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

JAN 31 2012

Mr. Jesse Martinez
Naval Facilities Engineering Command Southwest
1220 Pacific Highway
Building 1 Central IPT
San Diego, California 92132-5190

Subject: Draft Environmental Impact Statement for the Basewide Water Infrastructure and Stuart Mesa Bridge Replacement at Marine Corps Base Camp Pendleton, California (CEQ # 20110406)

Dear Mr. Martinez:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement for the Basewide Water Infrastructure and Stuart Mesa Bride Replacement projects pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The EPA recognizes the need to upgrade the drinking water infrastructure and replace the Stuart Mesa Bridge within Marine Corps Base Camp Pendleton (MCBCP). We commend the Marine Corps for developing a preferred alternative, and committing to mitigation measures, that will reduce the impacts of these projects. We would also like to thank you for agreeing, with Jason Gerdes of my staff, to a two-week extension for the EPA to submit comments for this EIS.

Based on our review of the Draft EIS, we have rated the preferred alternative and the document as EC-2, Environmental Concerns – Insufficient Information (see enclosed EPA Rating Definitions). Though we acknowledge the efforts made by the Marine Corps to craft environmentally preferred alternatives for the projects described in this EIS, and to commit to a broad suite of mitigation measures, the EPA is concerned about the preferred alternative's projected impacts to water resources, particularly vernal pools and waters of the U.S. We recommend that the Marine Corps work with the U.S. Army Corps of Engineers to verify jurisdictional waters of the U.S. and to develop the least environmentally damaging practicable alternative to avoid and minimize impacts to such waters. We also recommend that reasonable mitigation measures be implemented for air quality impacts during the construction phase, and that the Final EIS provide additional information on the potential effects of climate change on the proposed projects. Our detailed comments are enclosed.

We appreciate the opportunity to review this DEIS, and are available to discuss our comments. When the FEIS is released for public review, please send one hard copy and one CD-ROM to the address above (Mail Code: CED-2). If you have any questions, please contact me at 415-972-3521, or contact Jason Gerdes, the lead reviewer for this project. Jason can be reached at 415-947-4221 or gerdes.jason@epa.gov.

Sincerely,

Kathleen Martyn Goforth, Manager
Environmental Review Office

Enclosure: Summary of the EPA Rating System
EPA Detailed Comments

cc: Peter Beck, U.S. Fish and Wildlife Service
Therese O'Rourke, U.S. Army Corps of Engineers

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE BASEWIDE WATER INFRASTRUCTURE AND STUART MESA BRIDGE REPLACEMENT, MARINE CORPS BASE CAMP PENDLETON, CALIFORNIA, JANUARY 31, 2012

Compliance with Clean Water Act Section 404

The project will require a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (USACE), yet the DEIS does not include the necessary information to determine compliance with this requirement. Information is lacking in the following areas, and we have the following recommendations to help facilitate compliance of the project.

The alternatives analysis does not demonstrate that the Preferred Alternative 5 is the Least Environmentally Damaging Practicable Alternative (LEDPA).

Pursuant to EPA's *Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials* (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the CWA (Guidelines), only the Least Environmentally Damaging Practicable Alternative (LEDPA) that achieves the overall project purpose, while not causing or contributing to significant degradation of the aquatic ecosystem, can be permitted by the USACE. At this time, the EPA believes that the alternatives analysis in the DEIS does not demonstrate compliance with the Guidelines. The DEIS simply states that the project design "would avoid direct and indirect impacts to vernal pools, riparian habitats, jurisdictional waters, and other sensitive wetlands to the greatest extent feasible" (p. 2-81). Identification of the LEDPA is achieved by performing an alternatives analysis that estimates the direct, indirect, and cumulative impacts to jurisdictional waters resulting from each alternative considered. Project alternatives that are not practicable and do not meet the project purpose are eliminated. The LEDPA is the remaining alternative with the fewest impacts to aquatic resources, so long as it does not have other significant adverse environmental consequences. Only when an analysis is correctly structured can there be assurances that the practicable alternative with the least adverse impact on the aquatic ecosystem has been selected (40 CFR 230.10(a)).

