**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION IX**
**75 Hawthorne Street**
**San Francisco, CA 94105-3901**

April 9, 2012

Dr. Aaron O. Allen
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U.S. Army Corps of Engineers
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Subject: Draft Environmental Impact Statement for the Sanitation Districts of Los Angeles County Clearwater Program, Los Angeles County, CA (CEQ # 20120028)

The U.S. Environmental Protection Agency is providing comments on the Draft Environmental Impact Statement for the Clearwater Program, Los Angeles County, California. Our comments are provided pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. These comments were also prepared under the authority of, and in accordance with, the provisions of the Federal Guidelines promulgated at 40 CPR 230 under Section 404(b)(1) of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research and Sanctuaries Act.

EPA appreciated the opportunity to coordinate early and discuss our concerns with the Districts on December 10, 2007, and with the Army Corps of Engineers and the Districts on February 9, 2010 and August 24, 2011. We provided detailed comments on the January 2, 2008 Draft Notice of Intent in our letter dated March 5, 2008. EPA also submitted a letter to the Districts, dated July 30, 2008, clarifying our Superfund Program comments with respect to the effluent-affected sediment deposit on the Palos Verdes Shelf. In a November 4, 2008 letter, we confirmed that our comments on the Draft NOI still applied, based on our review of the NOI released on October 6, 2008.

We commend the Corps and the Districts for selecting their preferred alternative (Alternative 4) which would not necessitate construction of new outfalls that would have the potential to disturb contaminated sediment and generate additional air emissions. We are also pleased that the preferred alternative should avoid impacts to the Palos Verdes DDT Superfund Site and the LA-2 Ocean Disposal site.

While we acknowledge these positive developments and the need to update the county's sanitation infrastructure, we have rated the preferred alternative in the DEIS as Environmental Concerns – Insufficient Information (EC-2) (please see enclosed "*Summary of Rating Definitions*") due to concerns regarding impacts to air quality, aquatic resources, children's health and environmental justice communities.

We remain concerned with the localized and cumulative impacts to the already health burdened communities in the vicinity of the project, and recommend the Districts and the Corps commit, in the Final Environmental Impact Statement and Record of Decision, to implementing measures, beyond those identified in the DEIS, that would further reduce air emissions and associated health risks. For example, in anticipation of the availability of cleaner engines prior to commencement of project construction in 2015, we recommend the Districts and the Corps fully integrate the cleanest engines and the best available emission control technologies for equipment to be used during the project's construction phases,

as well as for the operational elements of the Clearwater Program (e.g. truck hauling of biosolids from Joint Water Pollution Control Plant to various locations for beneficial use or disposal).

We were pleased to note that rehabilitation work of the existing outfalls will be limited to depths between 20 and 50 ft below the water's surface. While we believe this should minimize impacts to potentially contaminated sediments, we recommend the FEIS and ROD include Best Management Practices to ensure minimum disturbance to sediments and marine habitats. To better identify potential impacts to aquatic resources, we recommend the FEIS provide additional information describing the potential frequency of bottom sediment disturbance and the volume of bottom sediments disturbed during outfall joint rehabilitation, as well as any direct or indirect impacts to kelp forests and/or kelp bed habitat. This information may be useful in identifying additional avoidance measures.

Please see the enclosed detailed comments for a more thorough discussion of the comments provided above, as well as additional comments on air and aquatic resources, the Palos Verdes Shelf Superfund Site, greenhouse gas emissions, physical safety, and noise.

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one hard copy and one electronic copy to the address above (mail code: CED-2). If you have questions, please contact me at (415) 972-3521 or Tom Plenys of my staff at plenys.thomas@epa.gov.

