Street. The driveway is in close proximity to Intersection #3, SR-1/Carlos Street, as well as Intersection #4, Carlos Street/Sierra Street. There is an emergency access to Lincoln Street to the east (page 46).

A more detailed Driveway/Carlos Street intersection design or sketch is required to indicate how the project vehicular operations will be implemented.

There are likely to be significant adverse traffic impacts from the proposed project Driveway/Carlos Street intersection operations. These operational issues should be analyzed further before project approval. Currently, operational traffic issues from inadequate sight distance, inadequate turning radii, and others, have not been adequately analyzed, mitigated, or avoided.

7. MITIGATION MEASURES

The proposed Mitigation Measures are in the TIA starting on page 49.

In reference to the significant traffic impacts based on the LOS calculations for the Existing Conditions or TRAF-1, the TIA discusses mitigations TRAF-1A and TRAF-1B.

TRAF-1A
Intersection #7 or SR-1/California Avenue-Wienke Way for the PM peak hour and Saturday peak hour:

The conversion of the existing two-way STOP control into a roundabout or signalized intersection is the proposal with a determination upon the completion of the Intersection Control Evaluation (ICE) study required by CalTrans. This is an unresolved mitigation measure as there has not been a completion of the ICE study nor any information regarding the potential "fair share" cost sharing aspects with the proposed development. In the absence of this information about who will pay or the ICE results, the mitigation's feasibility is unknown.

The ICE study and the Connect to Coastside Study recommendations, when completed, should be included in an updated TIA analysis.

Without the ICE Study and without a "fair share" cost sharing agreement, this proposed mitigation measure is incomplete, unenforceable, and cannot be relied upon for a conclusion of a less than significant traffic impact.

TRAF-1B
"Develop a Transportation Demand Management (TDM) Plan for the review and approval by San Mateo County".

In the absence of a TDM Plan, it is impossible to assess its feasibility or how it will potentially mitigate acknowledged significant traffic impacts.

The TIA indicates that "the effectiveness of a TDM plan cannot be guaranteed" (page 50). CalTrans has also commented on this issue, as well as prior San Mateo County Civil (Traffic) responses and suggestions. Thus, the proposed mitigation measure does not resolve the significant traffic impacts that have been identified.

In reference is to the significant traffic impacts based on the LOS calculations for the Background Conditions or TRAF-2, the TIA discusses mitigations TRAF-2A and TRAF-2B.

TRAF-2A
Intersection #7 or SR-1/California Avenue-Wienke Way for the PM peak hour and Saturday peak hour:

Similar to TRAF-1A and 1B above, those comments are repeated herein.

TRAF 2B:
Intersection #3 or SR-1/Carlos Street for the Saturday peak hour.

Three potential mitigation measures were considered (page 52):
1. Closing Carlos Street between SR-1 and the Project to all but emergency vehicles;
2. Connecting Carlos Street with 16th Street instead of SR-1;
3. Grading the east side of SR-1 to provide clear sight distance.

The TIA does not identify "feasible" mitigation measures for Item #1 above.

Item #2 above has geometric and topographic challenges, and right of way issues, which remain unresolved.

Item #3 above is a challenge to obtain the clear sight distance requirements. However, merely stating that a topographic map will be required is insufficient. There are other CalTrans issues not studied nor adequately discussed including but not limited to a "fair share" agreement for the right of way, and intersection and street improvement costs.

The TIA has not identified cost sharing for any of the above three mitigations, and that undermines the feasibility of the proposed mitigation measures as discussed above.

Also, the TDM Plan is once again mentioned and the prior response stated above in TRAF 1B applies.

In reference to the significant traffic impacts based on the LOS calculations for the Cumulative Conditions or TRAF-3, the TIA discusses mitigations TRAF-3A, TRAF-3B, and TRAF-3C.

TRAF-3A
Intersection #3 or SR-1/Carlos Street for the AM, PM and Saturday peak hours.

The TIA proposes to implement the TDM program or TRAF-1B, which has not as yet been developed nor submitted, is an unacceptable mitigation measure for the reasons above.

TRAF-3B
Intersection #6 or SR-1/Vallemar Street-Etheldore Street for the Saturday peak hour.

The TIA proposes to implement the TDM program or TRAF-1B which has not as yet been developed nor submitted, is an unacceptable mitigation measure for the reasons above.

An additional mitigation measure of a new traffic signal was analyzed and the peak hour signal warrant was not satisfied. Therefore, this is NOT an adequate proposed mitigation measure.

TRAF-3C
Intersection #2 or SR-1/16th Street for the PM peak hour and Cumulative with Project Condition.

The TIA proposes to implement the TDM program or TRAF-1B which has not as yet been developed nor submitted, is an unacceptable mitigation measure. The traffic signal peak hour warrant is not satisfied. Therefore, there is no mitigation measure that reduces the traffic impacts to less than significant.

In reference to the significant traffic impacts based on Design Features or TRAF 4, the TIA discusses mitigation TRAF-4A.

TRAF 4A
The SR-1/Carlos Street intersection (#3) has restricted sight distance along the east side of SR-1.

The proposed mitigation measure of TRAF-1B or a TDM program is unacceptable for the reasons above. The TIA fails to provide a design of this intersection to resolve the sight distance issues, along with a "fair share" agreement as to the future costs of any proposed intersection improvements, and other sight distance and intersection street improvements.

In reference to the safety of public transit, bicycle and pedestrian facilities or TRAF-5, the TIA discusses mitigations TRAF-5A and TRAF-5B.

TRAF 5A
Sidewalk construction mitigation measure should be a condition of development.

TRAF-5B
The proposed mitigation measure of distributing information is a given and not a true mitigation measure. The TIA fails to provide a sketch detailing the bus stop locations with signing, crosswalk markings if deemed feasible, and the correction with actual physical improvements of the inadequate sight distance along SR-1.

Additional continuing collaborative efforts with Sam Trans at a minimum should be required for all project related bus route changes, and the TIA should include analysis of impacts on traffic of such bus-related mitigation measures.

8. VEHICLE MILES TRAVELED

The concept of Vehicle Miles Traveled (VMT) should either complement or replace the LOS analysis depending upon the transition by San Mateo County to this type of analysis. However, it is important to note that VMT analysis does not eliminate nor remove the significant traffic impacts already noted with the LOS calculations within the TIA.

To accurately analyze traffic impacts, the TIA should provide estimates of the VMT for this proposed project to complement the results and traffic impacts from the LOS calculations.

9. OTHER

A. Queues (TIA, page 63)

The TIA contains the queue calculations for the 95th percentile analysis at the request of CalTrans. It appears that the analyses are adequate assuming that the inputs were consistent. Nevertheless, there are issues previously mentioned with the trip generation, trip distribution and assignments, and "seasonally" adjusted counts that must be analyzed to properly reflect the project traffic impacts.

B. CalTrans Comments

Two CalTrans comment letters have been submitted regarding the proposed project. The first is dated April 9, 2018 and the second August 29, 2018. Our comments are as follows:

CalTrans April 9, 2018 Letter

This Caltrans letter raises the issue of Vehicle Miles Traveled (VMT) and its goal to reduce VMT while tripling bicycle, and doubling pedestrian and transit travel. Their comments are based on the January 2018 Draft Traffic Analysis.

CalTrans indicates that "improvements to SR-1 may be necessary to accommodate increased vehicle, transit, pedestrian, and bicycle trips associated with the project". There are many SR-1 challenges and multiple constraints affecting SR-1 which still MUST be evaluated before project approval. Some of the items raised by CalTrans, to the best of our knowledge, have NOT been adequately analyzed within the revised TIA of April, 2019. These include the following:

1. right of way (ROW) constraints and topography limit options for the Carlos Street/SR-1 intersection;
2. SR-1 has limited accommodations for transit users, cyclists, and pedestrians in his area;
3. sight distance and potential turning movement conflicts limit the options for intersection improvements;
4. accessing the coast or existing southbound SamTrans Route 17 bus stop, which runs on one-hour headways, requires crossing SR-1 at an unsignalized intersection;
5. accessing the northbound SamTrans Route 17 bus or the community of Montara requires walking along the shoulder of SR-1 for approximately 0.15 miles.

The TIA does not adequately address those issues. Not only should additional analyses be performed, e.g. a CalTrans ICE Study, but those items should be adopted prior to project approval.

The TIA still does not include an adequate nor detailed analysis for the issues such as the Carlos Street emergency vehicles only between project driveway and SR-1; 16th street, eastbound and westbound approaches, right turns only; and Vallemar Street/Etheldore Street, eastbound and westbound approaches, right turns only.

Also, the TIA proposes to convert the SR-1/California Avenue-Wienke Way intersection from a two-way STOP controlled into a roundabout or signalized intersection. However, while there are some LOS calculations in the Appendices of the TIA, an actual sketch or preliminary design for either a signalized intersection or roundabout has not been included within the revised TIA.

The TIA has however, included a queue analysis for vehicular storage as previously noted, but has NOT analyzed the truck U-Turn issue at critical intersections.

With respect to Multimodal Planning, Caltrans has identified a "Fair Share" contribution concept "toward multimodal and regional transit improvement to fully mitigate cumulative impacts to regional transportation". The "fair share" contribution concept has not been included within the revised April, 2019 TIA.

Additionally, CalTrans has suggested a Pedestrian Hybrid Beacon (PHB) be evaluated and considered with high visibility crosswalk at the SR-1/14th Street intersection, and the relocation of the SamTrans route 17 southbound bus stop to that location across from the existing northbound stop. Neither of those suggestions were adequately analyzed, with the PHB issue completely ignored within the revised April, 2019 TIA.

Primary and secondary effects on pedestrians, bicyclists, disabled traveler, and transit user have not been adequately analyzed within the revised TIA.

A robust TDM Program is suggested by CalTrans to reduce VMT. The revised TIA has not adequately analyzed the development of a TDM Program yet indicates that there are no guarantees involved in reducing traffic impacts.

CalTrans has noted that "any proposed non-standard design feature (such as inadequate sight distance) will have to be approved by a Fact Sheet for Exceptions to Mandatory and/or Advisory Design Standards prior to implementation." The revised TIA has not moved forward with any sketches regarding the sight distance inadequacy along SR-1.

CalTrans August 29, 2018 Letter

This Caltrans letter refers to the Application Referral. It duplicates the first letter with respect to the VMT issue, and multimodal planning. New issues include hydraulics, as well as the Travel Demand Analysis and Mitigation wherein "the July, 2018 TIA has not been updated to reflect CalTrans' comments on the January 2018 Draft Traffic Analysis". Nor has the "fair share" contribution concept been included within the revised TIA, and it is again mentioned herein.

The VMT reduction is once again mentioned and has not been analyzed within the revised TIA.

CalTrans has commented that "reducing parking supply can encourage active forms of transportation, reduce regional VMT, and lessen future transportation impacts on State facilities". Yet the proposed project has a parking supply of 142 stalls or 15 stalls ABOVE the San Mateo County code required amount of 127 stalls.

The revised TIA has failed to address many of the comments from CalTrans' two letters. This points to the TIA's continued failure to adequately analyze project impacts and feasible mitigation measures.

C. San Mateo County Comments

San Mateo County has provided Civil (Traffic) comments. Nine items were listed, and the key items are:

Item #4: "the proposed turn restrictions as mitigation measures are not acceptable. Please provide alternative mitigation measures to address project significant impact at Highway 1 and Vallemar/Etheldore and Highway 1 and 16th." (Not included within the revised TIA);

Item #5:"the closure of Carlos Street to all motor vehicles other than emergency vehicles is not acceptable as a mitigation measure. Please provide other mitigation measures to address the project's significant impacts." (Not included within the revised TIA).

Item #6: SamTrans bus stop relocation is not a County project. It is up to the applicant to coordinate with SamTrans and provide all the necessary approvals from SamTrans to the County for review and consideration before the TIA can be approved. Please provide alternate mitigation measures in case SamTrans does not approve the proposed rerouting." (Not included within the revised TIA).

Item #7: "Please provide documentation that supports the premise that a fully funded project is currently moving forward. Absent an assurance that a fully funded project is in the process of being implemented, the applicant will be responsible for mitigating the project's impacts." (Not included within the revised TIA).

Item #8: "If the applicant is proposing any TDM measures as mitigation, the measures need to be clearly defined and calculations shown as how many trips will be reduced by each measure and how that will impact the operations and LOS at the applicable intersections. In addition, please provide a monitoring measure to each of the TDM measures proposed and alternate measure in case the monitoring shows that TDM is not as effective as assumed."
(Not included within the revised TIA).

The revised TIA has failed to address many of the San Mateo County Civil (Traffic) comments. This points to the TIA's continued failure to adequately analyze project impacts and feasible mitigation measures.

D. Traffic Infusion on Residential Environment (TIRE)

The Executive Summary of the Connect The Coastside Report refers to the extensive community outreach program. Curiously, the TIA does not include mitigation measures for street segments e.g. along Carlos Street, as that street serves the proposed project and has a traffic impact on the existing residential developments. A Traffic Infusion on Residential Environmental (TIRE) analysis which requires Average Daily Traffic (ADT) volumes for both a typical weekday and weekend day for two scenarios i.e. during the school year and for a Summer day, should be performed. The analysis and evaluation would include the comparison of the TIRE Index and the change in the index with the proposed project. The potential traffic impacts on at least two segments along Carlos Street, e.g. near the project site north of Sierra Street, and also north of Etheldore Street should be included. This evaluation would reveal whether or not the Carlos Street segments would be adversely impacted on those two segments.

SUMMARY

This "peer review" of the April, 2019 TIA, CalTrans' two comment letters, and the San Mateo County Civil (Traffic) comments for the proposed 71 dwelling units "affordable" apartment residential development, included a summary review of the Traffic Impacts that were listed as significant and unavoidable.

Additional clarification is required as to how these Traffic impacts will be mitigated appropriately and conditioned as part of the approval of the proposed project, with the comments and concerns previously indicated.

The estimated trip generation, trip distribution and assignments, traffic counts, the Level of Service (LOS) calculations for several scenarios, parking, access and circulation, the TRAF Mitigation Measures, Vehicle Miles Traveled (VMT), and residential street segments, all have some errors and omissions as noted above, which require further evaluation/clarification and should be analyzed in more detail.

Of particular concern is that many of the comments from Caltrans and the San Mateo County Civil (Traffic) comments do not appear to have been included in the revised April, 2019 TIA.

Our review indicates that there are potentially significant deficiencies, omissions, and inaccuracies within the TIA. It is our opinion that the deficiencies, omissions, and inaccuracies would require revisions and amplifications to arrive at an acceptable and complete evaluation of the traffic and transportation issues within a subsequent and additional revised TIA.

Reasonable, appropriate, and updated potential mitigation measures, along with conditions of development, any "fair share" contributions, and with the appropriate findings and conclusions, should be included within any revised evaluations.

Very Truly Yours,

Gay Lawrence Pang
Civil Engineer #20,203
Traffic Engineer #073

Documents Reviewed

1. TIA dated April, 2019
2. CalTrans comment letter dated April 9, 2018
3. CalTrans comment letter dated August 29, 2018
4. San Mateo County Civil (Traffic) comments dated September 24, 2018
5. Executive Summary-Connect The Coastside, dated January 15, 2020

From:	Harald
To:	midcoastcommunitycouncil@gmail.com
Cc:	Michael Schaller; erik.martinez@coastal.ca.gov; Planning_Commission; Lisa Ketcham
Subject:	PUD 140 Cypress Point Moss Beach / MidPen - (APN 037-022-070)
Date:	Wednesday, March 11, 2020 6:36:50 PM

Dear Midcoast Community Council members,

The proposed Cypress Point project includes proposed amendment to the San Mateo County General Plan to change the land use designation of APN 037-022-070, amendment to the County's Zoning Map, amendment of the County's zoning text, and creation of an entirely new Planned Unit Development (PUD -140) designation for the project site.

