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

December 23, 2008

Ms. Cynthia Fowler
U.S. Army Corps of Engineers
San Francisco District
Attn: Planning Branch
1455 Market Street
San Francisco, CA 94103

Subject: Draft Supplemental Environmental Impact Statement (DSEIS) for the Hamilton Wetland Restoration Project, Dredged Material Aquatic Transfer Facility Project, Marin County, California (CEQ # 20080440)

Dear Ms. Fowler:

The U.S. Environmental Protection Agency (EPA) has reviewed the Hamilton Wetland Restoration Project, Dredged Material Aquatic Transfer Facility Project (Project) pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) 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 (Guidelines) promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act (CWA) and EPA's ocean dumping regulations promulgated at 40 CFR 220-227 under the Marine Protection, Research and Sanctuaries Act (MPRSA). Our detailed comments are enclosed.

Based on review of the DSEIS we have rated the document EC-2, Environmental Concerns – Insufficient Information (see enclosed EPA Rating Definitions). We are concerned with the lack of sufficient information describing potential beneficial impacts of Alternative 2 on water quality, fish habitat and benthic environments in San Francisco Bay. We are also concerned with a lack of information on monitoring, impact avoidance, and mitigation for green sturgeon and long-fin smelt, and recommend early coordination with the National Marine Fisheries Service (NOAA Fisheries) to develop this information prior to release of the Final Supplemental Environmental Impact Statement (FSEIS). Additional concerns include the need to adequately monitor changes in turbidity and dissolved oxygen that could result from the

Project, and a lack of information on reductions in criteria pollutants from construction and operational emissions. We also recommend the FSEIS discuss an alternative that would include a second off-loader, and discuss commercial fish catch as a potential threshold of significance. Finally, we are concerned with the potential impact of Alternative 1: No Action, on the San Francisco Bay Long Term Management Strategy for Dredging (LTMS).

EPA, along with the other LTMS agencies, has been actively involved in discussions about a potential Aquatic Transfer Facility (ATF) for some time. We assisted the U.S Army Corps of Engineers (Corps) and the California Coastal Conservancy (Conservancy) in presenting Project concepts at the public scoping meeting on January 26, 2005. We also participated in a number of meetings and discussions about the project as technical studies were being performed and as certain sections of the DSEIS were being drafted. Finally, we have helped describe the concept of the Project and its relation to the ongoing success of the LTMS program at a number of outreach sessions with interested parties. We appreciate the Corps' willingness to work with EPA and the other LTMS agencies throughout the DSEIS preparation process.

EPA supports the concept of an ATF for the Hamilton Wetland Restoration Project. We believe that finding an environmentally appropriate means of completing the Hamilton wetlands project more quickly and efficiently, by increasing the rate of beneficial reuse of dredged material (and concurrently reducing the amount of ongoing discharge of dredged material as a waste at other in-Bay disposal sites), could result in significant overall environmental benefits. These environmental benefits include restoration of thousands of acres of wetlands and associated endangered species habitats several years sooner than would be the case with the existing hydraulic off-loader system, and a concomitant reduction of hundreds of tons of construction-related emissions of air pollutants. In addition, an ATF would capture a greater volume of the clean sediments from Bay Area dredging projects each year due to greater operational flexibility, whereas the existing off-loader cannot accommodate hopper dredges or small scows. This increased flexibility also eliminates the risk that dredging projects could be pushed outside of their individual environmental work windows by cumulative delays at the off-loader.

These kinds of environmental and operational benefits are substantial, but from an LTMS perspective the concept of an ATF for the Hamilton project has even greater importance. By creating a practicable means for many more routine dredging projects to send their clean material to beneficial reuse, an ATF would help ensure that the LTMS goals for reducing in-Bay waste disposal and increasing beneficial reuse can continue to be met for the next ten years or more. In fact, the LTMS goals would be substantially exceeded because EPA and the other LTMS agencies would ensure that little or no in-Bay disposal would be allowed to continue (especially at the SF-10 site in San Pablo Bay) as long as an ATF were available and operational. In contrast, since other existing beneficial reuse opportunities in the area are not practicable for as many dredging projects to use, continued progress toward the LTMS goals would be likely to slow – or even halt – for the foreseeable future if there were no ATF and the current off-loader remained the primary means for delivering sediment to the Hamilton project.

We appreciate the opportunity to review this DSEIS and look forward to continued coordination with the Corps and the Conservancy between now and the release of the FSEIS. When it is published, please send us a copy of the FSEIS to the address above (Mail Code: CED-2). If you have any questions, please contact me at 415-972-3521. Paul Amato is the lead reviewer for this project and can be reached at 415-972-3847 or amato.paul@epa.gov. Brian Ross, with our Water Division, can also be reached at (415) 972-3475 or ross.brian@epa.gov for specific questions regarding dredging, sediment management, and water quality.