Sincerely,

/s/ Connell Dunning *for*

Kathleen Martyn Goforth, Manager
Environmental Review Office
Communities and Ecosystems Division

Enclosures:
(1) Summary of EPA Rating Definitions
(2) EPA's Detailed Comments

cc: David Castanon, Chief, Regulatory Branch, Los Angeles District, Corps of Engineers
Thomas J. LeBrun, Department Head, County Sanitation Districts of Los Angeles County
Steven Highter, Supervising Engineer, County Sanitation Districts of Los Angeles County

EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE SANITATION DISTRICTS OF LOS ANGELES COUNTY CLEARWATER PROGRAM, LOS ANGELES COUNTY, CALIFORNIA, APRIL 9, 2012

**Air Quality**

EPA is concerned about the direct, indirect and cumulative impacts of construction emissions associated with the project, even after mitigation measures have been taken into account. The DEIS includes estimated emissions for criteria pollutants and description of the mitigation measures that will be implemented to reduce the adverse air impacts identified in the DEIS; however, even with implementation of these mitigation measures, combined peak daily emissions from outfall rehabilitation, coupled with the construction of the on-shore tunnel and shaft sites, would exceed South Coast Air Quality Management District daily emissions significance thresholds for nitrogen oxides under the preferred alternative (p. 5-114). Table 5-56 indicates the construction of the on-shore tunnel, alone, from 2016 to 2020 would exceed the 100 pounds per day $NO_x$ threshold.

Given the severe air quality problems within the project area, all feasible measures should be implemented to reduce and mitigate air quality impacts to the greatest extent possible. This is especially important for the South Coast Air Basin nonattainment criteria pollutants including volatile organic compounds, $NO_x$, and particulate matter, both 10 microns or less ($PM_{10}$) and 2.5 microns or less ($PM_{2.5}$).

> *Recommendation:*
> The Districts and Corps should ensure that mitigation measures in the DEIS, and additional mitigation measures that go beyond those in the DEIS (see recommendations, below), are implemented on a schedule that will reduce construction emissions to the maximum extent feasible. All mitigation measures proposed in the DEIS and any additional measures should be included in the Final Environmental Impact Statement and the Record of Decision. The FEIS should describe how these mitigation measures will be made an enforceable part of the project's implementation schedule. We recommend implementation of applicable mitigation measures prior to or, at a minimum, concurrent with the commencement of construction of the project.

*Additional mitigation for non-road engines*

EPA appreciates the efforts of Corps and the Districts to identify the suite of seven air quality mitigation measures to reduce emissions from project construction (p. 5-127). In particular we were pleased to note the use of the all-electric tunnel boring machine.

In light of the air quality in and around the Ports of Los Angeles and Long Beach, and the SCAB in general, we recommend that the Corps and the Districts commit to implementing best available emission control technologies for construction, ahead of the California Air Resources Board's in-use off-road diesel vehicle regulations, regardless of fleet size.[1] EPA began phasing-in Tier 4 standards for non-road engines in 2008,[2] and the DEIS notes the availability of Tier 4 non-road engines, effective January 1st, 2015. The use of such engines would result in an approximately 90% reduction in $NO_x$ and PM emissions as compared to Tier 3 (p. 5-13); yet, although construction is expected to begin after January 1, 2015, MM AQ-2b and 3b state that all off-road diesel powered equipment used during construction will be equipped with an EPA Tier 3 engine, except for

[1] See CARB's Factsheet at: http://www.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf
[2] See EPA website: http://www.epa.gov/nonroad-diesel/2004fr/420f04032.htm#standards

specialized equipment that is not available (p. 5-121). The DEIS leaves open the possibility of using Tier 4 engines, if available, but does not commit to their use (p. 5-42).

*Recommendations:*
The FEIS and ROD should commit to using non-road construction equipment that meets Tier 4 emission standards, when available, and best available emission control technology, for construction that occurs prior to Tier 4 standards availability.

The FEIS should indicate the expected availability of Tier 3 and Tier 4 engines for the construction equipment list provided in Appendix 3-A.

The FEIS should update the tables in the Chapter 5 impact analysis to reflect the additional criteria pollutant emissions reductions that would result from using Tier 4 engines for each component of project construction.

Mitigation Measure AQ-2f for harbor craft recommends the use of the cleanest marine diesel engines available at the Port of Los Angeles. The mitigation measure does not specifically discuss new Tier 4 standards applicable to harbor craft in 2015.

*Recommendation:*
Mitigation Measure AQ-2f should be revised to require Tier 4 equivalent harbor craft as of January 2015. It should also be revised so that the contractor is required to provide proof that the cleanest Tier is unavailable in California, Oregon or Washington, before allowing the use of a lower Tier harbor craft.

