B. Reasonably Foreseeable Future Projects and Maintenance

6

The EIS/EIR should contain a section setting forth reasonably foreseeable new work dredging projects over the planning period. For example, it may make a major difference to the disposal policy ultimately selected if the public and decision makers understood that large container ships are likely to continue to require ever deeper channels over time versus a scenario in which such requirements are more likely to plateau. The lack of specific intelligence about what the future holds in this regard is itself an important piece of information in formulating long-term policy.

As discussed above, disposal of 6 mcy annually for fifty years is essentially the project proposal now before the public and decision makers. We strongly urge the LTMS agencies to provide a thorough and supportable estimate of the ***reasonably likely*** level of dredging that can be expected to occur the next decades. It may be that substantial fluctuations are likely or that requirements will actually decrease rather than increase over a certain period of time. All of these possibilities need to be disclosed and evaluated prior to the adoption of a long-term disposal policy for the region.

III SELECTION OF A PREFERRED ALTERNATIVE

7

As we discussed during the public hearing on the draft EIS/EIR, a major flaw in the EIS/EIR is the agencies' inclination to adopt two mutually exclusive alternatives at the same time. Alternative 3 would emphasize upland disposal and beneficial reuse and minimize bay dumping while holding ocean dumping at a medium level. Alternative 1 would emphasize aquatic disposal and minimize upland disposal and beneficial reuse. These alternatives are both set forth as long-term programmatic approaches. Obviously neither would be immediately and automatically implemented with the finalization of the EIS/EIR. Any of the alternatives under review (except for the no action alternative) will require some type phasing and implementation planning over time. It is the selection of the general policy direction, however, that will fundamentally affect implementation planning.

8

The draft EIS states that the agencies are included to adopt Alternative 1 "initially." There seems to be an expectation that Alternative 3 will somehow be phased in. This is clearly erroneous. If the agencies adopt a **long-term policy** of open water dumping, there is obviously no way to simultaneously phase in beneficial reuse. As we have stated publicly on numerous occasions, we fully support the notion that a policy shift in favor of increased beneficial reuse and upland disposal will require phasing over time. Such phasing cannot and clearly will not occur if a contrary long-term policy is adopted that is dedicated instead to open water disposal.

It may be that the problem is less substantive and more one of semantics. The document is a programmatic review of policy approaches designed to achieve a specific volume of dredged material disposal over time. Thus, adoption of a programmatic approach

would not require immediate implementation but would be phased in over time as specific tiered projects become feasible. However, as currently drafted, the EIS/EIR suggests that a long-term policy emphasizing beneficial reuse is infeasible because such sites are currently unavailable. This is a "Catch-22" argument that we have objected to over the entire course of the LTMS. **Such sites are unavailable precisely because there is no policy in place promoting their development.** The lack of current policy promoting the development of alternatives to open water dumping does not establish the infeasibility of adopting such a policy.

9 We object to suggestions in the EIS/EIR that changes in current policy would be inappropriate at best and inconsistent with current legal mandates at worst. The document states that Alternative 3 would require that "policy and management actions would need to be taken by respective LTMS agencies and upland/wetland sites would need to be made available . . . " ES 1-17. Determining such actions is precisely the point of this document, and yet the EIS/EIR seems to suggest that any alternative requiring a deviation from the status quo might not be viable. A later point in the draft indicates that selection of Alternative 3 may be prohibited as "legislative advocacy." (7-1) Of substantial concern is the clearly incorrect statement that beneficial use alternatives cannot be fully implemented under current laws. (6-39) These and similar statements throughout the document suggest that the agencies believe that there is some statute that precludes adoption of Alternative 3 in this EIS/EIR. If this is the case, such laws should be expressly identified and analyzed in the draft EIS/EIR.

However, our review of the applicable statutory and regulatory regime is squarely to the contrary. Indeed, a strong case can be made that current policy (no action alternative) that emphasizes open water dumping in the Bay and the ocean is squarely at odds with current federal law and Administration dredging policy. The EIS/EIR states that it is Corps policy to select the least cost (but still environmentally acceptable) alternative under its internal National Economic Development (NED) policy. (7-8) It states as well that application of this policy in connection with Bay Area dredging has resulted in disposal of most dredged sediment in the Bay. (7-8) This occurs because the NED policy elevates economic considerations over environmental concerns in all but the most extreme cases where "overriding circumstances" allow for the selection of an alternative on other than economic grounds.