With this letter I want to iterate my concerns raised during the Feb 26 MCC meeting regarding the PUD -140. While PUD-140 contains a number of misleading statements, I'm especially concerned about the following two items:

1. Environmental impact due to proximity to an environmentally sensitive habitat areas (ESHA) – Montara Creek

The 1985 EIR for a different project on the same site found that Montara Creek is located approximately 50 feet north of the project site. The Montara Creek riparian corridor is an Environmentally Sensitive Habitat Area (ESHA) as defined by the San Mateo County LCP.

PUD-140 states on page 7:

No environmentally sensitive habitat areas (ESHA) have been identified on the project site. The closest ESHA is Montara Creek, which lies to the north of the project parcel.

And page 21 states:

Montara Creek, a perennial stream, is located approximately 250 feet to the northeast of the site, and runs parallel to the site's

northern border.

Question: Why does the EIR from 1985 state a distance of 50 feet to Montara Creek (ESHA) vs 250 feet in PUD-140? Did property boundaries or the location of Montara Creek change?

2. Updated liquefaction maps show that the named property (APN 037-022-070) is in a landslide zone and parts are in a liquefaction landslide overlap zone.

Source: The California Geological Survey released a series of new seismic hazard zones for parts of San Mateo and Contra Costa counties (April 2019) including Moss Beach.

https://www.mercurynews.com/2019/04/05/earthquake-maps-for-san-mateo-contra-costa-counties-show-vulnerable-areas/

PUD 140 Page 21 states:

Hazards Component Policy 9.1 (Definition of Hazard Areas) defines hazardous areas as “fault zones and land subject to dangers from liquefaction and other severe seismic impacts, unstable slopes, landslides, coastal cliff instability, flooding, tsunamis, fire, and steep slopes (over 30%).”

AND

The subject site is not within or immediately adjacent to a known fault zone, nor does it have steep or unstable slopes or soils subject to liquefaction.

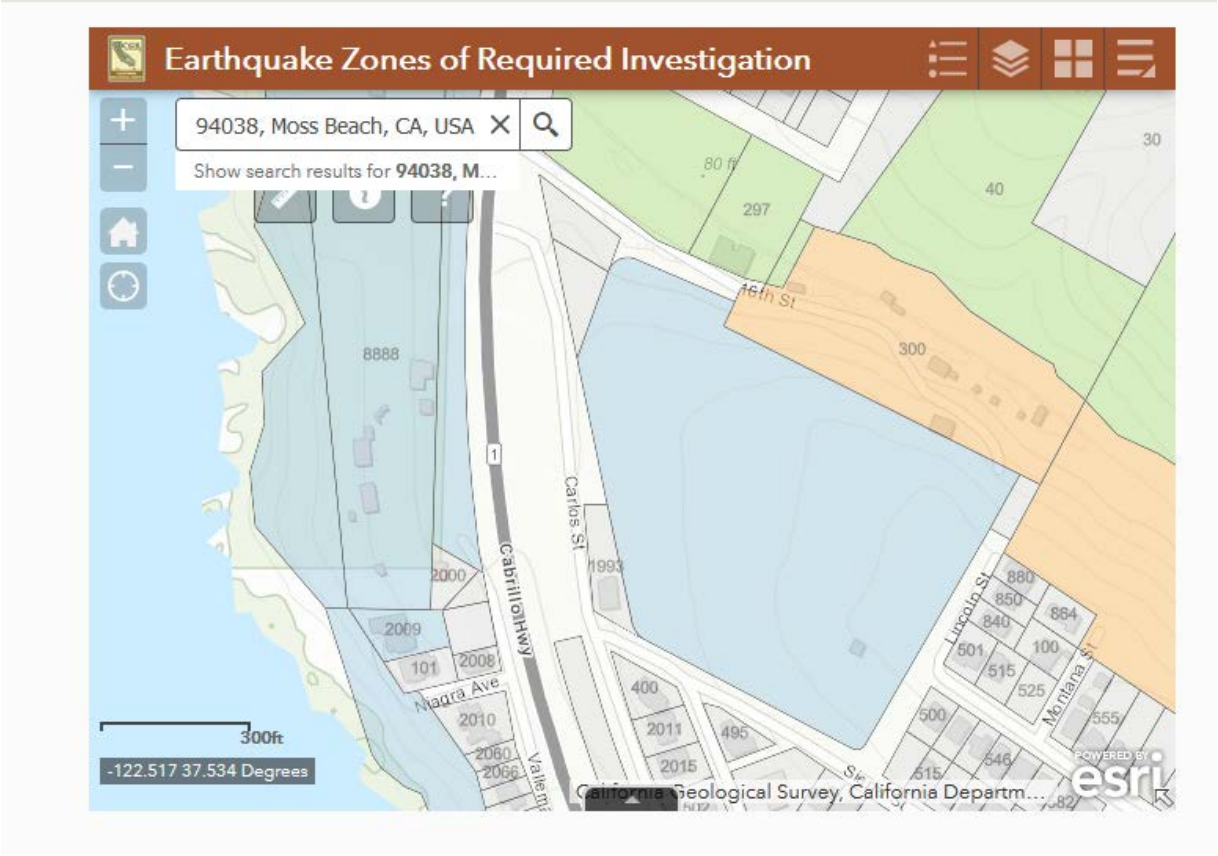
Question: What additional measures need be taken to build a large scale development in a landslide and liquefaction landslide overlap zone? This is especially important as this property has been extensively used by the Navy in the past and no records are available indicating that the site has been cleaned up.

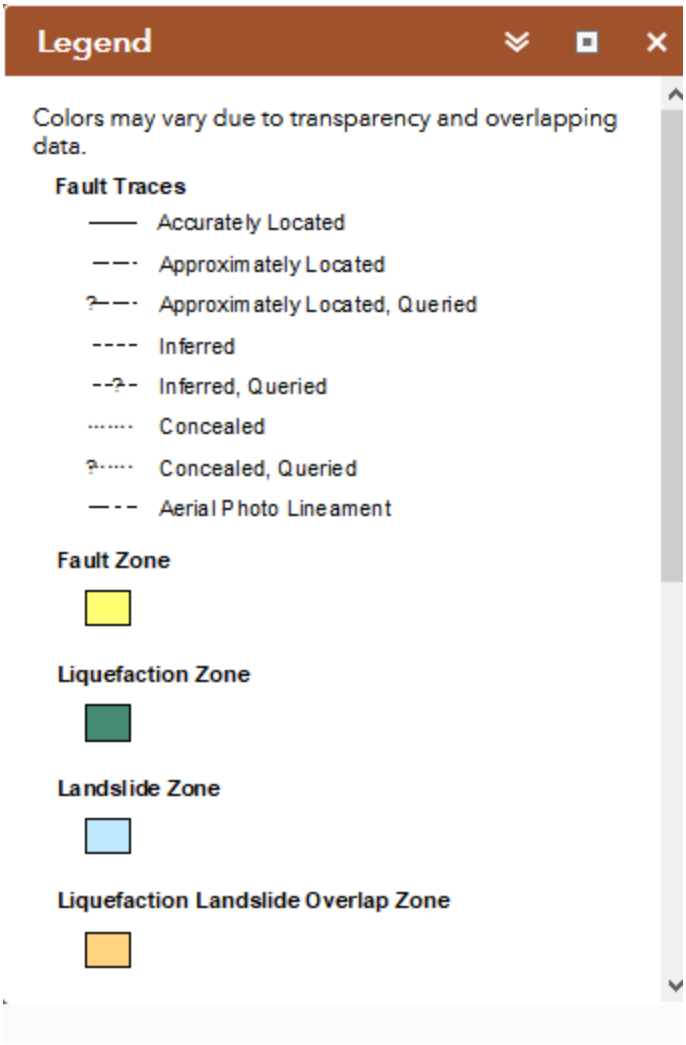
Thank you for all your work on the MCC.

Best regards,

Harold Herrman

SM MidCoast




Legend
Colors may vary due to transparency and overlapping data.
Fault Traces
Accurately Located
Approximately Located
Approximately Located, Queried
Inferred
Inferred, Queried
Concealed
Concealed, Queried
Aerial Photo Lineament
Fault Zone
Liquefaction Zone
Landslide Zone
Liquefaction Landslide Overlap Zone

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April 9, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

Subject: Comments on the MidPen Cypress Point Project, PLN2018-00264

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

We write regarding the proposed MidPen Cypress Point Project ("Project") located in Moss Beach, California. MidPen proposes to develop 71 housing units, a community building, and outdoor recreation areas on the 11-acre Project site. I am a California-licensed hydrogeologist and the former Senior Science Policy Advisor with the U.S. EPA. My CV is attached for reference as Exhibit A.

To prepare the comments below, we have reviewed the Project's Preliminary Environmental Evaluation Report (PEIR) dated April 2019, the Phase I Report dated November 10, 2015, the Additional Subsurface Investigation and Water Well Evaluation dated February 20, 2018, the Groundwater Sampling and Well Destruction Report dated April 9, 2018.

Our review of the above documents leads us to conclude that the PEIR fails to adequately evaluate the Project's impacts in the subject areas of Hazards and Hazardous Materials and Hydrology and Water Quality. Impacts associated with construction and operation of the proposed Project are undisclosed and inadequately mitigated. An Environmental Impact Report (EIR) should be prepared to assess and mitigate the potential impacts that the Project may have.

Hazards and Hazardous Materials

The PEIR fails to disclose residual soil contamination at the Project site. The Project site is a former World War II-era facility used for gunnery training. A November 10, 2015 Phase I Environmental Site Assessment (ESA), prepared for the Project, describes the Project site to have been used for barracks, offices, a mess hall, a library, a garage, a boiler room, and an incinerator.

On the basis of a Phase I recommendation, a Phase II ESA sampling investigation was completed. The Phase II ESA found two locations (Borings B-7 and B-21) where lead concentrations in soil exceeded the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL).

The concentrations of lead in those two samples, taken at the ground surface, was 230 mg/kg and 88 mg/kg, respectively. In contrast, the RWQCB ESL for lead in residential shallow soil is 32 mg/kg[1] based on terrestrial habitat exposure.

The lead contamination was attributed in the Phase I ESA to the use of lead paint. The Phase II ESA was followed by an additional investigation (the February 20, 2018 "Additional Subsurface Investigation & Water Well Evaluation") that conducted further sampling for lead in soil. The additional investigation found lead at one location at concentrations above the ESL. The concentration of lead in soil at boring CS-3 was found to be 290 mg/kg – nine times the ESL. Figure 2 from the additional investigation is attached and shows that the horizontal extent of the lead contamination has not been determined.

The additional investigation, without any regulatory input, prescribed mixing of Project site soils upon excavation as a solution to the lead contamination. None of these lead contamination results, nor the suggested soil mixing plan, were disclosed in the PEIR. The mixing plan also does not address the fact that the horizontal extent of the lead contamination is unknown and that additional elevated lead soil concentrations ("hot spots") may be found if further testing as conducted.

No documentation was provided in the PEIR, in the Phase I, the Phase II or the additional investigation to show that the results were shared with any regulatory agency. The Project site does not appear on the RWQCB Geotracker or the Department of Toxic Substances (DTSC) Control Envirostor websites and therefore the lead contamination that was found apparently has not been brought to the attention of the RWQCB or the DTSC.

The Phase I, the Phase II and the additional investigation basically self-certify that the sampling that was conducted and the analysis of the results do not pose a threat to human health with the soil mixing plan that is planned. The additional investigation concluded (p. 5):

> On the basis of the information, presented herein, no further investigation or remedial action is warranted at this time.

Without regulatory review, this conclusion of no further action or remediation and the basis for this conclusion (all which was not disclosed in the PEIR), should not be relied upon for decision making about the potential risk to human health and the adequacy of the Mitigation Measure HAZ-1, the sole mitigation measure proposed to address Hazards and Hazardous Waste impacts. Mitigation Measure HAZ-1 only commits to a management plan and is quoted in its entirely below:

> MidPen will prepare a Site Management Plan for the project site prior to submitting an application for a Coastal Development Permit for the proposed project, and will comply with all requirements and implement all BMPs contained in the plan during construction of the project.

Because of the lead contamination, the Phase I, the Phase II and the additional investigation should be submitted for regulatory review, to the San Mateo County Environmental Health Services, to the San

[1] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html (Table "Tier 1 ESLs")

Francisco Bay RWQCB, and to DTSC. A formal voluntary oversight agreement is recommended with the RWQCB to certify the reliability of the data for decision making and to ensure the protection of public health. Any determination by the regulatory agencies about the need for further action, to include sampling or soil excavation and off-site disposal, should be included in an EIR.

Hydrology and Water Quality

The Project site is located approximately 750 feet from the coastline. A perennial stream (Montara Creek), located approximately 50 to 250 feet to the northeast of the project site, runs in parallel to the northern border of the site (prior to emptying into the Pacific Ocean).

The PEIR states (p. 18):

> Potential impacts to groundwater and surface water quality could occur both during construction and operation of the proposed project. Temporary increases in the erosion of exposed soils during construction of the project could result in minor on-or-off-site water quality impacts, particularly if rainfall events occur during an active construction phase.

The PEIR further states (p. 18):

> On-site soils are subject to severe water erosion hazards (NRCS 2018).

What the PEIR fails to disclose is that onsite soils are contaminated with lead at concentrations greater than the RWQCB ESL 32 mg/kg for the protection of terrestrial habitat.[2] The PEIR makes no specific provisions in Mitigation Measure GEO-2 for the protection of terrestrial habitat in the adjacent Montara Creek from the erosion of lead-contaminated soils upon soil disturbance during the Project's construction period or from any residual soil contamination that would be left in place after the mixing of site soils, as planned.

Note that the statistical analysis that was performed in the Additional Subsurface Investigation & Water Well Evaluation found the upper 95th percentile confidence limit for lead in soil to be 42 mg/kg. This value exceeds the ESL of 32 mg/kg for the protection of terrestrial habitat.

Best management practices (BMPs) that are specific to known lead contamination at concentrations above the terrestrial habitat protection ESL need to be implemented during the project construction period. The reference in the PEIR to compliance with the State Water Resources Control Board Construction General permit is insufficient mitigation without consideration of the lead contamination and specific BMPs that would be taken to control lead in stormwater runoff An EIR should be prepared to disclose lead contamination in the context of Hydrology and Water Quality impacts, along with effective mitigation measures and BMPs to control lead-contaminated soils from erosion and transportation to the adjacent Montara Creek.

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[2] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html (Table "Summary of Soil ESLs")

Sincerely,

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

Attachment A: CV, Matt Hagemann

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

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

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.