Sincerely,

Kathleen M. Goforth, Manager
Environmental Review Office

Enclosures: Summary of EPA Rating System
EPA's Detailed Comments

cc:
Colonel Laurence Farrell, Corps
Mr. Dick Butler, NOAA Fisheries
Mr. David Woodbury, NOAA Fisheries
Ms. Susan Moore, USFWS
Mr. Ryan Olah, USFWS
Mr. Bruce Wolfe, SFBRWQCB
Ms. Beth Christian, SFBRWQCB
Mr. George Isaac, CDFG
Ms. Vicki Frey, CDFG
Mr. Tom Gandesbery, California Coastal Conservancy
Mr. Will Travis, BCDC
Mr. Steve Goldbeck, BCDC

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's 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 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 must 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 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."

Water Quality

The document lacks sufficient information on the potential benefits of the Project on water quality and fish habitat. All of the existing in-Bay disposal sites are dispersive, meaning that most or all of the material discharged at them quickly re-suspends into the water column and redistributes in complex patterns. Reducing disposal of dredged material at other in-Bay disposal sites by routing it to the proposed Aquatic Transfer Facility (ATF) in San Pablo Bay would directly improve water quality throughout the Bay. In San Pablo Bay, the existing SF-10 disposal site is very near the proposed location of the ATF. SF-10 can receive up to 500,000 cubic yards (cy) of dredged material each year. Since 2000, actual volumes disposed at SF-10 have averaged 227,000 cy per year, but have ranged as high as 432,000 cy per year. SF-10 is a fully dispersive site, so all of this volume re-suspends into the water column each year. The technical studies and modeling presented in the Draft Supplemental Environmental Impact Statement (DSEIS) indicate that much less material (perhaps 50-75 percent less) will be re-suspended and dispersed from the ATF than disperses now from SF-10 (which is not in a basin) even though much more material would be placed each year in the ATF basin than has ever been disposed at SF-10; however, this conclusion is not very clearly presented in the DSEIS, nor is it emphasized to the extent that it should be.

> *Recommendation:*
> The Final Supplemental Environmental Impact Statement (FSEIS) should discuss in more detail the water quality and fish habitat benefits of significantly reducing disposal at existing dispersive in-Bay disposal sites. The discussions should note that, as a direct consequence of establishing an ATF, water quality would improve not only Bay-wide but also specifically in San Pablo Bay, even though much more material would be temporarily placed there than presently can occur at SF-10. This discussion should be included in the Circulation and Sedimentation, Water and Sediment Quality, and Marine and Terrestrial Biology sections.

Turbidity should be monitored closely to ensure Basin Plan requirements are not exceeded. Concerns have been raised over biological impacts from increased turbidity that could result from operation of the ATF. The Corps, through Mitigation Measure WSQ-MM-2, has committed to periodically monitor turbidity during dredged material placement operations, to determine whether suspended sediment concentrations surrounding the ATF basin exceed San Francisco Bay Regional Water Quality Control Board Basin Plan (Basin Plan) standards. As part of the mitigation measure, dredged material placement operations would temporarily stop if Basin Plan standards are not met. EPA agrees with the need to monitor turbidity during operations, and we suggest the Corps provide a detailed description of turbidity monitoring methods, including adaptive management measures to modify material placement methods, if necessary, to ensure standards are met. We recommend an approach that would initially monitor at a higher frequency and spatial density, and under a representative range of physical conditions at the ATF, to ensure the accuracy of sediment dispersion modeling and to verify the less than significant impacts determination. If deemed appropriate, monitoring could be adjusted later based on initial results.

Recommendation:
The FSEIS should provide a detailed description of the turbidity monitoring that would occur during dredged material placement operations, and identify any adaptive management measures that would be taken, if necessary, to ensure Basin Plan turbidity standards are met. We recommend initial monitoring include higher frequency, spatial density, and a range of physical conditions.

The Corps should describe monitoring for dissolved oxygen (DO) concentrations during construction excavation of the proposed ATF and access channel. The DSEIS states that "construction, maintenance, operation and decommissioning Alternatives 2 and 3 would reduce oxygen in the water column surrounding the in-Bay ATF site" and that "...the largest reduction in dissolved oxygen would occur during construction excavation of the ATF basin and, to a lesser extent, the access channel, and the potential reduction of dissolved oxygen levels is expected to persist only during the 3-4 months of construction." No indication is provided of how low DO concentration levels could fall and whether or not they would comply with Basin Plan standards. This could be easily addressed through periodic monitoring of DO in and around the ATF and access channel during construction.