> ***Recommendation:*** The FEIS should include a detailed evaluation of the project alternatives in order to demonstrate the project's compliance with the 404(b)(1) Guidelines and support the identification of the LEDPA by the USACE. The alternatives analysis should include additional information that demonstrates the proposed project is avoiding and minimizing damage to waters as required by the Guidelines. If, under the proposed project, dredged or fill material would be discharged into waters of the U.S., the FEIS should discuss alternatives to avoid those discharges.

The DEIS does not demonstrate that the preferred alternative does not result in significant degradation of aquatic resources.

The DEIS indicates that the project will permanently impact vernal pools occupied by the federally endangered Riverside fairy shrimp[1] (20 basins) and San Diego fairy shrimp (71 basins) (Table ES-3). The Guidelines prohibit granting a 404 permit to a project that causes or contributes to significant degradation of aquatic resources. Effects contributing to significant degradation include: 1) loss of fish and wildlife habitat (40 CFR 230.10(c)(3)); 2) reduction of biological productivity caused by smothering wetland habitat (40 CFR 230.41), and 3) impairment or destruction of endangered species habitat (40 CFR 230.30(2)). Much of the anticipated impacts to vernal pools occupied by Riverside fairy shrimp

[1] P-1045 alone would "impact thread-leaved brodiaea, more riparian habitat (permanent plus temporary), vernal pools, and populations of listed vernal pool species." (p. 3.315)

and San Diego fairy shrimp would come from proposed paved maintenance access and recreation corridors that do not appear to meet the purposes defined for the projects in the DEIS.

> ***Recommendations:*** We recommend that the FEIS include a description of how the paved maintenance access and recreation corridors, particularly those corridors adjacent to Stuart Mesa Road in the Oscar Two Training Area (corridors that would most impact vernal pools occupied by Riverside and San Dan fairy shrimp), meet the purpose of the project. If these areas are not integral to meeting the purpose and need, they should be removed from the project description. We also recommend that the Marine Corps consult with the U.S. Fish and Wildlife Service to ensure that the preferred alternative avoids, to the greatest extent possible, all direct and indirect impacts to the vernal pools occupied by Riverside fairy shrimp and San Diego fairy shrimp.

The DEIS does not indicate whether the jurisdictional delineation has been verified by the U.S. Army Corps of Engineers or disclose all impacts to waters for each alternative.
The DEIS states on page 3.3-3 that jurisdictional waters of the U.S. (including wetlands) were delineated pursuant to the latest procedural guidelines and criteria in the *Corps of Engineers Wetlands Delineation Manual*, the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*, and the Code of Federal Regulations, but it does not indicate whether the jurisdictional delineation has been verified by the USACE. A jurisdictional determination by the USACE is needed prior to publication of the FEIS in order to provide a determination of potential significant impacts and identify mitigation and avoidance measures in the design of the projects that comprise the preferred alternative.

> ***Recommendation:*** In the FEIS, include documentation that the delineation of the extent of waters, including wetlands, on the project sites has been verified by the USACE. Update the estimated impacts to waters if applicable. The FEIS should include estimates of acreages of direct (differentiating between permanent and temporary impacts) and indirect impacts to waters for each alternative.

The DEIS does not fully discuss compensatory mitigation or include mitigation for indirect impacts.
Pursuant to the Guidelines, the applicant must mitigate for unavoidable impacts to waters. Based on a review of the DEIS, Table 4.5.3.1-5 "Mitigation for Permanent and Temporary Direct Impacts to Waters of the U.S.," the proposed mitigation ratios are 2:1 for permanent loss of acreage and 1:1 for temporary loss of acreage. There is no discussion regarding compensation for potential indirect impacts to waters.