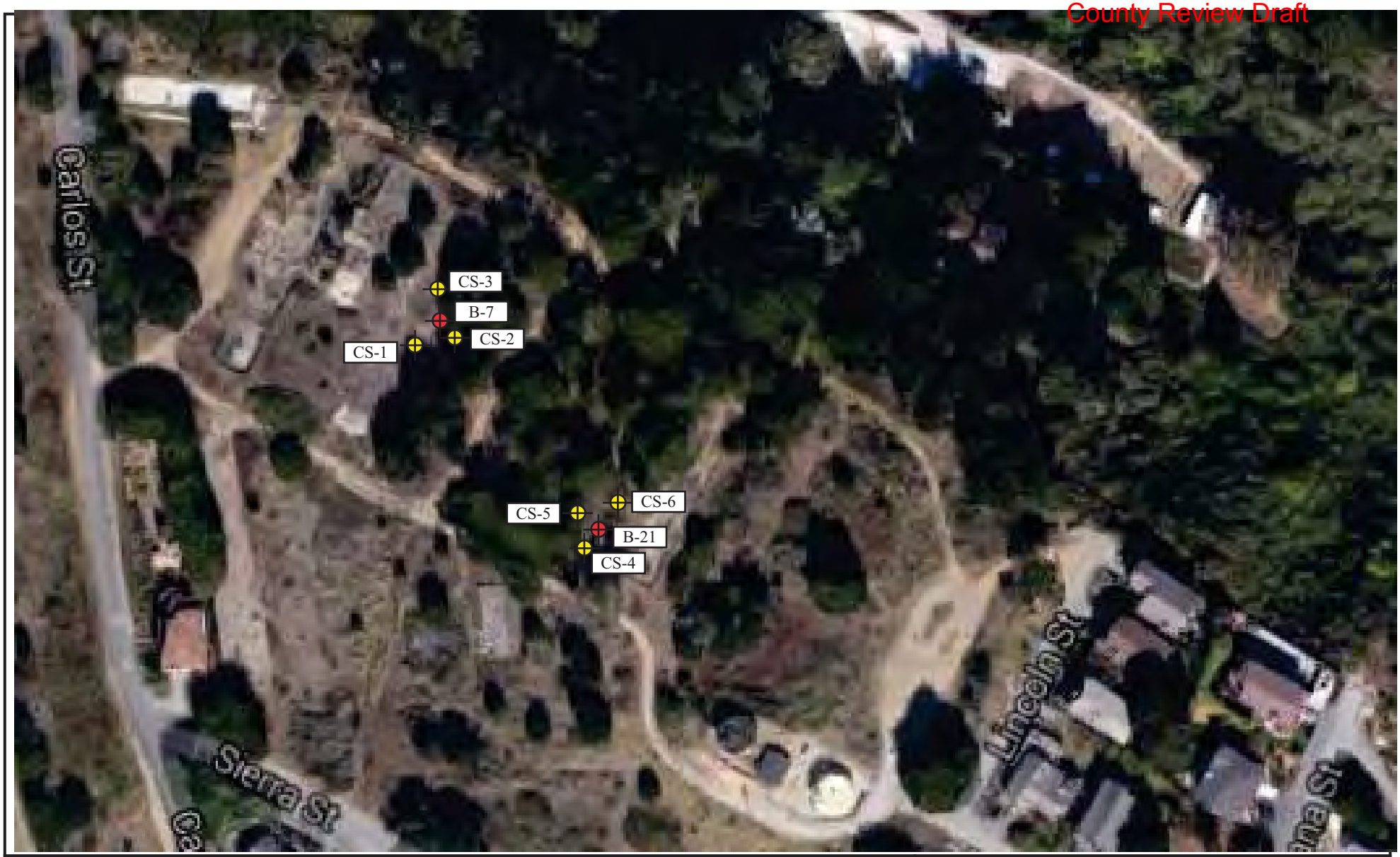
Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

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

Attachment B: Additional Subsurface Investigation & Water Well Evaluation – Figure 2

County Review Draft



LEGEND

- Soil Boring (AEI, 2017)
- Exploratory Boring (AEI, 2015)

0 50 100
APPROXIMATE SCALE (Feet)

N

AEI CONSULTANTS

3880 S. BASCOM AVENUE, SAN JOSE, CALIFONIA

CONFIRMATION BORING LOCATIONS

Carlos Street at Sierra Street
Moss Beach, California

FIGURE 2
Project No. 350248

Attachment C: Environmental Screening Level Tables

Tier 1 ESLs [1]

2019 (Rev. 2)

Based on a generic conceptual site model designed for use at most sites[2]

Chemicals	CAS No.	Groundwater (µg/L)	Soil (mg/kg)	Subslab / Soil Gas (µg/m^3)	Indoor Air (µg/m^3)
1,2-Dichloropropane	78-87-5	2.3E+00	6.5E-02	9.4E+00	2.8E-01
1,3-Dichloropropene	542-75-6	5.0E-01	1.7E-02	5.8E+00	1.8E-01
Dieldrin	60-57-1	1.4E-04	4.6E-04	2.0E-02	6.1E-04
Diethyl phthalate	84-66-2	1.5E+00	2.5E-02	--	--
Dimethyl phthalate	131-11-3	1.5E+00	3.5E-02	--	--
2,4-Dimethylphenol	105-67-9	1.0E+02	8.1E+00	3.3E+01	1.0E+00
2,4-Dinitrophenol	51-28-5	3.9E+01	3.0E+00	--	--
2,4-Dinitrotoluene	121-14-2	2.4E-01	2.3E-02	--	--
1,4-Dioxane	123-91-1	3.8E-01	1.7E-04	1.2E+01	3.6E-01
Dioxin (2,3,7,8-TCDD)	1746-01-6	1.4E-08	4.8E-06	2.5E-06	7.4E-08
Endosulfan	115-29-7	8.7E-03	9.8E-03	--	--
Endrin	72-20-8	2.3E-03	1.1E-03	--	--
Ethylbenzene	100-41-4	3.5E+00	4.3E-01	3.7E+01	1.1E+00
Fluoranthene [PAH]	206-44-0	8.0E+00	6.9E-01	--	--
Fluorene [PAH]	86-73-7	3.9E+00	6.0E+00	--	--
Heptachlor	76-44-8	2.1E-04	1.2E-01	7.2E-02	2.2E-03
Heptachlor epoxide	1024-57-3	1.1E-04	1.8E-04	3.6E-02	1.1E-03
Hexachlorobenzene	118-74-1	7.7E-04	8.0E-04	1.8E-01	5.5E-03
Hexachlorobutadiene	87-68-3	1.4E-01	2.8E-02	4.3E+00	1.3E-01
g-Hexachlorocyclohexane (Lindane)	58-89-9	1.6E-02	7.4E-03	--	--
Hexachloroethane	67-72-1	3.3E-01	1.9E-02	8.5E+00	2.6E-01
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	4.9E-02	4.8E-01	--	--
Lead	7439-92-1	2.5E+00	3.2E+01	--	--
Mercury (elemental)	7439-97-6	2.5E-02	1.3E+01	1.0E+00	3.1E-02
Methoxychlor	72-43-5	3.0E-03	1.3E-02	--	--
Methylene chloride	75-09-2	5.0E+00	1.2E-01	3.4E+01	1.0E+00
Methyl ethyl ketone	78-93-3	5.6E+03	6.1E+00	1.7E+05	5.2E+03
Methyl isobutyl ketone	108-10-1	1.2E+02	3.6E-01	1.4E+04	4.2E+02
Methyl mercury	22967-92-6	3.0E-03	3.4E-02	--	--
2-Methylnaphthalene	91-57-6	2.1E+00	8.8E-01	2.3E+03	6.8E+01
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.0E+00	2.8E-02	3.6E+02	1.1E+01
Molybdenum	7439-98-7	1.0E+02	6.9E+00	--	--
Naphthalene [PAH]	91-20-3	1.7E-01	4.2E-02	2.8E+00	8.3E-02
Nickel	7440-02-0	8.2E+00	8.6E+01	--	--
Pentachlorophenol	87-86-5	1.0E+00	1.3E-02	--	--
Perchlorate	7790-98-9	6.0E+00	5.5E+01	--	--
Petroleum - Gasoline	--	1.0E+02	1.0E+02	3.3E+03	1.0E+02
Petroleum - Stoddard Solvent	--	1.0E+02	1.0E+02	1.1E+04	3.3E+02
Petroleum - Jet Fuel	--	1.0E+02	1.0E+02	1.1E+04	3.3E+02
Petroleum - Diesel	--	1.0E+02	2.6E+02	8.9E+03	2.7E+02
Petroleum - HOPs	--	1.0E+02	--	--	--
Petroleum - Motor Oil	--	--	1.6E+03	--	--
Phenanthrene [PAH]	85-01-8	4.6E+00	7.8E+00	1.8E+03	5.5E+01
Phenol	108-95-2	5.0E+00	1.6E-01	5.2E+03	1.6E+02
Polychlorinated biphenyls (PCBs)	1336-36-3	1.7E-04	2.3E-01	1.6E-01	4.9E-03
Pyrene [PAH]	129-00-0	2.0E+00	4.5E+01	--	--
Selenium	7782-49-2	5.0E-01	2.4E+00	--	--
Silver	7440-22-4	1.9E-01	2.5E+01	--	--
Styrene	100-42-5	1.0E+01	9.2E-01	3.1E+04	9.4E+02
tert-Butyl alcohol	75-65-0	1.2E+01	7.5E-02	--	--
1,1,1,2-Tetrachloroethane	630-20-6	5.7E-01	1.7E-02	1.3E+01	3.8E-01
1,1,2,2-Tetrachloroethane	79-34-5	1.0E+00	1.8E-02	1.6E+00	4.8E-02
Tetrachloroethene	127-18-4	6.4E-01	8.0E-02	1.5E+01	4.6E-01
Thallium	7440-28-0	2.0E+00	7.8E-01	--	--
Toluene	108-88-3	4.0E+01	3.2E+00	1.0E+04	3.1E+02
Toxaphene	8001-35-2	2.0E-04	5.1E-01	--	--
1,2,4-Trichlorobenzene	120-82-1	5.0E+00	1.2E+00	7.0E+01	2.1E+00

Tier 1 ESLs [1]

2019 (Rev. 2)

Based on a generic conceptual site model designed for use at most sites[2]

Chemicals	CAS No.	Groundwater (µg/L)	Soil (mg/kg)	Subslab / Soil Gas (µg/m^3)	Indoor Air (µg/m^3)
1,1,1-Trichloroethane	71-55-6	6.2E+01	7.0E+00	3.5E+04	1.0E+03
1,1,2-Trichloroethane	79-00-5	5.0E+00	7.6E-02	5.8E+00	1.8E-01
Trichloroethene	79-01-6	1.2E+00	8.5E-02	1.6E+01	4.8E-01
2,4,5-Trichlorophenol	95-95-4	1.1E+01	2.9E+00	--	--
2,4,6-Trichlorophenol	88-06-2	6.3E-01	4.0E-02	1.0E+01	3.0E-01
1,2,3-Trichloropropane	96-18-4	5.0E-03	1.1E-04	1.0E+01	3.1E-01
Vanadium	7440-62-2	1.9E+01	1.8E+01	--	--
Vinyl chloride	75-01-4	8.6E-03	1.5E-03	3.2E-01	9.5E-03
Xylenes	1330-20-7	2.0E+01	2.1E+00	3.5E+03	1.0E+02
Zinc	7440-66-6	8.1E+01	3.4E+02	--	--

Notes:

1 - ESLs are developed based on methodologies discussed in the User's Guide. Evaluation of laboratory detection limits and naturally occurring background or ambient concentrations should be independently conducted. See User's Guide Chapter 12 (Additional Considerations) for further information.

2 - Generic Conceptual Site Model - See User's Guide Chapter 2. Input settings are:
Land Use = Residential
Groundwater Use = Drinking Water Resource
MCL Priority over Risk-Based Levels = Yes
Discharge to Surface Water = Saltwater & Freshwater
Vegetation Level = Substantial
Soil Exposure Depth = Shallow

Abbreviations:

DDD - Dichlorodiphenyldichloroethane
DDE - Dichlorodiphenyldichloroethene
DDT - Dichlorodiphenyltrichloroethane
HOPs - Hydrocarbon Oxidation Products (biodegradation metabolites and photo-oxidation products of petroleum hydrocarbons). See User's Guide Chapter 4 for further information.
PAH - Polycyclic aromatic hydrocarbon
TCDD - Tetrachlorodibenzodioxin