Recommendation:
The FSEIS should discuss, in greater detail, the anticipated reductions in DO concentrations that would occur in and around the ATF and access channel during construction and maintenance. The Corps should describe monitoring for DO during construction to ensure impacts would be less than significant.

Sediment plume modeling assumptions should be clarified. Section 4.4.4 of the DSEIS describes modeling simulations conducted to measure sediment plume transport during operation of the ATF basin. According to the model, sediment plumes during material placement at the ATF would decay to 1-7 mg/L above background within 5 hours of release. It is unclear whether sediment plume concentrations might remain higher and persist longer if the ATF basin were partially filled with sediments, thus providing less containment than an empty basin. Based on the discussion, it is not clear whether the model assumed various ATF basin depth scenarios and the resulting affect on settling of suspended sediments.

Recommendation:
The FSEIS should further discuss the assumptions of the sediment plume model and clarify whether a partially filled ATF basin would result in sediment plumes with higher sediment concentrations over a longer period of time.

Biological Resources

The FSEIS should expand the discussion of monitoring, impact avoidance, and mitigation for green sturgeon and long-fin smelt. The primary significant adverse environmental impact of an ATF in the area proposed is the potential risk to sturgeon (particularly green sturgeon, which are now a federally-listed threatened species) and to long-fin smelt, (a California species of special concern). EPA is concerned that this impact has not been sufficiently addressed in the DSEIS.

Both sturgeon and long-fin smelt can occur in the area, and benthic aspects of their life history may make them susceptible to impacts - especially entrainment when the ATF basin and access channel are excavated or periodically emptied by hydraulic cutterhead dredging. The DSEIS mentions some mitigation measures to address various potential impacts on sturgeon, but these are limited to best management practices (BMPs) for reducing water quality impacts due to suspended sediment loss (measure WSQ-MM-1), constraining operations to within the LTMS environmental work windows (measure MTB-MM-1, which would only cover the period when adult sturgeon may be present), ensuring that sediments placed at the ATF are clean based on approved sampling and analysis plans (measure WQ-MM-3, which EPA and the other LTMS agencies already require), and reducing vessel speed to minimize the potential for vessel or propeller strikes (measure MTB-MM-2).

The DSEIS does not discuss whether other potential mitigation measures, specifically to reduce the probably more significant risk of entrainment, may be possible (exclusion devices, operational restrictions on the cutterhead or other equipment used to empty the ATF basin, etc.). Nor does the DSEIS discuss whether additional research or any form of compensatory mitigation may be appropriate to consider if impacts do occur. Similarly there is no detailed discussion of sturgeon monitoring plans or possibilities (such as increasing the number of sturgeon tagged, instrumenting the ATF area with a high-resolution grid of tag sensors, monitoring the discharge point on the Hamilton site, etc.). Instead, the document seems to await consultation with NOAA Fisheries to identify potential specific monitoring or mitigation measures.

> *Recommendations:*
> The FSEIS should provide more detail about monitoring, mitigation (avoidance and minimization of entrainment impacts), and the potential for additional mitigation measures (such as research programs) for green sturgeon and long-fin smelt.
>
> The Corps should consult with NOAA Fisheries to develop behavioral studies, appropriate mitigations, and monitoring, and provide this information in the FSEIS instead of waiting for selection of an alternative as is the Corps' plan, according to the document.

The document lacks sufficient information on the potential benefits of the Project on benthic environments in the Bay. The intensity of benthic habitat disturbance, and any risk of impact to fish species during actual disposal, would be reduced at the existing in-Bay disposal sites as a result of dredged material scows and hoppers being diverted to an ATF. The four in-Bay disposal sites together cover over 350 acres (SF-10 alone covers 103 acres) and disposal at these locations would stop during the approximate 10-year operation of the ATF. Initial disturbance of bottom habitat would, instead, occur at the smaller (77-acre) ATF site.

> *Recommendation:*
> The FSEIS should discuss in more detail that an ATF would result in reduced benthic habitat disturbance and reduced risk of impacts to fish from initial disposal operations, compared to continued disposal at the existing in-Bay sites.