Mitigation Measure AQ-2g for tunnel locomotives recommends the use of US EPA Tier 4 engines. The mitigation measure does not discuss the availability of battery-electric locomotives.

*Recommendations:*
The FEIS should include a discussion of available battery-electric locomotives suitable for tunnel construction.

Mitigation Measure AQ-2g should be revised to require battery-electric locomotives during tunnel construction pending availability and applicability.

*Additional mitigation for on-road engines*

The DEIS estimates 30 to 65 truck trips per day during construction of the West Shaft Site, 10 to 40 truck trips per day during construction of the Royal Palms Shaft Site, and 48 to 95 truck trips per day during on-shore tunnel alignment construction (p. 3-15 and 3-17). As a result of the expansion of the Joint Outfall System and the increased biosolids processing at the Joint Water Pollution Control Plant, it is anticipated that there would be an additional 20 truckloads per day above 2008 baseline levels to haul biosolids to various locations for beneficial use or disposal (p. 5-25). By 2050, approximately 27,500 trucks per year would transport biosolids from the JWPCP to the beneficial use and landfill locations (p. 3-8).

MM AQ-2a and 3a state that all on-road heavy-duty diesel trucks used during construction (greater than 26,000 pounds) will include a particulate matter trap or have a 2007 model engine or newer (p. 5-121). MM AQ-2d and 3d indicate alternative fuels will be evaluated for their use during construction.

In view of the heavily impacted air basin and nearby residents, exceedances of the SCAQMD thresholds for $NO_x$, and the potential adverse impacts to environmental justice communities, the cleanest achievable $NO_x$ emission controls are justified for trucks and equipment used on this project during the construction phase as well as the program operational elements.

*Recommendations:*

The FEIS should address $PM_{10}$, $PM_{2.5}$ and $NO_x$ emission levels as part of the on-road diesel engine discussion in Chapter 5 (p. 5-13), and include a table, similar to Table 5-8 for off-road engines, highlighting emission levels for on-road engines. Discuss and compare these levels to those that would be achieved with alternative fuel use.

The FEIS should discuss the availability of on-road engines that meet the $NO_x$ emission standard of 0.2 g/bhp-hr for each on-road vehicle application required as part of the project construction and program operational elements. It should note that EPA on-road standards allowed manufacturers to phase-in compliance with this standard, and that 100 percent of vehicle sales met the standards as of 2010.

Mitigation Measures AQ-2a and 3a, as well as MM AQ-2d and 3d, should commit to meeting the cleanest available on-road emission standards for trucks to be used during project construction, as well as program operational elements (e.g. hauling of biosolids from JWPCP).

MM AQ-2a and 3a should be updated to apply to all on-road heavy-duty diesel trucks greater than 14,000 pounds versus the current 26,000 pounds mentioned in the DEIS.

The FEIS should update the tables in the Chapter 5 impact analysis to reflect the additional criteria pollutant emissions reductions that would result from using the cleanest available on-road engines for each component of project construction and program operational elements.

The FEIS should describe the location of expected final disposal locations for excavated materials and include criteria that would minimize overhaul hauling distances.

Provide a quantification of (1) the additional air quality impacts associated specifically with the trucking of the excavated material and (2) the air quality benefits expected to be achieved by specific mitigation measures. If prior analysis of emissions and mitigation strategies has been conducted, update the FEIS to reflect this.

The Ports' Clean Trucks Programs, key elements of the neighboring Ports' Clean Air Action Plan, have substantially reduced port-related air emissions, especially diesel emissions, in the vicinity of the project. Last August, the Ports released the technical document, "Roadmap for Moving Forward with Zero Emissions Technologies at the Ports of Long Beach and Los Angeles – Technical Report." The report is their mechanism for evaluating various methods of transport that produce no air pollution at the tailpipe. Through the CAAP, the ports created the Technology Advancement Program, which places a priority on the development and demonstration of zero emission technologies for port-operations, consistent with this report.[3]

[3] Website for the report at: http://www.cleanairactionplan.org/civica/filebank/blobdload.asp?BlobID=2527

*Recommendations*:
The FEIS should discuss the Ports' Clean Trucks Programs and how their success could be transferred to truck applications proposed for construction of the Clearwater project, as well as the fleet of trucks used to transport biosolids from the JWPCP. The FEIS should also discuss incentives and require continuous improvement for trucks servicing the construction sites and the JWPCP.