2019 (Rev. 2)		Summary of Groundwater ESLs (µg/L)														
Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table GW-1)			Aquatic Habitat Goal Levels (Table GW-2)			Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3)				Gross Contam-ination Levels (GW-4)	Odor Nuisance Levels (Table GW-5)		GW Tier 1 ESL	Basis
								Residential		Commercial/Industrial						
		MCL Priority[1]	Tapwater Cancer Risk	Tapwater Non-cancer Hazard	Fresh Water Ecotox	Saltwater Ecotox	Seafood Ingestion Human Health	Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard		Drinking Water	Non-Drinking Water		
Heptachlor	76-44-8	1.0E-02	1.4E-03	1.3E+00	3.8E-03	3.6E-03	2.1E-04	1.8E-01	--	7.9E-01	--	9.0E+01	2.0E+01	2.0E+02	2.1E-04	Aquatic Habitat
Heptachlor epoxide	1024-57-3	1.0E-02	1.4E-03	1.2E-01	3.8E-03	3.6E-03	1.1E-04	1.3E+00	--	5.5E+00	--	1.0E+02	--	--	1.1E-04	Aquatic Habitat
Hexachlorobenzene	118-74-1	1.0E+00	8.8E-03	1.6E+01	3.7E+00	6.5E+01	7.7E-04	7.9E-02	--	3.4E-01	--	3.1E+00	3.0E+03	3.0E+04	7.7E-04	Aquatic Habitat
Hexachlorobutadiene	87-68-3	1.4E-01	1.4E-01	6.5E+00	4.7E+00	3.2E+00	5.0E+01	3.0E-01	--	1.3E+00	--	1.6E+03	6.0E+00	6.0E+01	1.4E-01	Tap Canc-Risk
g-Hexachlorocyclohexane (Lindane)	58-89-9	2.0E-01	3.2E-02	3.6E+00	8.0E-02	1.6E-02	6.3E-02	--	--	--	--	3.7E+03	1.2E+04	1.2E+05	1.6E-02	Aquatic Habitat
Hexachloroethane	67-72-1	3.3E-01	3.3E-01	6.2E+00	1.2E+01	9.4E+01	8.9E+00	1.6E+00	2.0E+02	7.0E+00	8.2E+02	2.5E+04	1.0E+01	1.0E+02	3.3E-01	Tap Canc-Risk
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	2.5E-01	2.5E-01	--	--	1.5E+01	4.9E-02	--	--	--	--	9.5E-02	--	--	4.9E-02	Aquatic Habitat
Lead	7439-92-1	1.5E+01	9.2E+00	2.0E-01	2.5E+00	8.1E+00	--	--	--	--	--	5.0E+04	--	--	2.5E+00	Aquatic Habitat
Mercury (elemental)	7439-97-6	2.0E+00	--	6.1E-02	2.5E-02	2.5E-02	5.1E-02	--	8.9E-02	--	3.8E-01	3.0E+01	--	--	2.5E-02	Aquatic Habitat
Methoxychlor	72-43-5	3.0E+01	--	9.0E-02	1.9E-02	3.0E-03	--	--	--	--	--	5.0E+01	4.7E+03	4.7E+04	3.0E-03	Aquatic Habitat
Methylene chloride	75-09-2	5.0E+00	9.3E-01	1.0E+02	2.2E+03	3.2E+03	1.6E+03	7.8E+00	3.2E+03	9.4E+01	1.3E+04	5.0E+04	9.1E+03	9.1E+04	5.0E+00	MCL
Methyl ethyl ketone	78-93-3	5.6E+03	--	5.6E+03	1.4E+04	--	--	--	2.3E+06	--	9.5E+06	5.0E+04	8.4E+03	8.4E+04	5.6E+03	Tap NC-Hazard
Methyl isobutyl ketone	108-10-1	1.2E+02	--	1.2E+02	1.7E+02	--	--	--	5.6E+05	--	2.3E+06	5.0E+04	1.3E+03	1.3E+04	1.2E+02	Tap NC-Hazard
Methyl mercury	22967-92-6	2.0E+00	--	2.0E+00	3.0E-03	--	--	--	--	--	--	5.0E+04	--	--	3.0E-03	Aquatic Habitat
2-Methylnaphthalene	91-57-6	3.6E+01	--	3.6E+01	2.1E+00	3.0E+01	--	--	--	--	--	1.3E+04	1.0E+01	1.0E+02	2.1E+00	Aquatic Habitat
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.0E+00	1.3E+01	6.3E+03	6.6E+04	8.0E+03	--	4.5E+02	1.3E+05	2.0E+03	5.5E+05	5.0E+04	5.0E+00	1.8E+03	5.0E+00	Odor/Nuis
Molybdenum	7439-98-7	1.0E+02	--	1.0E+02	2.4E+02	--	--	--	--	--	--	5.0E+04	--	--	1.0E+02	Tap NC-Hazard
Naphthalene [PAH]	91-20-3	1.7E-01	1.7E-01	6.1E+00	2.4E+01	1.5E+01	--	4.6E+00	1.7E+02	2.0E+01	7.3E+02	1.6E+04	2.1E+01	2.1E+02	1.7E-01	Tap Canc-Risk
Nickel	7440-02-0	1.0E+02	1.2E+01	2.2E+02	5.2E+01	8.2E+00	4.6E+03	--	--	--	--	5.0E+04	--	--	8.2E+00	Aquatic Habitat
Pentachlorophenol	87-86-5	1.0E+00	4.0E-02	2.3E+01	1.5E+01	7.9E+00	8.2E+00	--	--	--	--	7.0E+03	3.0E+01	5.9E+03	1.0E+00	MCL
Perchlorate	7790-98-9	6.0E+00	--	1.0E+00	6.0E+02	--	--	--	--	--	--	5.0E+04	--	--	6.0E+00	MCL
Petroleum - Gasoline	--	7.6E+02	--	7.6E+02	4.4E+02	3.7E+03	--	--	--	--	--	5.0E+04	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Stoddard Solvent	--	2.1E+02	--	2.1E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Jet Fuel	--	2.1E+02	--	2.1E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Diesel	--	2.0E+02	--	2.0E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - HOPs	--	4.1E+02	--	4.1E+02	5.1E+02	5.1E+02	--	--	--	--	--	5.0E+04	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Motor Oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene [PAH]	85-01-8	--	--	--	6.3E+00	4.6E+00	--	--	--	--	--	4.1E+02	1.0E+03	1.0E+04	4.6E+00	Aquatic Habitat
Phenol	108-95-2	4.2E+03	--	4.2E+03	1.3E+03	5.8E+02	4.6E+06	--	--	--	--	5.0E+04	5.0E+00	7.9E+04	5.0E+00	Odor/Nuis
Polychlorinated biphenyls (PCBs)	1336-36-3	5.0E-01	1.9E-03	--	1.4E-02	3.0E-02	1.7E-04	2.9E-01	--	1.3E+00	--	3.5E+02	--	--	1.7E-04	Aquatic Habitat
Pyrene [PAH]	129-00-0	1.2E+02	--	1.2E+02	2.0E+00	1.5E+01	1.1E+04	--	--	--	--	7.0E+01	--	--	2.0E+00	Aquatic Habitat
Selenium	7782-49-2	5.0E+01	--	3.0E+01	5.0E+00	5.0E-01	--	--	--	--	--	5.0E+04	--	--	5.0E-01	Aquatic Habitat
Silver	7440-22-4	1.0E+02	--	9.4E+01	3.4E+00	1.9E-01	--	--	--	--	--	5.0E+04	1.0E+02	--	1.9E-01	Aquatic Habitat
Styrene	100-42-5	1.0E+01	5.0E-01	1.1E+03	--	--	--	--	8.5E+03	--	3.6E+04	5.0E+04	1.0E+01	1.1E+02	1.0E+01	Odor/Nuis
tert-Butyl alcohol	75-65-0	1.2E+01	1.2E+01	--	1.8E+04	--	--	--	--	--	--	5.0E+04	--	--	1.2E+01	Tap Canc-Risk
1,1,1,2-Tetrachloroethane	630-20-6	5.7E-01	5.7E-01	4.8E+02	9.3E+02	--	--	3.8E+00	--	1.7E+01	--	5.0E+04	--	--	5.7E-01	Tap Canc-Risk

2019 (Rev. 2)		Summary of Soil ESLs (mg/kg)															
Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table S-1)						Terrestrial Habitat Levels (Table S-2)		Leaching to Groundwater Levels (Table S-3)		Gross Contamination Levels (Table S-4)	Odor Nuisance Levels (Table S-5)			Soil Tier 1 ESL	Basis
		Residential: Shallow Soil Exposure		Commerical/ Industrial: Shallow Soil Exposure		Construction Worker: Any Land Use/ Any Depth Soil Exposure		Significantly Vegetated Area	Minimally Vegetated Area	Drinking Water	Non-drinking Water		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use: Any Soil Exposure (CW)		
		Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard	Examples: Parkland or single family homes with yards	Examples: High density residential or commercial/ industrial areas								
1,2-Dichlorobenzene	95-50-1	--	1.8E+03	--	9.4E+03	--	7.8E+03	4.3E+00	8.5E+00	1.0E+00	1.0E+00	3.8E+02	1.0E+03	2.5E+03	2.5E+03	1.0E+00	Leaching
1,3-Dichlorobenzene	541-73-1	--	--	--	--	--	--	6.0E+00	1.2E+01	7.4E+00	7.4E+00	6.1E+02	1.0E+02	5.0E+02	5.0E+02	6.0E+00	Terr Habitat
1,4-Dichlorobenzene	106-46-7	2.6E+00	3.4E+03	1.2E+01	2.6E+04	2.8E+02	1.5E+04	4.5E+00	9.0E+00	2.0E-01	2.0E-01	1.9E+02	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
3,3-Dichlorobenzidine	91-94-1	5.8E-01	--	2.7E+00	--	2.0E+01	--	--	--	2.5E-02	1.3E+02	6.0E+01	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
DDD	72-54-8	2.7E+00	--	1.2E+01	--	8.1E+01	--	8.5E+00	1.7E+01	6.5E+01	6.5E+01	6.5E+01	5.0E+02	1.0E+03	1.0E+03	2.7E+00	Canc-Risk
DDE	72-55-9	1.8E+00	--	8.3E+00	--	5.7E+01	--	3.3E-01	6.5E-01	2.9E+01	2.9E+01	2.9E+01	5.0E+02	1.0E+03	1.0E+03	3.3E-01	Terr Habitat
DDT	50-29-3	1.9E+00	3.7E+01	8.5E+00	5.2E+02	5.7E+01	1.4E+02	1.1E-03	7.8E+00	5.6E+00	5.6E+00	5.6E+00	5.0E+02	1.0E+03	1.0E+03	1.1E-03	Terr Habitat
1,1-Dichloroethane	75-34-3	3.6E+00	1.6E+04	1.6E+01	2.3E+05	3.7E+02	7.1E+04	1.1E+01	2.1E+01	2.0E-01	3.1E-01	1.7E+03	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
1,2-Dichloroethane	107-06-2	4.7E-01	3.2E+01	2.1E+00	1.4E+02	4.5E+01	1.3E+02	2.9E+01	2.9E+01	7.0E-03	3.1E-02	3.0E+03	1.0E+02	5.0E+02	5.0E+02	7.0E-03	Leaching
1,1-Dichloroethene	75-35-4	--	8.3E+01	--	3.5E+02	--	3.5E+02	4.3E+01	1.3E+02	5.4E-01	4.2E+00	1.2E+03	5.0E+02	1.0E+03	1.0E+03	5.4E-01	Leaching
cis-1,2-Dichloroethene	156-59-2	--	1.9E+01	--	8.5E+01	--	7.8E+01	8.4E+01	9.4E+02	1.9E-01	1.6E+00	2.4E+03	1.0E+02	5.0E+02	5.0E+02	1.9E-01	Leaching
trans-1,2-Dichloroethene	156-60-5	--	1.3E+02	--	6.0E+02	--	5.7E+02	8.4E+01	9.4E+02	6.5E-01	1.4E+01	1.9E+03	5.0E+02	1.0E+03	1.0E+03	6.5E-01	Leaching
2,4-Dichlorophenol	120-83-2	--	2.3E+02	--	3.5E+03	--	1.1E+03	2.1E+00	--	7.5E-03	7.5E-02	5.6E+03	5.0E+02	1.0E+03	1.0E+03	7.5E-03	Leaching
1,2-Dichloropropane	78-87-5	1.0E+00	1.6E+01	4.4E+00	6.6E+01	9.9E+01	6.6E+01	3.1E+01	6.3E+01	6.5E-02	6.5E-02	1.4E+03	1.0E+02	5.0E+02	5.0E+02	6.5E-02	Leaching
1,3-Dichloropropene	542-75-6	5.7E-01	7.2E+01	2.5E+00	3.1E+02	5.3E+01	3.0E+02	3.1E+01	6.3E+01	1.7E-02	4.0E-02	1.6E+03	5.0E+02	1.0E+03	1.0E+03	1.7E-02	Leaching
Dieldrin	60-57-1	3.7E-02	3.5E+00	1.6E-01	4.8E+01	1.1E+00	1.2E+01	9.6E-04	1.1E-01	4.6E-04	6.3E-03	2.4E+01	5.0E+02	1.0E+03	1.0E+03	4.6E-04	Leaching
Diethyl phthalate	84-66-2	--	5.1E+04	--	6.6E+05	--	1.5E+05	1.3E+01	2.7E+01	2.5E-02	2.5E-02	7.7E+02	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
Dimethyl phthalate	131-11-3	--	--	--	--	--	--	2.1E+01	4.2E+01	3.5E-02	3.5E-02	4.7E+03	5.0E+02	1.0E+03	1.0E+03	3.5E-02	Leaching
2,4-Dimethylphenol	105-67-9	--	1.6E+03	--	2.3E+04	--	7.1E+03	--	--	8.1E+00	8.9E+00	2.4E+04	1.0E+02	5.0E+02	5.0E+02	8.1E+00	Leaching
2,4-Dinitrophenol	51-28-5	--	1.6E+02	--	2.3E+03	--	7.1E+02	--	--	3.0E+00	5.7E+00	8.0E+03	5.0E+02	1.0E+03	1.0E+03	3.0E+00	Leaching
2,4-Dinitrotoluene	121-14-2	2.2E+00	1.6E+02	1.1E+01	2.3E+03	7.9E+01	7.1E+02	--	--	2.3E-02	1.1E+01	7.2E+02	5.0E+02	1.0E+03	1.0E+03	2.3E-02	Leaching
1,4-Dioxane	123-91-1	4.7E+00	8.1E+02	2.2E+01	4.5E+03	2.1E+02	3.4E+03	1.8E+00	1.8E+00	1.7E-04	8.4E-01	1.2E+05	5.0E+02	1.0E+03	1.0E+03	1.7E-04	Leaching
Dioxin (2,3,7,8-TCDD)	1746-01-6	4.8E-06	5.1E-05	2.2E-05	7.2E-04	1.5E-04	2.0E-04	1.3E-05	9.9E-05	3.0E-01	3.0E-01	3.0E-01	5.0E+02	1.0E+03	1.0E+03	4.8E-06	Canc-Risk
Endosulfan	115-29-7	--	4.2E+02	--	5.8E+03	--	1.5E+03	2.3E-02	3.8E-01	9.8E-03	9.8E-03	1.3E+01	5.0E+02	1.0E+03	1.0E+03	9.8E-03	Leaching
Endrin	72-20-8	--	2.1E+01	--	2.9E+02	--	7.4E+01	1.1E-03	1.1E-03	7.6E-03	7.6E-03	3.0E+01	5.0E+02	1.0E+03	1.0E+03	1.1E-03	Terr Habitat
Ethylbenzene	100-41-4	5.9E+00	3.4E+03	2.6E+01	2.1E+04	5.4E+02	1.5E+04	9.0E+01	4.3E+02	4.3E-01	4.3E-01	4.9E+02	5.0E+02	1.0E+03	1.0E+03	4.3E-01	Leaching
Fluoranthene [PAH]	206-44-0	--	2.4E+03	--	3.0E+04	--	6.7E+03	6.9E-01	1.2E+05	8.6E+01	8.6E+01	8.6E+01	5.0E+02	1.0E+03	1.0E+03	6.9E-01	Terr Habitat
Fluorene [PAH]	86-73-7	--	2.4E+03	--	3.0E+04	--	6.7E+03	--	--	6.0E+00	6.0E+00	9.4E+01	5.0E+02	1.0E+03	1.0E+03	6.0E+00	Leaching
Heptachlor	76-44-8	1.2E-01	3.5E+01	5.3E-01	4.8E+02	3.7E+00	1.2E+02	2.5E-01	5.0E-01	4.4E+01	4.4E+01	4.4E+01	1.0E+03	2.5E+03	2.5E+03	1.2E-01	Canc-Risk
Heptachlor epoxide	1024-57-3	6.2E-02	9.1E-01	2.8E-01	1.3E+01	1.9E+00	3.2E+00	--	--	1.8E-04	6.0E-03	1.2E+01	1.0E+03	2.5E+03	2.5E+03	1.8E-04	Leaching
Hexachlorobenzene	118-74-1	1.8E-01	5.6E+01	7.8E-01	7.7E+02	7.7E+00	2.0E+02	1.3E+02	2.5E+02	8.0E-04	8.2E-02	2.3E-01	5.0E+02	1.0E+03	1.0E+03	8.0E-04	Leaching
Hexachlorobutadiene	87-68-3	1.2E+00	7.8E+01	5.3E+00	1.2E+03	1.0E+02	3.5E+02	--	--	2.8E-02	6.2E-02	1.7E+01	5.0E+02	1.0E+03	1.0E+03	2.8E-02	Leaching
g-Hexachlorocyclohexane (Lindane)	58-89-9	5.5E-01	2.1E+01	2.5E+00	2.9E+02	1.6E+01	7.4E+01	7.4E+00	1.5E+01	7.4E-03	7.4E-03	1.2E+02	5.0E+02	1.0E+03	1.0E+03	7.4E-03	Leaching
Hexachloroethane	67-72-1	1.8E+00	3.8E+01	7.8E+00	3.7E+02	1.3E+02	1.2E+02	--	--	1.9E-02	9.2E-02	6.7E+01	5.0E+02	1.0E+03	1.0E+03	1.9E-02	Leaching
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	1.1E+00	--	2.1E+01	--	1.1E+02	--	4.8E-01	9.5E-01	1.6E+01	3.2E+01	2.3E+00	5.0E+02	1.0E+03	1.0E+03	4.8E-01	Terr Habitat
Lead	7439-92-1	8.2E+01	8.0E+01	3.8E+02	3.2E+02	2.7E+03	1.6E+02	3.2E+01	3.2E+01	--	--	--	--	--	--	3.2E+01	Terr Habitat
Mercury (elemental)	7439-97-6	--	1.3E+01	--	1.9E+02	--	4.4E+01	1.5E+01	2.0E+01	--	--	--	5.0E+02	1.0E+03	1.0E+03	1.3E+01	NC-Hazard
Methoxychlor	72-43-5	--	3.5E+02	--	4.8E+03	--	1.2E+03	1.3E-01	4.1E+03	1.3E-02	1.3E-02	1.6E+01	5.0E+02	1.0E+03	1.0E+03	1.3E-02	Leaching
Methylene chloride	75-09-2	1.9E+00	3.1E+02	2.5E+01	2.5E+03	4.9E+02	1.4E+03	9.8E-01	2.0E+00	1.2E-01	1.9E-01	3.3E+03	5.0E+02	1.0E+03	1.0E+03	1.2E-01	Leaching
Methyl ethyl ketone	78-93-3	--	2.7E+04	--	2.0E+05	--	1.2E+05	4.4E+01	8.8E+01	6.1E+00	1.5E+01	2.8E+04	5.0E+02	1.0E+03	1.0E+03	6.1E+00	Leaching
Methyl isobutyl ketone	108-10-1	--	3.4E+04	--	1.4E+05	--	1.4E+05	--	--	3.6E-01	5.1E-01	3.4E+03	1.0E+02	5.0E+02	5.0E+02	3.6E-01	Leaching
Methyl mercury	22967-92-6	--	6.3E+00	--	8.2E+01	--	1.9E+01	3.4E-02	3.4E-02	--	--	--	1.0E+02	5.0E+02	5.0E+02	3.4E-02	Terr Habitat
2-Methylnaphthalene	91-57-6	--	2.4E+02	--	3.0E+03	--	6.7E+02	--	--	8.8E-01	8.8E-01	3.8E+02	5.0E+02	1.0E+03	1.0E+03	8.8E-01	Leaching
Methyl tertiary butyl ether (MTBE)	1634-04-4	4.7E+01	1.6E+04	2.1E+02	6.6E+04	4.1E+03	6.5E+04	3.1E+01	6.3E+01	2.8E-02	2.5E+00	9.0E+03	1.0E+02	5.0E+02	5.0E+02	2.8E-02	Leaching