Air Quality

The air quality analysis does not appear to provide mitigations to reduce emissions for criteria pollutants other than nitrogen oxides (NOx). Table 4.12-3 Summarizes uncontrolled construction emissions for reactive organic gasses (ROG), NOx, carbon monoxide (CO) and particulate matter smaller than 10 microns (PM_{10}). Table 4.12-4 shows controlled mitigations after emission control measures are implemented. Only NOx has been reduced, from 213.9 tons per year to 99.7 tons per year, because it otherwise would exceed the federal de minimis threshold of 100 tons per year. The same pattern is true for controlled operational emissions in Table 4.12-6, though the amounts are different. While we recognize that the Corps has committed to mitigation measures that would reduce NOx emissions below the federal de minimis threshold, we are concerned that no quantifiable reductions in ROG, CO or PM_{10} have been demonstrated. We encourage the Corps to implement all available emission control measures to reduce all Project-related criteria pollutants in the San Francisco Bay Air Basin. This would appear to be consistent with the environmental and safety measures described on pages 2-14 and 2-15 of the DSEIS. We also suggest the Corps implement additional measures to further reduce NOx emissions from construction, given that controlled emissions are only 0.3 tons (600 pounds) per year below the federal de minimis threshold- an amount that is probably well below the margin of error for the analysis.

> *Recommendation:*
> The FSEIS should identify construction and operational emission control measures that would reduce all criteria pollutants, regardless of whether they exceed federal de minimis thresholds or not. These measures and the amount of emission reductions should be quantified and included in the FSEIS.

Alternatives

EPA is concerned with the potential impact of the No Action Alternative on beneficial reuse of sediments. The discussions about Alternative 1: Dredged Material Off-Loader (No Action) should evaluate and discuss, in more detail, the potential effects on the San Francisco Bay Long Term Management Strategy for Dredging (LTMS) goals, with emphasis on the LTMS Transition Period goal of decreasing sediment disposal within San Francisco Bay over time. This evaluation should present a realistic discussion of which dredging projects would be able to dispose of sediments through the existing off-loader and remain within their environmental work windows, including which projects would likely continue to be dredged by Corps hopper dredges, and therefore lost to beneficial reuse at Hamilton, since the off-loader cannot accommodate hopper dredges.

> *Recommendation:*
> The FSEIS should provide additional information on the impact of Alternative 1 on the ability of the LTMS to meet long-term sediment management goals.

Use of a second hydraulic off-loader should be assessed. The DSEIS does not specifically consider whether the addition of a second hydraulic off-loader might also meet the Project objectives of speeding dredged material deliveries to Hamilton and furthering the LTMS goal to

reduce in-Bay disposal. We expect that other aspects of such an alternative (including increased overall emissions, increased decant water to manage on the Hamilton site, and increased overall cost) would likely render it infeasible. However, the FSEIS should discuss the potential in at least a screening sense, in Section 2.3.

> *Recommendation:*
> The FSEIS should discuss, in at least a screening sense in Section 2.3, the alternative of adding a second off-loader. If such screening was already done for the original Hamilton project EIS, that evaluation should be summarized briefly in Section 2.3

The Executive Summary's list of reasons why Alternative 2 is the Environmentally Preferable Alternative should be expanded. The Executive Summary lists reasons why the Corps considers Alternative 2 to be environmentally preferable to the other alternatives. The comparison to Alternative 1 includes that at least 400,000 cy of maintenance dredged material would be disposed in San Francisco or San Pablo Bays, or at ocean disposal sites under Alternative 1, but does not mention that this amount would be disposed of each year and at dispersive sites resulting in water quality impacts from increased turbidity. The comparison to Alternative 3 does not include that Alternative 2 would have a less than significant impact on circulation patterns in San Pablo Bay, while Alternative 3 would have a potentially significant impact. EPA considers these to be important benefits of Alternative 2 that should be highlighted in the summary.

> *Recommendation:*
> Any list in the FSEIS describing reasons that Alternative 2 is considered environmentally preferable should include water quality benefits from avoiding disposal at dispersive sites, and avoiding significant effects on circulation patterns in San Pablo Bay.

Recreation and Commercial Fishing

Commercial fishing catch should be discussed further as a potential threshold of significance. The discussion of recreation and commercial fishing includes a list of thresholds of significance that does not directly address changes in commercial fishing catch or fishery populations. This effect may be considered too difficult to measure due to other variables outside of the control of the Corps that can influence catch (climatic, water quality, over fishing, etc.); however, at a minimum, the FSEIS should include a discussion of why commercial fishing catch and fishery populations were not considered as thresholds. This is especially important given the public's concerns over impacts of the Project on fishing in San Pablo Bay.

> *Recommendation:*
> The FSEIS should consider commercial fishing catch and fishery populations as potential thresholds of significance for commercial fishing, or, at a minimum, discuss why these parameters have not been considered. The FSEIS should also include monitoring designed to ensure that the Project will not negatively affect commercial fishing.