The FEIS should describe zero and near zero emission tailpipe demonstration and deployment projects, and include a mitigation measure providing a schedule for phase-in of zero emission heavy duty trucks, as practicable, for construction related heavy duty trucks, as well as biosolids transport trucks, following successful demonstrations by the ports through their Clean Trucks Programs.

The FEIS should commit to reviewing periodically (e.g., every three years from the date of the ROD), new technologies and regulations specific to heavy-duty trucks to further reduce $NO_x$ and other criteria pollutant and air toxics emissions. Additionally, technology reviews and any recommendations that result should be made available to the public.

*Analysis of Localized Emissions Impacts*

Potential local effects can include emissions of volatile organic compounds, carbon monoxide, nitrogen oxides, $PM_{10}$, and $PM_{2.5}$. Because some communities impacted by this project are predominantly minority and low income communities, these impacts could constitute a disproportionately adverse impact on minority and low income populations. We note the DEIS evaluates the localized impact of construction emissions using the SCAQMD's Localized Significance Thresholds and that the "NOx LST" was scaled to reflect the federal $NO_2$ standard (p. 5-32).

*Recommendation:*
The FEIS should clarify the calculations used to adjust the LST threshold based on the federal $NO_2$ standard and demonstrate compliance with both EPA and SCAQMD localized thresholds.

Impact AQ-6 considers whether the public is exposed to significant levels of toxic air contaminants. The DEIS concludes, for each alternative, that, because exposure to diesel exhaust would be well below the 70-year exposure period at any given location, construction of the preferred alternative is not anticipated to result in an elevated cancer risk to exposed persons, due to the short term nature of construction. While we recognize that Table 5-23 includes a hazard index of greater than or equal to 1.0 as presumably a non-cancer significance threshold, Impact AQ-6 does not discuss or analyze the non-cancer risks associated with short term exposures. Numerous scientific studies have linked particulate pollution exposure to a range of health problems, including premature death, increased hospital and emergency room visits for cardiovascular and respiratory effects, and development of chronic respiratory disease.

*Recommendations:*
Discuss, in the FEIS, the range of potential non-cancer health problems linked to particulate pollution, including diesel PM.

Discuss and analyze, for each alternative, as appropriate, the relative contribution (or project increment) to the acute hazard index from toxic air contaminants during construction as well as a total hazard index (background plus project exposure).

Consider incorporating, into the FEIS, additional mitigation, as appropriate, such as altering the construction schedule or using high emitting equipment only when emissions would otherwise be low, which may sufficiently change the timing of emissions to avoid an acute residential or non-residential hazard.

*Greenhouse Gas Emissions - Construction and Operation Bid Specifications*

In soliciting future contracts for project construction and program operations, consider including in the FEIS, and adopting in the ROD, the following additional requirements:

a) Soliciting bids that include use of energy- and fuel-efficient fleets;
b) Giving preference to construction bids that use Best Available Control Technology, particularly those seeking to deploy zero emission technologies;
c) Requiring that contractors ensure to the extent possible that construction activities utilize grid-based electricity and/or onsite renewable electricity generation rather than diesel and/or gasoline powered generators.
d) Employing the use of alternative fueled vehicles;
e) Using lighting systems that are energy efficient, such as LED technology;
f) Using the minimum feasible amount of GHG-emitting construction materials that is feasible;
g) Use of cement blended with the maximum feasible amount of flash or other materials that reduce GHG emissions from cement production;
h) Use of lighter-colored pavement where feasible;
i) Recycling construction debris to maximum extent feasible; and,
j) Planting shade trees in or near construction projects where feasible.

**Environmental Justice**

The Department of Defense is signatory to the August 4, 2011 Memorandum of Understanding on Environmental Justice and Executive Order 12898. In addition to reinforcing the federal government's commitment to environmental justice, the MOU is relevant to actions such as the Clearwater Program through its focus on NEPA and Title VI of the Civil Rights Act. In light of this renewed commitment and focus, we recommend that the Corps consider changes to mitigation measures, as proposed in this letter and by other stakeholders, to avoid or further mitigate the project's adverse impacts. Further efforts to reduce environmental justice impacts could assist local entities that receive Federal funds to meet their potential obligations under Title VI of the Civil Rights Act.