2019 (Rev. 2)		Summary of Vapor ESLs													
		Subslab/ Soil Gas (µg/m^3)							Indoor Air (µg/m^3)						
Chemicals	CAS No.	Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels (Table SG-1)				Subslab/ Soil Gas Vapor Intrusion: Odor Nuisance Levels (Table SG-2)	Tier 1 ESL	Basis	Direct Exposure Human Health Risk Levels (Table IA-1)				Odor Nuisance Levels (Table IA-2)	Tier 1 ESL	Basis
		Residential		Commercial/ Industrial					Residential		Commercial/ Industrial				
		Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard				Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard			
Dioxin (2,3,7,8-TCDD)	1746-01-6	2.5E-06	1.4E-03	1.1E-05	5.8E-03	--	2.5E-06	Canc-Risk	7.4E-08	4.2E-05	3.2E-07	1.8E-04	--	7.4E-08	Canc-Risk
Endosulfan	115-29-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	72-20-8	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	3.7E+01	3.5E+04	1.6E+02	1.5E+05	6.7E+04	3.7E+01	Canc-Risk	1.1E+00	1.0E+03	4.9E+00	4.4E+03	2.0E+03	1.1E+00	Canc-Risk
Fluoranthene [PAH]	206-44-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene [PAH]	86-73-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	76-44-8	7.2E-02	--	3.1E-01	--	1.0E+04	7.2E-02	Canc-Risk	2.2E-03	--	9.4E-03	--	3.0E+02	2.2E-03	Canc-Risk
Heptachlor epoxide	1024-57-3	3.6E-02	--	1.6E-01	--	1.0E+04	3.6E-02	Canc-Risk	1.1E-03	--	4.7E-03	--	3.0E+02	1.1E-03	Canc-Risk
Hexachlorobenzene	118-74-1	1.8E-01	--	8.0E-01	--	--	1.8E-01	Canc-Risk	5.5E-03	--	2.4E-02	--	--	5.5E-03	Canc-Risk
Hexachlorobutadiene	87-68-3	4.3E+00	--	1.9E+01	--	4.0E+05	4.3E+00	Canc-Risk	1.3E-01	--	5.6E-01	--	1.2E+04	1.3E-01	Canc-Risk
g-Hexachlorocyclohexane (Lindane)	58-89-9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	67-72-1	8.5E+00	1.0E+03	3.7E+01	4.4E+03	--	8.5E+00	Canc-Risk	2.6E-01	3.1E+01	1.1E+00	1.3E+02	--	2.6E-01	Canc-Risk
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	7439-92-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury (elemental)	7439-97-6	--	1.0E+00	--	4.4E+00	--	1.0E+00	NC-Hazard	--	3.1E-02	--	1.3E-01	--	3.1E-02	NC-Hazard
Methoxychlor	72-43-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	75-09-2	3.4E+01	1.4E+04	4.1E+02	5.8E+04	1.9E+07	3.4E+01	Canc-Risk	1.0E+00	4.2E+02	1.2E+01	1.8E+03	5.6E+05	1.0E+00	Canc-Risk
Methyl ethyl ketone	78-93-3	--	1.7E+05	--	7.3E+05	1.1E+06	1.7E+05	NC-Hazard	--	5.2E+03	--	2.2E+04	3.2E+04	5.2E+03	NC-Hazard
Methyl isobutyl ketone	108-10-1	--	1.0E+05	--	4.4E+05	1.4E+04	1.4E+04	Odor/Nuis	--	3.1E+03	--	1.3E+04	4.2E+02	4.2E+02	Nuis/Odor
Methyl mercury	22967-92-6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	--	--	--	--	2.3E+03	2.3E+03	Odor/Nuis	--	--	--	--	6.8E+01	6.8E+01	Nuis/Odor
Methyl tertiary butyl ether (MTBE)	1634-04-4	3.6E+02	1.0E+05	1.6E+03	4.4E+05	1.8E+04	3.6E+02	Canc-Risk	1.1E+01	3.1E+03	4.7E+01	1.3E+04	5.3E+02	1.1E+01	Canc-Risk
Molybdenum	7439-98-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene [PAH]	91-20-3	2.8E+00	1.0E+02	1.2E+01	4.4E+02	1.5E+04	2.8E+00	Canc-Risk	8.3E-02	3.1E+00	3.6E-01	1.3E+01	4.4E+02	8.3E-02	Canc-Risk
Nickel	7440-02-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	7790-98-9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Petroleum - Gasoline	--	--	2.0E+04	--	8.3E+04	3.3E+03	3.3E+03	Odor/Nuis	--	6.0E+02	--	2.5E+03	1.0E+02	1.0E+02	Nuis/Odor
Petroleum - Stoddard Solvent	--	--	1.1E+04	--	4.6E+04	3.3E+04	1.1E+04	NC-Hazard	--	3.3E+02	--	1.4E+03	1.0E+03	3.3E+02	NC-Hazard
Petroleum - Jet Fuel	--	--	1.1E+04	--	4.6E+04	3.3E+04	1.1E+04	NC-Hazard	--	3.3E+02	--	1.4E+03	1.0E+03	3.3E+02	NC-Hazard
Petroleum - Diesel	--	--	8.9E+03	--	3.7E+04	3.3E+04	8.9E+03	NC-Hazard	--	2.7E+02	--	1.1E+03	1.0E+03	2.7E+02	NC-Hazard
Petroleum - HOPs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Petroleum - Motor Oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

From:	Alexander Melendrez
To:	Planning_Commission
Cc:	Janneth Lujan
Subject:	Support - 71 Affordable Homes at Moss Beach
Date:	Friday, May 29, 2020 5:45:01 PM
Attachments:	_Support - Moss Beach Cypress Point - June 2020.pdf

Dear San Mateo County Planning Commission,

On behalf of the Housing Leadership Council of San Mateo County, I would like to reiterate our strong support for Midpen's Cypress Point. Please see attached our updated letter of support for these 71 affordable homes.

Additionally, we would like to share with the commission these three articles in the Half Moon Bay Review reflecting support for Midpen's Cypress Point in Moss Beach.

Letter to the Editor: We Need Cypress Point housing
Letter to the Editor: Coastside community depends on more than just homeowners
OP-ED: Supporting the people who support us

Thank you for the opportunity to comment and we wish you all good health.

Sincerely,

Alex Melendrez

--
#HousingIsHealthcare

Alexander Melendrez
Organizer
Housing Leadership Council of San Mateo County (HLC)
2905 S El Camino Real
San Mateo, CA 94403
(650) 242-1764 ext. 4 Linkedin
Pronouns: He, Him, His

HLC: Website | Facebook | Twitter | LinkedIn | Instagram | Become A Member!

From: Jan Stokley
To: Planning_Commission
Subject: Support 71 affordable homes in Moss Beach
Date: Friday, June 5, 2020 2:43:32 PM

Dear San Mateo County Planning Commissioners,

I am writing to you in support of the affordable homes in Moss Beach. These 71 homes are highly needed. Please approve the current number of homes as soon as you can.

I am a long-time resident of the Coastside and a homeowner in El Granada. We need affordable homes on the Coastside so that people who work in retail, hospitality, health care, services, and agriculture can live close to work. We also need affordable homes to achieve racial equity and economic inclusion.

I do not want to see the Coastside continue down a path of providing homes only for the wealthy. This trend is not only unjust but it is also contrary to community well-being The current pandemic has shown us exactly how much we depend every day on essential workers who would income-qualify for these homes. Let's show our gratitude to our essential workforce by approving housing that is truly affordable at their income level.

Respectfully yours,

Jan Stokley
Resident of El Granada

--

From: Auros Harman
To: Planning_Commission
Subject: Wednesday June 10th meeting, regular agenda item #4
Date: Friday, May 29, 2020 5:00:20 PM

I'm writing in support of the MidPen project at Carlos and Sierra in Moss Beach. I have for years been a frequent patron of local businesses such as the Moss Beach Distillery, and various businesses down at Pillar Point. More housing in this area will mean that workers in these businesses will have more options to live locally, reducing commute times, traffic, and GHG emissions. Our county desperately needs more affordable housing. I hope you will be advancing this project without further delay.

Regards,
Auros Harman

From: Mark Hilvert
To: Planning_Commission
Subject: Item 4. PLN2018-00264
Date: Monday, June 8, 2020 6:48:57 PM

Dear Planning Commissioners and Staff,
I am a 53 year resident of Moss Beach, and I have seen significant change to our coastside. I am not against change as long as it the changes are well vetted and thoughtfully implemented. This project has significant impacts to the entire coastside from Montara to Half Moon Bay. It seems to me that if Planning Commissioners and staff are unable to spend some time to visit the site and the coast during “normal”(non-SIP) times, how can they justify making such a significant decision?
I would recommend that the Commission postpone any decisions until the county/coastside has re-normalized so all parties that will be effected can be more involved in this decision making process.

Mark Hilvert
520 Stetson St.
Moss Beach, CA

From: Ann Rothman
To: Planning_Commission; Janneth Lujan
Cc: honzey3@comcast.net
Subject: Please do not change the current LCP for Cypress Point project Moss Beach Agenda item 4
Date: Tuesday, June 9, 2020 5:07:02 PM

DATE: June 9, 2020
TO: Planning Commission Kumkum Gupta, Frederick Hanson, Lisa Ketchum, Manuel Ramirez, JR, Mario Santacruz, Planning Commission Secretary: Jannette Lujan
FROM: Ann R, Moss Beach
SUBJT: Reject Amendment of policy 3.15 (d) of the LCP and reject Amendment PUD-124/CD to PUD140/CD for the proposed Cypress Point project at Carlos and Sierra Streets Moss Beach

Dear Commissioners,

Please reject the proposed LCP and PUD amendments for the proposed Cypress Point project in Moss Beach. In light of the Black Lives Matter movement and widespread peaceful protests I must speak out against the proposed changes to the LCP to remove the current designation of affordable housing and market rate combination to only affordable housing. The segregation of affordable housing from the surrounding community promotes economic inequality. Segregation is at the heart of systemic racism. The current LCP provides for a mix of market rate and affordable housing which unifies inhabitants and creates equality for all. Those who can pay full rent would be able to financially support services that lower income tenants may not be able to. If units are interspersed among income levels everyone is treated equally and view each other as equals. Full rent payers will demand upkeep of the facilities. I saw online google reviews of MidPen housing from Cecilia Rodriguez being wrongly evicted for complaining about non repaired AC/heater system at Hillsdale Townhouse. Another complaint from San Jose mentioned AC unit and refrigerator repair that was unsatisfactory as well as parking issues. These complaints are just a few but how many are not available online. How many people fear complaining or they will lose their housing? This is far less likely to happen when full rent payers are present. As someone who grew up impoverished I understand intimately economic inequality. The proposed project creates Economic Inequality. We need to bridge the economic divide by living together not separate. Mixed income housing is much more sustainable long term.

Another issue is that anyone who is handicapped or mobility challenged will need transportation to travel ¼ mile to the Post Office, ½ mile to playground or only corner market, and any bus stop as the grade of hillside throughout Moss Beach is too great for ramps. The playground is on a hillside and may prove a challenge for anyone unloading a wheel chair from a vehicle. One could not get to Cypress Point without transportation from the proposed bus stops. The multimodal trail will not be able to provide proper ramps for the handicapped because of the greater than 8% grade hillside throughout Moss Beach Heights. There is a presence of an endangered species in the development zone. This has been pointed out by Joe LaClair during his connect the Coastside presentation made at several MCC meetings April22, 2020 and May meetings. His comments are on YouTube at MCC meetings.

Joe LaClair also mentioned the endangered species red legged frog in ditches along Carlos Street. He said this would impact road improvement and the multimodal trail. As this endangered species does have a migration pattern it could impact proposed vegetation removal on Carlos to try to improve site lines and the proposed building site may be impacted. Proposed road improvements can be significantly impacted by the presence of the frogs. In addition the proposed roundabouts may require vegetation removal and create a visibility of the development from Highway one changing the look of the community entirely.

Since Covid 19 began a significant number of jobs have been lost and may not come back to the Moss Beach corridor reducing the need for local housing. Although MidPen now says they may have a 75%(up from 50%) preference for those that work and live on the coast there is no guarantee. Initially they promised 100%.

Fire service may be severely hindered as cars line up Kelmore, Stetson Streets and California Ave to pull out at a traffic light with little to no space to move out of the way of the Fire trucks. Although water is reserved for housing at this site the water and sewer system which is owned and operated by

homeowners of Montara and Moss Beach, is in such dire need of repair that all home owners have been hit with additional property tax charges and significant rate changes that will amount to thousands of dollars per year even during a pandemic when homeowners are financially strapped. MidPen will only have to pay a minimal connection fee and will not pay its fair share of the costs. Building all of the units at once instead of phasing in at 40 total units of housing per year which is in the LCP may overwhelm the fragile sewer system. The outcome of this is raw sewage in the ocean.