> ***Recommendations:*** The FEIS should discuss how all potential impacts would be minimized and mitigated. This discussion should include: (a) acreage and habitat type of waters of the U.S. that would be created, restored, or preserved; (b) water sources to maintain the mitigation area; (c) a revegetation plan utilizing native plants; (d) maintenance and monitoring plans, including performance standards to determine mitigation success; (e) an Adaptive Management Plan; (f) the parties that would be ultimately responsible for the plan's success; and (g) contingency plans that would be enacted if the original plan fails. Mitigation should be implemented in advance of the impacts to avoid habitat losses due to the lag time between the occurrence of the impact and successful mitigation. In addition, the FEIS should include compensatory mitigation for indirect impacts to waters.

Air Quality

Tables 4.5.9-1 and 4.5.9-2 estimate annual emissions of NO_x, PM_{10}, and other pollutants in the San Diego and South Coast Air Basins during construction of the proposed projects. The EPA agrees that the emissions do not trigger a conformity determination, but because they will occur in areas not in attainment with the National Ambient Air Quality Standards (NAAQS), they should be reduced to the extent practicable.

***Recommendations*:**
In addition to the fugitive dust mitigation measures in Section 2.5.4, the EPA recommends that all of the following mitigation measures be adopted in the FEIS to further reduce impacts associated with emissions of particulate matter and other toxics from construction-related activities:

Fugitive Dust Source Controls:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate at active and inactive sites during workdays, weekends, holidays, and windy conditions;
- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions; and
- Prevent spillage when hauling material and operating non-earthmoving equipment and limit speeds to 15 miles per hour. Limit speed of earth-moving equipment to 10 mph.

Mobile and Stationary Source Controls:

- Plan construction scheduling to minimize vehicle trips;
- Limit idling of heavy equipment to less than 5 minutes and verify through unscheduled inspections (Note: The California Air Resources Board has a number of mobile source anti-idling requirements, see their website at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm);
- Maintain and tune engines per manufacturer's specifications to perform at CARB and/or EPA certification levels, prevent tampering, and conduct unscheduled inspections to ensure these measures are followed;
- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal[2] or State Standards[3]. In general, commit to the best available emissions control technology. Tier 4 engines should be used for project construction equipment to the maximum extent feasible[4];
- Lacking availability of non-road construction equipment that meets Tier 4 engine standards, the responsible agency should commit to using CARB and EPA-verified particulate traps, oxidation catalysts and other appropriate controls where suitable to reduce emissions of diesel particulate matter and other pollutants at the construction site; and
- Consider alternative fuels such as natural gas and electricity (plug-in or battery).

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[2] EPA's website for nonroad mobile sources is http://www.epa.gov/nonroad/.
[3] For ARB emissions standards, see: http://www.arb.ca.gov/msprog/offroad/offroad.htm.
[4] Diesel engines < 25 hp rated power started phasing in Tier 4 Model Years in 2008. Larger Tier 4 diesel engines will be phased in depending on the rated power (e.g., 25 hp - <75 hp: 2013; 75 hp - < 175 hp: 2012-2013; 175 hp - < 750 hp: 2011 - 2013; and ≥ 750 hp 2011- 2015).

Administrative controls:

- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking;
- Develop a construction traffic and parking management plan that maintains traffic flow and plan construction to minimize vehicle trips; and
- Identify sensitive receptors in the project area, such as children, elderly, and infirmed, and specify the means by which you will minimize impacts to these populations (e.g. locate construction equipment and staging zones away from sensitive receptors and building air intakes).

Climate Change

The EPA commends the Marine Corps for including an estimate, in Appendix D, of projected greenhouse gas emissions (GHG) associated with implementing the preferred alternative, as well as for providing a very good description of the many efforts on MCBCP to conserve energy, deploy renewable energy technologies, and reduce GHG emissions. There are no detailed descriptions, however, of how climate change may affect MCBCP water resources and the projects planned in the preferred alternative. The plans in Alternative 5 to treat, convey, and control water could be impacted by a water supply altered or diminished by climate change.

Recommendations:
The Marine Corps should describe in the FEIS how climate change may affect the projects planned in the preferred alternative. The FEIS should also include a climate change mitigation and adaptation plan.