The Environmental Justice analysis in the DEIS only analyzes impacts that were determined to be significant and unavoidable (p. 15-27). The EJ analysis concludes that, because the significant and unavoidable air quality impacts that would occur as a result of NOx emissions during construction of the Clearwater Program are regional emissions, the emissions would not result in adverse effects on minority and low-income populations, as the impacts on the reference community (Los Angeles County) and the affected community would be the same (p. 15-28). Because of the limitations of the EJ analysis, neither localized emissions from the project nor cumulative impacts are discussed in the EJ analysis.

The DEIS does note that the JWPCP West Shaft Site (proposed under Alternative 4) study area has a greater presence of minority and low-income populations in comparison to the reference community (p. 15-46). Additionally, sensitive receptors are located only 105 ft from the West Shaft

site (Figure 5-11), and numerous homes are located within a few hundred feet. The communities in the study area, and the local communities nearby, are already heavily impacted by air emissions[4], a condition likely to be exacerbated by the many projects currently planned at and around the Ports of Los Angeles and Long Beach, such as the Corps' Pier S and American President Lines' container terminal projects, the Southern California International Gateway, and perhaps the expansion of Interstate 710. Therefore, all impacts, even seemingly small ones, are important to consider and mitigate in order to fully offset the adverse project-related impacts to the local community.

There is a growing body of evidence that environmental justice communities are more vulnerable to pollution impacts than other communities[5]. As discussed in EPA's *Framework for Cumulative Risk*[6] and *Integrated Science Assessment for Oxides of Nitrogen – Health Criteria*[7] *(July 2008),* disadvantaged, underserved, and overburdened communities are likely to come to the table with pre-existing deficits of both a physical and social nature that make the effects of environmental pollution more, and in some cases, unacceptably, burdensome. Thus, certain subpopulations may be more likely to be adversely affected by a given stressor than is the general population.

As stated by the Council on Environmental Quality[8], the identification of disproportionately high and adverse human health or environmental effects on a low-income or minority population does not preclude a proposed agency action from going forward nor compel a finding that a proposed project is environmentally unacceptable. Instead, the identification of such effects is expected to encourage agency consideration of alternatives, mitigation measures, monitoring needs, and preferences expressed by the affected community or population.

*Recommendations:*
Given the magnitude of potential cumulative health impacts, the FEIS should consider all feasible mitigation strategies, monitoring measures, and the preferences expressed by the local community. Examples of mitigation measures that should be considered to reduce the community's exposure and reduce community vulnerability are:

- Fund proactive measures to improve air quality and general health in neighboring homes, schools, and other sensitive receptors;
- Provide public education programs about environmental health impacts to better enable residents to make informed decisions about their health and community;
- Engage in proactive measures to train and hire local residents for construction or operation of the project to improve their economic status and access to health care; and,
- Expand and improve the local community parks and recreation system in areas where air quality is highest, in order to provide increased access to open space and exercise opportunities**.**

As an element of the Corps' Pier S project, the proponent, the Port of Long Beach, offered grant funds for impacts that could not be fully mitigated. We recommend that the Corps and

[4] Final Report, Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES-III, September 2008, South Coast Air Quality Management District.
[5] Symposium on the Science of Disproportionate Environmental Health Impacts, March 17 - 19, 2010, see the fourteen scientific reviews commissioned by EPA and published in the American Journal of Public Health at: http://www.epa.gov/compliance/ej/multimedia/albums/epa/disproportionate-impacts-symposium.html.
[6] Available at: http://cfpub.epa.gov/ncea/raf/recordisplay.cfm?deid=54944.
[7] Available at: http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=194645#Download.
[8] Environmental Justice Guidance Under the National Environmental Policy Act, Council on Environmental Quality, 10 December 1997.

Districts consider establishing a similar program to facilitate implementation of the above and/or other mitigation measures, and discuss this in the FEIS.