To say that this development will not negatively impact traffic on the coast is a lie. I have lived here 27 years where almost no road improvements have been made and now to allow this project to go ahead a huge financial burden will be placed on local taxpayers to pay for road improvements specifically for this project. Home owners will have to pay for additional students attending the Cabrillo school district as budgets are being cut. This project will adversely affect the financial well being, health of the environment and persons who currently call Moss Beach home. This project will add a significant burden to current homeowners most of who are struggling due to Covid19. Please consider sharing the costs with other renters instead of just homeowners who are themselves struggling. We are supposed to be in this together. If that is true, please provide economic equality for all bu keeping the LCP as it is now. Thank you.

Best wishes,

Ann R

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

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

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

April 9, 2020

San Mateo County Planning Commission
planning-commission@smcgov.org
mschaller@smcgov.org

Subject: Comments on the MidPen Cypress Point Project, PLN2018-00264

Dear Commissioners Hansson, Gupta, Santacruz, Ramirez and Ketcham,

We write regarding the proposed MidPen Cypress Point Project ("Project") located in Moss Beach, California. MidPen proposes to develop 71 housing units, a community building, and outdoor recreation areas on the 11-acre Project site. I am a California-licensed hydrogeologist and the former Senior Science Policy Advisor with the U.S. EPA. My CV is attached for reference as Exhibit A.

To prepare the comments below, we have reviewed the Project's Preliminary Environmental Evaluation Report (PEIR) dated April 2019, the Phase I Report dated November 10, 2015, the Additional Subsurface Investigation and Water Well Evaluation dated February 20, 2018, the Groundwater Sampling and Well Destruction Report dated April 9, 2018.

Our review of the above documents leads us to conclude that the PEIR fails to adequately evaluate the Project's impacts in the subject areas of Hazards and Hazardous Materials and Hydrology and Water Quality. Impacts associated with construction and operation of the proposed Project are undisclosed and inadequately mitigated. An Environmental Impact Report (EIR) should be prepared to assess and mitigate the potential impacts that the Project may have.

Hazards and Hazardous Materials

The PEIR fails to disclose residual soil contamination at the Project site. The Project site is a former World War II-era facility used for gunnery training. A November 10, 2015 Phase I Environmental Site Assessment (ESA), prepared for the Project, describes the Project site to have been used for barracks, offices, a mess hall, a library, a garage, a boiler room, and an incinerator.

On the basis of a Phase I recommendation, a Phase II ESA sampling investigation was completed. The Phase II ESA found two locations (Borings B-7 and B-21) where lead concentrations in soil exceeded the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL).

The concentrations of lead in those two samples, taken at the ground surface, was 230 mg/kg and 88 mg/kg, respectively. In contrast, the RWQCB ESL for lead in residential shallow soil is 32 mg/kg[1] based on terrestrial habitat exposure.

The lead contamination was attributed in the Phase I ESA to the use of lead paint. The Phase II ESA was followed by an additional investigation (the February 20, 2018 "Additional Subsurface Investigation & Water Well Evaluation") that conducted further sampling for lead in soil. The additional investigation found lead at one location at concentrations above the ESL. The concentration of lead in soil at boring CS-3 was found to be 290 mg/kg – nine times the ESL. Figure 2 from the additional investigation is attached and shows that the horizontal extent of the lead contamination has not been determined.

The additional investigation, without any regulatory input, prescribed mixing of Project site soils upon excavation as a solution to the lead contamination. None of these lead contamination results, nor the suggested soil mixing plan, were disclosed in the PEIR. The mixing plan also does not address the fact that the horizontal extent of the lead contamination is unknown and that additional elevated lead soil concentrations ("hot spots") may be found if further testing as conducted.

No documentation was provided in the PEIR, in the Phase I, the Phase II or the additional investigation to show that the results were shared with any regulatory agency. The Project site does not appear on the RWQCB Geotracker or the Department of Toxic Substances (DTSC) Control Envirostor websites and therefore the lead contamination that was found apparently has not been brought to the attention of the RWQCB or the DTSC.

The Phase I, the Phase II and the additional investigation basically self-certify that the sampling that was conducted and the analysis of the results do not pose a threat to human health with the soil mixing plan that is planned. The additional investigation concluded (p. 5):

> On the basis of the information, presented herein, no further investigation or remedial action is warranted at this time.

Without regulatory review, this conclusion of no further action or remediation and the basis for this conclusion (all which was not disclosed in the PEIR), should not be relied upon for decision making about the potential risk to human health and the adequacy of the Mitigation Measure HAZ-1, the sole mitigation measure proposed to address Hazards and Hazardous Waste impacts. Mitigation Measure HAZ-1 only commits to a management plan and is quoted in its entirely below:

> MidPen will prepare a Site Management Plan for the project site prior to submitting an application for a Coastal Development Permit for the proposed project, and will comply with all requirements and implement all BMPs contained in the plan during construction of the project.

Because of the lead contamination, the Phase I, the Phase II and the additional investigation should be submitted for regulatory review, to the San Mateo County Environmental Health Services, to the San

[1] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html (Table "Tier 1 ESLs")

Francisco Bay RWQCB, and to DTSC. A formal voluntary oversight agreement is recommended with the RWQCB to certify the reliability of the data for decision making and to ensure the protection of public health. Any determination by the regulatory agencies about the need for further action, to include sampling or soil excavation and off-site disposal, should be included in an EIR.

Hydrology and Water Quality

The Project site is located approximately 750 feet from the coastline. A perennial stream (Montara Creek), located approximately 50 to 250 feet to the northeast of the project site, runs in parallel to the northern border of the site (prior to emptying into the Pacific Ocean).

The PEIR states (p. 18):

> Potential impacts to groundwater and surface water quality could occur both during construction and operation of the proposed project. Temporary increases in the erosion of exposed soils during construction of the project could result in minor on-or-off-site water quality impacts, particularly if rainfall events occur during an active construction phase.

The PEIR further states (p. 18):

> On-site soils are subject to severe water erosion hazards (NRCS 2018).

What the PEIR fails to disclose is that onsite soils are contaminated with lead at concentrations greater than the RWQCB ESL 32 mg/kg for the protection of terrestrial habitat.[2] The PEIR makes no specific provisions in Mitigation Measure GEO-2 for the protection of terrestrial habitat in the adjacent Montara Creek from the erosion of lead-contaminated soils upon soil disturbance during the Project's construction period or from any residual soil contamination that would be left in place after the mixing of site soils, as planned.

Note that the statistical analysis that was performed in the Additional Subsurface Investigation & Water Well Evaluation found the upper 95th percentile confidence limit for lead in soil to be 42 mg/kg. This value exceeds the ESL of 32 mg/kg for the protection of terrestrial habitat.

Best management practices (BMPs) that are specific to known lead contamination at concentrations above the terrestrial habitat protection ESL need to be implemented during the project construction period. The reference in the PEIR to compliance with the State Water Resources Control Board Construction General permit is insufficient mitigation without consideration of the lead contamination and specific BMPs that would be taken to control lead in stormwater runoff An EIR should be prepared to disclose lead contamination in the context of Hydrology and Water Quality impacts, along with effective mitigation measures and BMPs to control lead-contaminated soils from erosion and transportation to the adjacent Montara Creek.

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[2] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html (Table "Summary of Soil ESLs")

Sincerely,

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

Attachment A: CV, Matt Hagemann

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

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

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.

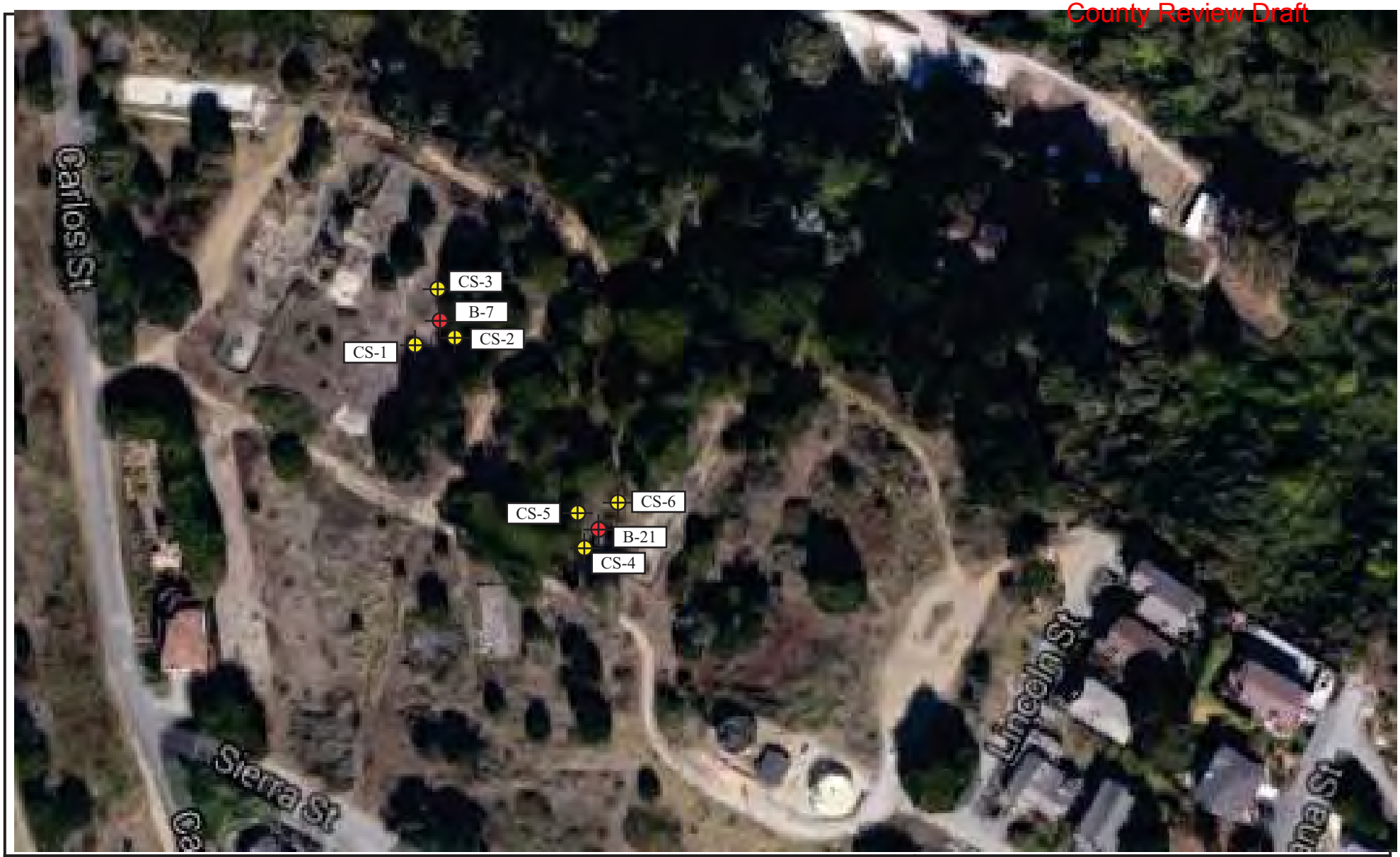
Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

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

Attachment B: Additional Subsurface Investigation & Water Well Evaluation – Figure 2

County Review Draft



LEGEND

- Soil Boring (AEI, 2017)
- Exploratory Boring (AEI, 2015)

0 50 100
APPROXIMATE SCALE (Feet)

N

AEI CONSULTANTS

3880 S. BASCOM AVENUE, SAN JOSE, CALIFONIA

CONFIRMATION BORING LOCATIONS

Carlos Street at Sierra Street
Moss Beach, California

FIGURE 2
Project No. 350248

Attachment C: Environmental Screening Level Tables

Tier 1 ESLs [1]

2019 (Rev. 2)

Based on a generic conceptual site model designed for use at most sites[2]

Chemicals	CAS No.	Groundwater (µg/L)	Soil (mg/kg)	Subslab / Soil Gas (µg/m^3)	Indoor Air (µg/m^3)
1,2-Dichloropropane	78-87-5	2.3E+00	6.5E-02	9.4E+00	2.8E-01
1,3-Dichloropropene	542-75-6	5.0E-01	1.7E-02	5.8E+00	1.8E-01
Dieldrin	60-57-1	1.4E-04	4.6E-04	2.0E-02	6.1E-04
Diethyl phthalate	84-66-2	1.5E+00	2.5E-02	--	--
Dimethyl phthalate	131-11-3	1.5E+00	3.5E-02	--	--
2,4-Dimethylphenol	105-67-9	1.0E+02	8.1E+00	3.3E+01	1.0E+00
2,4-Dinitrophenol	51-28-5	3.9E+01	3.0E+00	--	--
2,4-Dinitrotoluene	121-14-2	2.4E-01	2.3E-02	--	--
1,4-Dioxane	123-91-1	3.8E-01	1.7E-04	1.2E+01	3.6E-01
Dioxin (2,3,7,8-TCDD)	1746-01-6	1.4E-08	4.8E-06	2.5E-06	7.4E-08
Endosulfan	115-29-7	8.7E-03	9.8E-03	--	--
Endrin	72-20-8	2.3E-03	1.1E-03	--	--
Ethylbenzene	100-41-4	3.5E+00	4.3E-01	3.7E+01	1.1E+00
Fluoranthene [PAH]	206-44-0	8.0E+00	6.9E-01	--	--
Fluorene [PAH]	86-73-7	3.9E+00	6.0E+00	--	--
Heptachlor	76-44-8	2.1E-04	1.2E-01	7.2E-02	2.2E-03
Heptachlor epoxide	1024-57-3	1.1E-04	1.8E-04	3.6E-02	1.1E-03
Hexachlorobenzene	118-74-1	7.7E-04	8.0E-04	1.8E-01	5.5E-03
Hexachlorobutadiene	87-68-3	1.4E-01	2.8E-02	4.3E+00	1.3E-01
g-Hexachlorocyclohexane (Lindane)	58-89-9	1.6E-02	7.4E-03	--	--
Hexachloroethane	67-72-1	3.3E-01	1.9E-02	8.5E+00	2.6E-01
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	4.9E-02	4.8E-01	--	--
Lead	7439-92-1	2.5E+00	3.2E+01	--	--
Mercury (elemental)	7439-97-6	2.5E-02	1.3E+01	1.0E+00	3.1E-02
Methoxychlor	72-43-5	3.0E-03	1.3E-02	--	--
Methylene chloride	75-09-2	5.0E+00	1.2E-01	3.4E+01	1.0E+00
Methyl ethyl ketone	78-93-3	5.6E+03	6.1E+00	1.7E+05	5.2E+03
Methyl isobutyl ketone	108-10-1	1.2E+02	3.6E-01	1.4E+04	4.2E+02
Methyl mercury	22967-92-6	3.0E-03	3.4E-02	--	--
2-Methylnaphthalene	91-57-6	2.1E+00	8.8E-01	2.3E+03	6.8E+01
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.0E+00	2.8E-02	3.6E+02	1.1E+01
Molybdenum	7439-98-7	1.0E+02	6.9E+00	--	--
Naphthalene [PAH]	91-20-3	1.7E-01	4.2E-02	2.8E+00	8.3E-02
Nickel	7440-02-0	8.2E+00	8.6E+01	--	--
Pentachlorophenol	87-86-5	1.0E+00	1.3E-02	--	--
Perchlorate	7790-98-9	6.0E+00	5.5E+01	--	--
Petroleum - Gasoline	--	1.0E+02	1.0E+02	3.3E+03	1.0E+02
Petroleum - Stoddard Solvent	--	1.0E+02	1.0E+02	1.1E+04	3.3E+02
Petroleum - Jet Fuel	--	1.0E+02	1.0E+02	1.1E+04	3.3E+02
Petroleum - Diesel	--	1.0E+02	2.6E+02	8.9E+03	2.7E+02
Petroleum - HOPs	--	1.0E+02	--	--	--
Petroleum - Motor Oil	--	--	1.6E+03	--	--
Phenanthrene [PAH]	85-01-8	4.6E+00	7.8E+00	1.8E+03	5.5E+01
Phenol	108-95-2	5.0E+00	1.6E-01	5.2E+03	1.6E+02
Polychlorinated biphenyls (PCBs)	1336-36-3	1.7E-04	2.3E-01	1.6E-01	4.9E-03
Pyrene [PAH]	129-00-0	2.0E+00	4.5E+01	--	--
Selenium	7782-49-2	5.0E-01	2.4E+00	--	--
Silver	7440-22-4	1.9E-01	2.5E+01	--	--
Styrene	100-42-5	1.0E+01	9.2E-01	3.1E+04	9.4E+02
tert-Butyl alcohol	75-65-0	1.2E+01	7.5E-02	--	--
1,1,1,2-Tetrachloroethane	630-20-6	5.7E-01	1.7E-02	1.3E+01	3.8E-01
1,1,2,2-Tetrachloroethane	79-34-5	1.0E+00	1.8E-02	1.6E+00	4.8E-02
Tetrachloroethene	127-18-4	6.4E-01	8.0E-02	1.5E+01	4.6E-01
Thallium	7440-28-0	2.0E+00	7.8E-01	--	--
Toluene	108-88-3	4.0E+01	3.2E+00	1.0E+04	3.1E+02
Toxaphene	8001-35-2	2.0E-04	5.1E-01	--	--
1,2,4-Trichlorobenzene	120-82-1	5.0E+00	1.2E+00	7.0E+01	2.1E+00