**Children's Environmental Health and Safety**

Executive Order 13045 on Children's Health and Safety directs that each Federal agency shall make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and shall ensure that its policies, programs, activities, and standards address these risks. Analysis and disclosure of these potential effects under NEPA is necessary because some physiological and behavioral traits of children render them more susceptible and vulnerable than adults to health and safety risks. Children may be more highly exposed to contaminants than are adults because they generally eat more food, drink more water, and have higher inhalation rates relative to their size. Also, children's normal activities, such as putting their hands in their mouths or playing on the ground, can result in higher exposures to contaminants as compared with adults. Children may be more vulnerable to the toxic effects of contaminants because their bodies and systems are not fully developed and their growing organs are more easily harmed.

Based on current EPA policy and guidance, an analysis of impacts to children should be included in a NEPA analysis if there is a possibility of disproportionate impact on children related to the proposed action.[9] EPA views childhood as a sequence of life stages, from conception through fetal development, infancy, and adolescence. Therefore, exposures to children at each life stage, as well as to pregnant and nursing women, are relevant and should be considered when addressing health and safety risks for children.

Chapter 5 of the DEIS discusses air quality impacts and uses the SCAQMD Localized Significance Threshold Methodology to assess localized air quality impacts from construction activities. Table 5-21 provides approximate distances of proposed construction sites to nearest non-resident sensitive receptors.

*Recommendations:*
In addition to considering schools and convalescent homes as non-resident sensitive receptors, the FEIS should discuss and update analyses to include child care facilities as non-resident sensitive receptors when assessing localized air quality impacts from construction activities.

The FEIS should describe the specific location for all staging areas to be used during construction at each shaft site, and confirm that these locations would result in the least environmental impacts and disruption to sensitive receptors, including schools and child care centers. The FEIS should also consider smaller footprints for the proposed shaft sites and construction schedules that would minimize impacts to such sensitive receptors.

Please also identify measures to reduce identified impacts, including measures identified in the recently released Draft Schools Environmental Health Guidelines for reducing exposure of environmental hazards near schools.
http://www.epa.gov/schools/ehguidelines/index.html.

[9] U.S. EPA. April 4, 1996. Memorandum: Interim OFA Program Guidance on Implementing the EPA Policy on Evaluating Health Risks to Children. Available at: http://www.epa.gov/compliance/resources/policies/nepa/children-health-risks-pg.pdf.

Chapter 5 states that construction-related air pollution emissions would be reduced with the implementation of mitigation measures; however, construction-related emissions of $NO_x$ would continue to exceed the SCAQMD significance threshold and have an incremental regional air quality effect. Research has linked short-term $NO_2$ exposures with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma.[10] Children may be more susceptible to air pollution and experience higher exposures than adults. According to the 2007 Los Angeles County Health Survey, 9.5% of children less than 18 years old who live in the Los Angeles County South Bay Service Planning Area (also known as SPA 8) currently have asthma or had an asthma attack in the preceding 12 months.[11]

*Recommendation:*
The FEIS should discuss current rates of asthma in the study area and how construction-related air emissions may impact children's health.

Chapter 10 states that aerially deposited lead and asbestos may be present in surface soils at the JWPCP East, JWPCP West, and TraPac shaft sites. Residences have been identified near these shaft sites and a school was identified as being located near the JWPCP East shaft site. It is unclear whether soil screening has been completed or will be conducted prior to construction to assess the levels of lead and asbestos in surface soil.

*Recommendation:*
The FEIS should discuss whether activities have or will be completed to characterize potential surface soil contamination at these sites prior to excavation.

**Palos Verdes Shelf Superfund Site**

The preferred alternative would not require new outfalls and, as a result, should avoid impacts to the Palos Verdes DDT Superfund Site. While we are pleased this alternative would address many of the concerns we previously raised through our scoping comments and during our in person meetings pertaining to the Superfund site, the current alternatives analysis does not sufficiently characterize the impacts to the Palos Verdes DDT Superfund Site under each alternative, nor how such information was used to support selection of the preferred alternative.

*Recommendations:*
The "Description of Alternatives" (p. 3-4), in the FEIS, should include avoidance and impact minimization of the Palos Verdes Shelf Superfund Site as one of the screening criteria.

The FEIS should include a discussion on how the construction, operation, rehabilitation and maintenance activities under each alternative would impact the Palos Verdes Shelf Superfund Site and identify any potentially necessary remedial actions.

The FEIS should discuss potential environmental effects due to disturbance of DDT contaminated sediments that could result from effluent discharge and changes in currents as a result of the JWPCP outfall. A discussion of modeling and monitoring results used to determine environmental effects should also be included.

[10] U.S. Environmental Protection Agency. Nitrogen Dioxide: Health, last updated on July 6, 2011, http://www.epa.gov/airquality/nitrogenoxides/health.html.

[11] 2007 Los Angeles County Health Survey. Office of Health Assessment and Epidemiology, Los Angeles County Department of Public Health.

The FEIS should evaluate the alternatives with recognition that two of the offshore tunnel alignments have the potential to cause unavoidable, but mitigable, impacts to the Palos Verdes Superfund Site.

The FEIS should amend Chapter 10 - Hazardous Material – to discuss contaminated sediment at the Palos Verdes Shelf Superfund Site and disclose that two of the proposed offshore tunnel alignments terminate on Palos Verdes Shelf Superfund Site.

Please include the extent of DDT and PCB contamination as recorded in 2007[12] on Figure 13-4, and indicate the location of the proposed existing outfall rehabilitation activities.

The FEIS should acknowledge in Chapter 2 that the Districts entered into a Consent Decree in 1997 with EPA to address the DDT and PCB contaminations on the Palos Verdes Shelf.

We were pleased to note that rehabilitation work on the existing outfalls will be limited to depths between 20 and 50 ft below the water's surface. While we believe this should avoid potentially contaminated sediments and not interfere with the proposed CERLCA remedy[13], we recommend the FEIS and ROD include Best Management Practices to ensure minimum disturbance to sediments and marine habitats.

*Recommendations:*
EPA expects the proposed CERCLA remedy (sediment cap for the Palos Verdes Superfund site) will be implemented by 2018, prior to the proposed construction start date for offshore diffusers and risers and existing outfall rehabilitation. The FEIS and ROD should include commitments from the Corps and the Districts to coordinate with EPA during design and construction to ensure the selected alternative will not interfere with Superfund remediation activities.

In the FEIS, for each alternative, as part of the discussion on the existing outfall rehabilitation, off-shore tunneling and riser/diffuser construction:

- Include potential impacts from the construction and rehabilitation activities (e.g. ballasting work) to the proposed CERLCA remedy.
- Propose avoidance measures to minimize impacts from the construction and rehabilitation activities to the proposed CERCLA remedy.
- Propose mitigation measures to mitigate unavoidable impacts to the CERCLA remedy.
- Include a commitment to notify and coordinate with EPA if the proposed outfall rehabilitation activities occur beyond the 50 feet isobath.

**Clean Water Act Section 404**

The preferred alternative identified in the Corps' DEIS and February 13, 2012 Public Notice would avoid and minimize the impacts to aquatic resources described for Alternatives 1-3, including impacts associated with dredging and sediment disposal and fill from new outfall construction.

[12] In October, 2007 EPA issued the Final Palos Verdes Superfund Site Remedial Investigation Report. The Remedial Investigation Report contains EPA's last published characterization of the PV Shelf PCB and DDT contamination.

[13] Interim Record of Decision, Palos Verdes Shelf Operable Unit 5 of Montrose Chemical Corporation Superfund Site, Los Angeles County, California, September 2009.

Because of the degree to which project impacts would be avoided and minimized, EPA supports the identification of Alternative 4 as the preferred alternative. We will provide our comments on the Public Notice in a separate letter; but, preliminarily, EPA considers Alternative 4 to be the least environmentally damaging practicable alternative (LEDPA) that will achieve the overall project purpose.

The DEIS states that, in 2008, 150 acres of kelp were reported in the White Point area, but it is not clear whether the project would result in any impacts to this specific habitat. Kelp forest and kelp bed are highly productive aquatic habitats providing areas for spawning, foraging and refuge for several marine species. These habitats can also provide physical buffers that can attenuate wave energy, reducing damage to coastal environments.

> *Recommendation:*
> The FEIS should more accurately describe locations of kelp forest and/or kelp bed in proximity to the proposed project activities, clearly state whether the proposed project is expected to have any direct or indirect impacts to kelp, and, if so, how impacts will be avoided, minimized, and/or mitigated consistent with the CWA 404(b)(1) Guidelines.