Tier 1 ESLs [1]

2019 (Rev. 2)

Based on a generic conceptual site model designed for use at most sites[2]

Chemicals	CAS No.	Groundwater (µg/L)	Soil (mg/kg)	Subslab / Soil Gas (µg/m^3)	Indoor Air (µg/m^3)
1,1,1-Trichloroethane	71-55-6	6.2E+01	7.0E+00	3.5E+04	1.0E+03
1,1,2-Trichloroethane	79-00-5	5.0E+00	7.6E-02	5.8E+00	1.8E-01
Trichloroethene	79-01-6	1.2E+00	8.5E-02	1.6E+01	4.8E-01
2,4,5-Trichlorophenol	95-95-4	1.1E+01	2.9E+00	--	--
2,4,6-Trichlorophenol	88-06-2	6.3E-01	4.0E-02	1.0E+01	3.0E-01
1,2,3-Trichloropropane	96-18-4	5.0E-03	1.1E-04	1.0E+01	3.1E-01
Vanadium	7440-62-2	1.9E+01	1.8E+01	--	--
Vinyl chloride	75-01-4	8.6E-03	1.5E-03	3.2E-01	9.5E-03
Xylenes	1330-20-7	2.0E+01	2.1E+00	3.5E+03	1.0E+02
Zinc	7440-66-6	8.1E+01	3.4E+02	--	--

Notes:

1 - ESLs are developed based on methodologies discussed in the User's Guide. Evaluation of laboratory detection limits and naturally occurring background or ambient concentrations should be independently conducted. See User's Guide Chapter 12 (Additional Considerations) for further information.

2 - Generic Conceptual Site Model - See User's Guide Chapter 2. Input settings are:
Land Use = Residential
Groundwater Use = Drinking Water Resource
MCL Priority over Risk-Based Levels = Yes
Discharge to Surface Water = Saltwater & Freshwater
Vegetation Level = Substantial
Soil Exposure Depth = Shallow

Abbreviations:

DDD - Dichlorodiphenyldichloroethane
DDE - Dichlorodiphenyldichloroethene
DDT - Dichlorodiphenyltrichloroethane
HOPs - Hydrocarbon Oxidation Products (biodegradation metabolites and photo-oxidation products of petroleum hydrocarbons). See User's Guide Chapter 4 for further information.
PAH - Polycyclic aromatic hydrocarbon
TCDD - Tetrachlorodibenzodioxin

2019 (Rev. 2)		Summary of Groundwater ESLs (µg/L)														
Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table GW-1)			Aquatic Habitat Goal Levels (Table GW-2)			Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3)				Gross Contam-ination Levels (GW-4)	Odor Nuisance Levels (Table GW-5)		GW Tier 1 ESL	Basis
								Residential		Commercial/Industrial						
		MCL Priority[1]	Tapwater Cancer Risk	Tapwater Non-cancer Hazard	Fresh Water Ecotox	Saltwater Ecotox	Seafood Ingestion Human Health	Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard		Drinking Water	Non-Drinking Water		
Heptachlor	76-44-8	1.0E-02	1.4E-03	1.3E+00	3.8E-03	3.6E-03	2.1E-04	1.8E-01	--	7.9E-01	--	9.0E+01	2.0E+01	2.0E+02	2.1E-04	Aquatic Habitat
Heptachlor epoxide	1024-57-3	1.0E-02	1.4E-03	1.2E-01	3.8E-03	3.6E-03	1.1E-04	1.3E+00	--	5.5E+00	--	1.0E+02	--	--	1.1E-04	Aquatic Habitat
Hexachlorobenzene	118-74-1	1.0E+00	8.8E-03	1.6E+01	3.7E+00	6.5E+01	7.7E-04	7.9E-02	--	3.4E-01	--	3.1E+00	3.0E+03	3.0E+04	7.7E-04	Aquatic Habitat
Hexachlorobutadiene	87-68-3	1.4E-01	1.4E-01	6.5E+00	4.7E+00	3.2E+00	5.0E+01	3.0E-01	--	1.3E+00	--	1.6E+03	6.0E+00	6.0E+01	1.4E-01	Tap Canc-Risk
g-Hexachlorocyclohexane (Lindane)	58-89-9	2.0E-01	3.2E-02	3.6E+00	8.0E-02	1.6E-02	6.3E-02	--	--	--	--	3.7E+03	1.2E+04	1.2E+05	1.6E-02	Aquatic Habitat
Hexachloroethane	67-72-1	3.3E-01	3.3E-01	6.2E+00	1.2E+01	9.4E+01	8.9E+00	1.6E+00	2.0E+02	7.0E+00	8.2E+02	2.5E+04	1.0E+01	1.0E+02	3.3E-01	Tap Canc-Risk
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	2.5E-01	2.5E-01	--	--	1.5E+01	4.9E-02	--	--	--	--	9.5E-02	--	--	4.9E-02	Aquatic Habitat
Lead	7439-92-1	1.5E+01	9.2E+00	2.0E-01	2.5E+00	8.1E+00	--	--	--	--	--	5.0E+04	--	--	2.5E+00	Aquatic Habitat
Mercury (elemental)	7439-97-6	2.0E+00	--	6.1E-02	2.5E-02	2.5E-02	5.1E-02	--	8.9E-02	--	3.8E-01	3.0E+01	--	--	2.5E-02	Aquatic Habitat
Methoxychlor	72-43-5	3.0E+01	--	9.0E-02	1.9E-02	3.0E-03	--	--	--	--	--	5.0E+01	4.7E+03	4.7E+04	3.0E-03	Aquatic Habitat
Methylene chloride	75-09-2	5.0E+00	9.3E-01	1.0E+02	2.2E+03	3.2E+03	1.6E+03	7.8E+00	3.2E+03	9.4E+01	1.3E+04	5.0E+04	9.1E+03	9.1E+04	5.0E+00	MCL
Methyl ethyl ketone	78-93-3	5.6E+03	--	5.6E+03	1.4E+04	--	--	--	2.3E+06	--	9.5E+06	5.0E+04	8.4E+03	8.4E+04	5.6E+03	Tap NC-Hazard
Methyl isobutyl ketone	108-10-1	1.2E+02	--	1.2E+02	1.7E+02	--	--	--	5.6E+05	--	2.3E+06	5.0E+04	1.3E+03	1.3E+04	1.2E+02	Tap NC-Hazard
Methyl mercury	22967-92-6	2.0E+00	--	2.0E+00	3.0E-03	--	--	--	--	--	--	5.0E+04	--	--	3.0E-03	Aquatic Habitat
2-Methylnaphthalene	91-57-6	3.6E+01	--	3.6E+01	2.1E+00	3.0E+01	--	--	--	--	--	1.3E+04	1.0E+01	1.0E+02	2.1E+00	Aquatic Habitat
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.0E+00	1.3E+01	6.3E+03	6.6E+04	8.0E+03	--	4.5E+02	1.3E+05	2.0E+03	5.5E+05	5.0E+04	5.0E+00	1.8E+03	5.0E+00	Odor/Nuis
Molybdenum	7439-98-7	1.0E+02	--	1.0E+02	2.4E+02	--	--	--	--	--	--	5.0E+04	--	--	1.0E+02	Tap NC-Hazard
Naphthalene [PAH]	91-20-3	1.7E-01	1.7E-01	6.1E+00	2.4E+01	1.5E+01	--	4.6E+00	1.7E+02	2.0E+01	7.3E+02	1.6E+04	2.1E+01	2.1E+02	1.7E-01	Tap Canc-Risk
Nickel	7440-02-0	1.0E+02	1.2E+01	2.2E+02	5.2E+01	8.2E+00	4.6E+03	--	--	--	--	5.0E+04	--	--	8.2E+00	Aquatic Habitat
Pentachlorophenol	87-86-5	1.0E+00	4.0E-02	2.3E+01	1.5E+01	7.9E+00	8.2E+00	--	--	--	--	7.0E+03	3.0E+01	5.9E+03	1.0E+00	MCL
Perchlorate	7790-98-9	6.0E+00	--	1.0E+00	6.0E+02	--	--	--	--	--	--	5.0E+04	--	--	6.0E+00	MCL
Petroleum - Gasoline	--	7.6E+02	--	7.6E+02	4.4E+02	3.7E+03	--	--	--	--	--	5.0E+04	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Stoddard Solvent	--	2.1E+02	--	2.1E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Jet Fuel	--	2.1E+02	--	2.1E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Diesel	--	2.0E+02	--	2.0E+02	6.4E+02	6.4E+02	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - HOPs	--	4.1E+02	--	4.1E+02	5.1E+02	5.1E+02	--	--	--	--	--	5.0E+04	1.0E+02	5.0E+03	1.0E+02	Odor/Nuis
Petroleum - Motor Oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene [PAH]	85-01-8	--	--	--	6.3E+00	4.6E+00	--	--	--	--	--	4.1E+02	1.0E+03	1.0E+04	4.6E+00	Aquatic Habitat
Phenol	108-95-2	4.2E+03	--	4.2E+03	1.3E+03	5.8E+02	4.6E+06	--	--	--	--	5.0E+04	5.0E+00	7.9E+04	5.0E+00	Odor/Nuis
Polychlorinated biphenyls (PCBs)	1336-36-3	5.0E-01	1.9E-03	--	1.4E-02	3.0E-02	1.7E-04	2.9E-01	--	1.3E+00	--	3.5E+02	--	--	1.7E-04	Aquatic Habitat
Pyrene [PAH]	129-00-0	1.2E+02	--	1.2E+02	2.0E+00	1.5E+01	1.1E+04	--	--	--	--	7.0E+01	--	--	2.0E+00	Aquatic Habitat
Selenium	7782-49-2	5.0E+01	--	3.0E+01	5.0E+00	5.0E-01	--	--	--	--	--	5.0E+04	--	--	5.0E-01	Aquatic Habitat
Silver	7440-22-4	1.0E+02	--	9.4E+01	3.4E+00	1.9E-01	--	--	--	--	--	5.0E+04	1.0E+02	--	1.9E-01	Aquatic Habitat
Styrene	100-42-5	1.0E+01	5.0E-01	1.1E+03	--	--	--	--	8.5E+03	--	3.6E+04	5.0E+04	1.0E+01	1.1E+02	1.0E+01	Odor/Nuis
tert-Butyl alcohol	75-65-0	1.2E+01	1.2E+01	--	1.8E+04	--	--	--	--	--	--	5.0E+04	--	--	1.2E+01	Tap Canc-Risk
1,1,1,2-Tetrachloroethane	630-20-6	5.7E-01	5.7E-01	4.8E+02	9.3E+02	--	--	3.8E+00	--	1.7E+01	--	5.0E+04	--	--	5.7E-01	Tap Canc-Risk