It is unclear to what extent sediment disturbance, during construction of the preferred alternative, could result in increased turbidity and exposure of contaminated sediments. Based on the project description for Alternative 4, some ballast rock would be temporarily removed from the outfall pipes to expose the joints so that couplings and concrete or epoxy can be installed. EPA assumes that the entire circumference of the pipe would need to be exposed around each joint to complete this operation. If so, there is potential to disturb bottom sediments at several locations along the three outfalls.

> *Recommendation:*
> While it is expected that turbidity will be localized and temporary, it would be helpful to include additional language in the FEIS better describing the approximate number of locations where outfall joint rehabilitation will occur, and an estimate of the volume of bottom sediments that could be disturbed. This additional information would better inform whether additional sediment sampling and BMPs would be appropriate to prevent the redistribution of contaminated sediments, control turbidity, and protect aquatic organisms in proximity to the project.

**Cumulative Impacts**

The Council on Environmental Quality's regulations for implementing NEPA define cumulative effects as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions (40 CFR Part 1508.7).

The cumulative impact analysis provided in the DEIS does not fully assess and quantify cumulative impacts associated with the project. The DEIS includes a map of 'cumulative projects' in the vicinity of the project (Figure 21-1). It appears that the list of 'cumulative projects' was provided without being incorporated into an analysis of what additional impact to resources those projects may have when also considered with the Clearwater project.

For air quality, the cumulative impacts analysis indicates that, after mitigation, the incremental effect on cumulative air quality impacts for $NO_x$ during construction for Alternatives 1 through 4 would be significant and unavoidable. The cumulative impacts analysis does not discuss other key

pollutants of concern, such as VOCs, $PM_{10}$ and $PM_{2.5}$. As stated earlier, the cumulative air quality impacts of the proposed project are of concern to EPA; however, the degree of impact cannot be determined without a quantification of emissions of specific pollutants as was done for air quality impacts assessed in Chapter 5. This lack of quantified cumulative emissions leaves the reader uncertain as to how significant these cumulative impacts could be.

*Recommendations:*
The FEIS should update the list of cumulative impact projects and, in tabular format, summarize each project's current status, proximity to, and anticipated schedule overlap with the proposed project. It is critical to understand the full scope of the construction and timing of operation for the multiple ongoing projects in order to assess potential cumulative impacts.

The FEIS should include a quantification of cumulative emissions from the project and, at a minimum, other nearby goods movement projects, including terminal expansion projects at the Ports of Los Angeles and Long Beach, nearby proposed intermodal facilities and freeway expansion projects (e.g. the I-710), where emissions have already been quantified. Results should be provided in tabular format.

Discuss, in the FEIS, whether there are projects that, if all constructed at the same time, would heavily burden specific communities (with regard to construction impacts). Discuss whether there are measures that could be adopted, such as staging construction, so as not to overly-impact one community.

**Noise Impacts**

Chapter 14 discusses noise and vibration impacts from program and project construction. Noise sensitive receptors were identified near the shaft sites and the DEIS includes noise mitigation measures that will be implemented. Mitigation measure MM NOI-4b states that a complaint/response tracking program will be initiated prior to constriction, and a construction schedule will be made available to residents living near construction areas.

*Recommendation:*
The FEIS and ROD should include a commitment to provide the construction schedule and contact information of the noise disturbance coordinator to affected sensitive receptors, including schools and child care facilities, that are in the vicinity of construction areas.

**Physical Safety**

The DEIS states that access to the shaft sites will be controlled through the use of fencing and controlled access locations (p. 10-29). The 40 to 60 ft diameter JWPCP West Shaft Site and the 25 to 35 ft diameter Royal Palms Shaft Site could pose a risk of physical injury to anyone who enters the area unsupervised and without permission. Truck traffic, due to construction activities, is also expected to increase in the vicinity of the shaft sites.

*Recommendations*:
The FEIS and ROD should include a commitment to ensure signs are posted along the fence line that clearly communicate the danger of entering this area, especially at shaft sites that have nearby residences, schools, child care facilities, and parks.

The FEIS and ROD should include a commitment to ensure schools, child care facilities, and/or residences are notified of increased truck traffic, once truck routes are established for program and project elements.