2019 (Rev. 2)		Summary of Soil ESLs (mg/kg)															
Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table S-1)						Terrestrial Habitat Levels (Table S-2)		Leaching to Groundwater Levels (Table S-3)		Gross Contamination Levels (Table S-4)	Odor Nuisance Levels (Table S-5)			Soil Tier 1 ESL	Basis
		Residential: Shallow Soil Exposure		Commerical/ Industrial: Shallow Soil Exposure		Construction Worker: Any Land Use/ Any Depth Soil Exposure		Significantly Vegetated Area	Minimally Vegetated Area	Drinking Water	Non-drinking Water		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use: Any Soil Exposure (CW)		
		Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard	Examples: Parkland or single family homes with yards	Examples: High density residential or commercial/ industrial areas								
1,2-Dichlorobenzene	95-50-1	--	1.8E+03	--	9.4E+03	--	7.8E+03	4.3E+00	8.5E+00	1.0E+00	1.0E+00	3.8E+02	1.0E+03	2.5E+03	2.5E+03	1.0E+00	Leaching
1,3-Dichlorobenzene	541-73-1	--	--	--	--	--	--	6.0E+00	1.2E+01	7.4E+00	7.4E+00	6.1E+02	1.0E+02	5.0E+02	5.0E+02	6.0E+00	Terr Habitat
1,4-Dichlorobenzene	106-46-7	2.6E+00	3.4E+03	1.2E+01	2.6E+04	2.8E+02	1.5E+04	4.5E+00	9.0E+00	2.0E-01	2.0E-01	1.9E+02	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
3,3-Dichlorobenzidine	91-94-1	5.8E-01	--	2.7E+00	--	2.0E+01	--	--	--	2.5E-02	1.3E+02	6.0E+01	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
DDD	72-54-8	2.7E+00	--	1.2E+01	--	8.1E+01	--	8.5E+00	1.7E+01	6.5E+01	6.5E+01	6.5E+01	5.0E+02	1.0E+03	1.0E+03	2.7E+00	Canc-Risk
DDE	72-55-9	1.8E+00	--	8.3E+00	--	5.7E+01	--	3.3E-01	6.5E-01	2.9E+01	2.9E+01	2.9E+01	5.0E+02	1.0E+03	1.0E+03	3.3E-01	Terr Habitat
DDT	50-29-3	1.9E+00	3.7E+01	8.5E+00	5.2E+02	5.7E+01	1.4E+02	1.1E-03	7.8E+00	5.6E+00	5.6E+00	5.6E+00	5.0E+02	1.0E+03	1.0E+03	1.1E-03	Terr Habitat
1,1-Dichloroethane	75-34-3	3.6E+00	1.6E+04	1.6E+01	2.3E+05	3.7E+02	7.1E+04	1.1E+01	2.1E+01	2.0E-01	3.1E-01	1.7E+03	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
1,2-Dichloroethane	107-06-2	4.7E-01	3.2E+01	2.1E+00	1.4E+02	4.5E+01	1.3E+02	2.9E+01	2.9E+01	7.0E-03	3.1E-02	3.0E+03	1.0E+02	5.0E+02	5.0E+02	7.0E-03	Leaching
1,1-Dichloroethene	75-35-4	--	8.3E+01	--	3.5E+02	--	3.5E+02	4.3E+01	1.3E+02	5.4E-01	4.2E+00	1.2E+03	5.0E+02	1.0E+03	1.0E+03	5.4E-01	Leaching
cis-1,2-Dichloroethene	156-59-2	--	1.9E+01	--	8.5E+01	--	7.8E+01	8.4E+01	9.4E+02	1.9E-01	1.6E+00	2.4E+03	1.0E+02	5.0E+02	5.0E+02	1.9E-01	Leaching
trans-1,2-Dichloroethene	156-60-5	--	1.3E+02	--	6.0E+02	--	5.7E+02	8.4E+01	9.4E+02	6.5E-01	1.4E+01	1.9E+03	5.0E+02	1.0E+03	1.0E+03	6.5E-01	Leaching
2,4-Dichlorophenol	120-83-2	--	2.3E+02	--	3.5E+03	--	1.1E+03	2.1E+00	--	7.5E-03	7.5E-02	5.6E+03	5.0E+02	1.0E+03	1.0E+03	7.5E-03	Leaching
1,2-Dichloropropane	78-87-5	1.0E+00	1.6E+01	4.4E+00	6.6E+01	9.9E+01	6.6E+01	3.1E+01	6.3E+01	6.5E-02	6.5E-02	1.4E+03	1.0E+02	5.0E+02	5.0E+02	6.5E-02	Leaching
1,3-Dichloropropene	542-75-6	5.7E-01	7.2E+01	2.5E+00	3.1E+02	5.3E+01	3.0E+02	3.1E+01	6.3E+01	1.7E-02	4.0E-02	1.6E+03	5.0E+02	1.0E+03	1.0E+03	1.7E-02	Leaching
Dieldrin	60-57-1	3.7E-02	3.5E+00	1.6E-01	4.8E+01	1.1E+00	1.2E+01	9.6E-04	1.1E-01	4.6E-04	6.3E-03	2.4E+01	5.0E+02	1.0E+03	1.0E+03	4.6E-04	Leaching
Diethyl phthalate	84-66-2	--	5.1E+04	--	6.6E+05	--	1.5E+05	1.3E+01	2.7E+01	2.5E-02	2.5E-02	7.7E+02	5.0E+02	1.0E+03	1.0E+03	2.5E-02	Leaching
Dimethyl phthalate	131-11-3	--	--	--	--	--	--	2.1E+01	4.2E+01	3.5E-02	3.5E-02	4.7E+03	5.0E+02	1.0E+03	1.0E+03	3.5E-02	Leaching
2,4-Dimethylphenol	105-67-9	--	1.6E+03	--	2.3E+04	--	7.1E+03	--	--	8.1E+00	8.9E+00	2.4E+04	1.0E+02	5.0E+02	5.0E+02	8.1E+00	Leaching
2,4-Dinitrophenol	51-28-5	--	1.6E+02	--	2.3E+03	--	7.1E+02	--	--	3.0E+00	5.7E+00	8.0E+03	5.0E+02	1.0E+03	1.0E+03	3.0E+00	Leaching
2,4-Dinitrotoluene	121-14-2	2.2E+00	1.6E+02	1.1E+01	2.3E+03	7.9E+01	7.1E+02	--	--	2.3E-02	1.1E+01	7.2E+02	5.0E+02	1.0E+03	1.0E+03	2.3E-02	Leaching
1,4-Dioxane	123-91-1	4.7E+00	8.1E+02	2.2E+01	4.5E+03	2.1E+02	3.4E+03	1.8E+00	1.8E+00	1.7E-04	8.4E-01	1.2E+05	5.0E+02	1.0E+03	1.0E+03	1.7E-04	Leaching
Dioxin (2,3,7,8-TCDD)	1746-01-6	4.8E-06	5.1E-05	2.2E-05	7.2E-04	1.5E-04	2.0E-04	1.3E-05	9.9E-05	3.0E-01	3.0E-01	3.0E-01	5.0E+02	1.0E+03	1.0E+03	4.8E-06	Canc-Risk
Endosulfan	115-29-7	--	4.2E+02	--	5.8E+03	--	1.5E+03	2.3E-02	3.8E-01	9.8E-03	9.8E-03	1.3E+01	5.0E+02	1.0E+03	1.0E+03	9.8E-03	Leaching
Endrin	72-20-8	--	2.1E+01	--	2.9E+02	--	7.4E+01	1.1E-03	1.1E-03	7.6E-03	7.6E-03	3.0E+01	5.0E+02	1.0E+03	1.0E+03	1.1E-03	Terr Habitat
Ethylbenzene	100-41-4	5.9E+00	3.4E+03	2.6E+01	2.1E+04	5.4E+02	1.5E+04	9.0E+01	4.3E+02	4.3E-01	4.3E-01	4.9E+02	5.0E+02	1.0E+03	1.0E+03	4.3E-01	Leaching
Fluoranthene [PAH]	206-44-0	--	2.4E+03	--	3.0E+04	--	6.7E+03	6.9E-01	1.2E+05	8.6E+01	8.6E+01	8.6E+01	5.0E+02	1.0E+03	1.0E+03	6.9E-01	Terr Habitat
Fluorene [PAH]	86-73-7	--	2.4E+03	--	3.0E+04	--	6.7E+03	--	--	6.0E+00	6.0E+00	9.4E+01	5.0E+02	1.0E+03	1.0E+03	6.0E+00	Leaching
Heptachlor	76-44-8	1.2E-01	3.5E+01	5.3E-01	4.8E+02	3.7E+00	1.2E+02	2.5E-01	5.0E-01	4.4E+01	4.4E+01	4.4E+01	1.0E+03	2.5E+03	2.5E+03	1.2E-01	Canc-Risk
Heptachlor epoxide	1024-57-3	6.2E-02	9.1E-01	2.8E-01	1.3E+01	1.9E+00	3.2E+00	--	--	1.8E-04	6.0E-03	1.2E+01	1.0E+03	2.5E+03	2.5E+03	1.8E-04	Leaching
Hexachlorobenzene	118-74-1	1.8E-01	5.6E+01	7.8E-01	7.7E+02	7.7E+00	2.0E+02	1.3E+02	2.5E+02	8.0E-04	8.2E-02	2.3E-01	5.0E+02	1.0E+03	1.0E+03	8.0E-04	Leaching
Hexachlorobutadiene	87-68-3	1.2E+00	7.8E+01	5.3E+00	1.2E+03	1.0E+02	3.5E+02	--	--	2.8E-02	6.2E-02	1.7E+01	5.0E+02	1.0E+03	1.0E+03	2.8E-02	Leaching
g-Hexachlorocyclohexane (Lindane)	58-89-9	5.5E-01	2.1E+01	2.5E+00	2.9E+02	1.6E+01	7.4E+01	7.4E+00	1.5E+01	7.4E-03	7.4E-03	1.2E+02	5.0E+02	1.0E+03	1.0E+03	7.4E-03	Leaching
Hexachloroethane	67-72-1	1.8E+00	3.8E+01	7.8E+00	3.7E+02	1.3E+02	1.2E+02	--	--	1.9E-02	9.2E-02	6.7E+01	5.0E+02	1.0E+03	1.0E+03	1.9E-02	Leaching
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	1.1E+00	--	2.1E+01	--	1.1E+02	--	4.8E-01	9.5E-01	1.6E+01	3.2E+01	2.3E+00	5.0E+02	1.0E+03	1.0E+03	4.8E-01	Terr Habitat
Lead	7439-92-1	8.2E+01	8.0E+01	3.8E+02	3.2E+02	2.7E+03	1.6E+02	3.2E+01	3.2E+01	--	--	--	--	--	--	3.2E+01	Terr Habitat
Mercury (elemental)	7439-97-6	--	1.3E+01	--	1.9E+02	--	4.4E+01	1.5E+01	2.0E+01	--	--	--	5.0E+02	1.0E+03	1.0E+03	1.3E+01	NC-Hazard
Methoxychlor	72-43-5	--	3.5E+02	--	4.8E+03	--	1.2E+03	1.3E-01	4.1E+03	1.3E-02	1.3E-02	1.6E+01	5.0E+02	1.0E+03	1.0E+03	1.3E-02	Leaching
Methylene chloride	75-09-2	1.9E+00	3.1E+02	2.5E+01	2.5E+03	4.9E+02	1.4E+03	9.8E-01	2.0E+00	1.2E-01	1.9E-01	3.3E+03	5.0E+02	1.0E+03	1.0E+03	1.2E-01	Leaching
Methyl ethyl ketone	78-93-3	--	2.7E+04	--	2.0E+05	--	1.2E+05	4.4E+01	8.8E+01	6.1E+00	1.5E+01	2.8E+04	5.0E+02	1.0E+03	1.0E+03	6.1E+00	Leaching
Methyl isobutyl ketone	108-10-1	--	3.4E+04	--	1.4E+05	--	1.4E+05	--	--	3.6E-01	5.1E-01	3.4E+03	1.0E+02	5.0E+02	5.0E+02	3.6E-01	Leaching
Methyl mercury	22967-92-6	--	6.3E+00	--	8.2E+01	--	1.9E+01	3.4E-02	3.4E-02	--	--	--	1.0E+02	5.0E+02	5.0E+02	3.4E-02	Terr Habitat
2-Methylnaphthalene	91-57-6	--	2.4E+02	--	3.0E+03	--	6.7E+02	--	--	8.8E-01	8.8E-01	3.8E+02	5.0E+02	1.0E+03	1.0E+03	8.8E-01	Leaching
Methyl tertiary butyl ether (MTBE)	1634-04-4	4.7E+01	1.6E+04	2.1E+02	6.6E+04	4.1E+03	6.5E+04	3.1E+01	6.3E+01	2.8E-02	2.5E+00	9.0E+03	1.0E+02	5.0E+02	5.0E+02	2.8E-02	Leaching

2019 (Rev. 2)		Summary of Vapor ESLs													
		Subslab/ Soil Gas (µg/m^3)							Indoor Air (µg/m^3)						
Chemicals	CAS No.	Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels (Table SG-1)				Subslab/ Soil Gas Vapor Intrusion: Odor Nuisance Levels (Table SG-2)	Tier 1 ESL	Basis	Direct Exposure Human Health Risk Levels (Table IA-1)				Odor Nuisance Levels (Table IA-2)	Tier 1 ESL	Basis
		Residential		Commercial/ Industrial					Residential		Commercial/ Industrial				
		Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard				Cancer Risk	Non-cancer Hazard	Cancer Risk	Non-cancer Hazard			
Dioxin (2,3,7,8-TCDD)	1746-01-6	2.5E-06	1.4E-03	1.1E-05	5.8E-03	--	2.5E-06	Canc-Risk	7.4E-08	4.2E-05	3.2E-07	1.8E-04	--	7.4E-08	Canc-Risk
Endosulfan	115-29-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	72-20-8	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	3.7E+01	3.5E+04	1.6E+02	1.5E+05	6.7E+04	3.7E+01	Canc-Risk	1.1E+00	1.0E+03	4.9E+00	4.4E+03	2.0E+03	1.1E+00	Canc-Risk
Fluoranthene [PAH]	206-44-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene [PAH]	86-73-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	76-44-8	7.2E-02	--	3.1E-01	--	1.0E+04	7.2E-02	Canc-Risk	2.2E-03	--	9.4E-03	--	3.0E+02	2.2E-03	Canc-Risk
Heptachlor epoxide	1024-57-3	3.6E-02	--	1.6E-01	--	1.0E+04	3.6E-02	Canc-Risk	1.1E-03	--	4.7E-03	--	3.0E+02	1.1E-03	Canc-Risk
Hexachlorobenzene	118-74-1	1.8E-01	--	8.0E-01	--	--	1.8E-01	Canc-Risk	5.5E-03	--	2.4E-02	--	--	5.5E-03	Canc-Risk
Hexachlorobutadiene	87-68-3	4.3E+00	--	1.9E+01	--	4.0E+05	4.3E+00	Canc-Risk	1.3E-01	--	5.6E-01	--	1.2E+04	1.3E-01	Canc-Risk
g-Hexachlorocyclohexane (Lindane)	58-89-9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	67-72-1	8.5E+00	1.0E+03	3.7E+01	4.4E+03	--	8.5E+00	Canc-Risk	2.6E-01	3.1E+01	1.1E+00	1.3E+02	--	2.6E-01	Canc-Risk
Indeno[1,2,3-c,d]pyrene [PAH]	193-39-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	7439-92-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury (elemental)	7439-97-6	--	1.0E+00	--	4.4E+00	--	1.0E+00	NC-Hazard	--	3.1E-02	--	1.3E-01	--	3.1E-02	NC-Hazard
Methoxychlor	72-43-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	75-09-2	3.4E+01	1.4E+04	4.1E+02	5.8E+04	1.9E+07	3.4E+01	Canc-Risk	1.0E+00	4.2E+02	1.2E+01	1.8E+03	5.6E+05	1.0E+00	Canc-Risk
Methyl ethyl ketone	78-93-3	--	1.7E+05	--	7.3E+05	1.1E+06	1.7E+05	NC-Hazard	--	5.2E+03	--	2.2E+04	3.2E+04	5.2E+03	NC-Hazard
Methyl isobutyl ketone	108-10-1	--	1.0E+05	--	4.4E+05	1.4E+04	1.4E+04	Odor/Nuis	--	3.1E+03	--	1.3E+04	4.2E+02	4.2E+02	Nuis/Odor
Methyl mercury	22967-92-6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	--	--	--	--	2.3E+03	2.3E+03	Odor/Nuis	--	--	--	--	6.8E+01	6.8E+01	Nuis/Odor
Methyl tertiary butyl ether (MTBE)	1634-04-4	3.6E+02	1.0E+05	1.6E+03	4.4E+05	1.8E+04	3.6E+02	Canc-Risk	1.1E+01	3.1E+03	4.7E+01	1.3E+04	5.3E+02	1.1E+01	Canc-Risk
Molybdenum	7439-98-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene [PAH]	91-20-3	2.8E+00	1.0E+02	1.2E+01	4.4E+02	1.5E+04	2.8E+00	Canc-Risk	8.3E-02	3.1E+00	3.6E-01	1.3E+01	4.4E+02	8.3E-02	Canc-Risk
Nickel	7440-02-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	7790-98-9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Petroleum - Gasoline	--	--	2.0E+04	--	8.3E+04	3.3E+03	3.3E+03	Odor/Nuis	--	6.0E+02	--	2.5E+03	1.0E+02	1.0E+02	Nuis/Odor
Petroleum - Stoddard Solvent	--	--	1.1E+04	--	4.6E+04	3.3E+04	1.1E+04	NC-Hazard	--	3.3E+02	--	1.4E+03	1.0E+03	3.3E+02	NC-Hazard
Petroleum - Jet Fuel	--	--	1.1E+04	--	4.6E+04	3.3E+04	1.1E+04	NC-Hazard	--	3.3E+02	--	1.4E+03	1.0E+03	3.3E+02	NC-Hazard
Petroleum - Diesel	--	--	8.9E+03	--	3.7E+04	3.3E+04	8.9E+03	NC-Hazard	--	2.7E+02	--	1.1E+03	1.0E+03	2.7E+02	NC-Hazard
Petroleum - HOPs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Petroleum - Motor Oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--