In fact, federal law is directly to the contrary. WRDA specifically provides that "environmental protection" is a "primary mission" of the Corps in connection with water projects, including dredging. 33 USC 2316. Moreover, while national economic development is one matter to be addressed in water project planning, it is *only* one, not the exclusive or even primary factor. Quality of the total environment (including enhancement as well as preservation of the environment) and other matters are expressly included by statute as coequal considerations in the planning of such projects. 33 USC 2281. NEPA of course establishes environmental protection as national policy. 42 USC 4321.

10 With regard specifically to beneficial reuse, the document ignores totally statutory

direction and current federal policy emphasizing reuse of dredged sediments as opposed to open water disposal. WRDA itself establishes as part of the Corps' water resources development program "a long-term goal to increase the quality and quantity of the Nation's wetlands." 33 USC 2317. If this were not sufficient to quell the concerns of the Corps regarding adoption of a policy promoting beneficial reuse, WRDA further provides that the Corps is: 10

> authorized to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitat, including wetlands, in connection with dredging for the construction, operation or maintenance by the [Corps] of an authorized navigation project.

33 USC 2326. It is difficult to imagine Congress providing the Corps with any clearer direction on this point. Moreover, the National Dredging Policy expressly provides that:

> Dredged material is a resource, and environmentally-sound beneficial use of dredged material for such projects as wetland creation, beach nourishment, and development projects must be encouraged.

(Dredging Process Action Plan at 5 (Dec. 1994).)

The EIS/EIR should be revised to state clearly for the benefit of the public and decision makers the current federal law and policy regarding beneficial reuse of dredged sediments. To the extent that internal Corps policy is inconsistent with these mandates, such conflicts should be identified and solutions proposed for their resolution.

The only specific instance of a current statutory conflict with the limited reuse option proposed as part of Alternative 3 is a section of WRDA that does not allow the federal agencies to acquire or manage multi-user or wetland reuse sites. (6-39, 7-8) However, federal ownership and operation are only one among numerous possible implementation strategies. As demonstrated by the success of the Sonoma Baylands site, federal ownership and/or operation is in no way requisite for the successful implementation of a reuse option. Indeed, many of the reuse options listed in the EIS/EIR would be far more efficiently conducted by state, local, regional or even private parties.

The EIS/EIR should be revised to: 11

1. Specifically identify any and all statutory and regulatory barriers to adoption of Alternative 3 on a programmatic level (understanding that further implementation, management and site specific analysis will be required for all of the alternatives);

2. Specifically identify any and all Corps or other non-statutory policies that may act as a barrier to the adoption of Alternative 3 on a programmatic level; and

11 3. Discuss thoroughly any and all conflicts and potential resolutions between current policies that may conflict with stated federal law and policy directing the Corps to promote the beneficial reuse of dredged sediment.

IV AFFECTED ENVIRONMENT

As a general matter, the "Affected Environment" section was at times confusing due to the insertion of isolated discussions of various impacts associated with disposal options. (See, e.g., 4-140). We recommend that the EIS/EIR distinguish clearly between describing current conditions and potential impacts.

12

13 **A. Pacific Ocean Environment**

13a The EIS/EIR contains an unsatisfactory description of the affected ocean environment and resources. Foremost, the discussion is improperly limited to the area around the designated ocean dump site and neglects the large areas that dredged sediment transport vehicles must travel through and in particular the Gulf of the Farallones National Marine Sanctuary. This ignores the serious concerns raised by NHI, our clients, other conservation and fishing organizations and, even more critically, sister federal and state agencies with jurisdiction over this region, particularly the National Marine Sanctuary Program. It is not reasonable or responsible for the EIS/EIR to suggest that the only affected ocean environment and resources that can be substantially affected by ocean dumping are in the immediate vicinity of the dump site. Within the last year, a tug boat pulling dredged sediments was lost in the Sanctuary and the entire barge load was dumped. The Port of Oakland's dumping at the Half Moon Bay site resulted in a long plume of dredged sediment several miles long in the ocean and far from the designated dump area.

The EIS/EIR should be revised to disclose to the public and decision makers the potentially affected ocean region. It should discuss the important resources of the Sanctuary and in particular the potential for impacts resulting from spills and accidents in and around the Sanctuary.

13b The discussion of biological resources in the ocean environment is wholly inadequate. The baseline issue was a matter of considerable dispute in the preparation of the ocean dump site EIS. This programmatic document should fully disclose those issues. While this is a "tiered" document, it is tiered backward (from specific to programmatic) and decision makers and the public do not have an obligation (or often the means) to obtain the earlier environmental documentation. Specifically, conservation, fishing and other interests objected to EPA's summary conclusions that (1) there are virtually no resources of consequence in or around the site or in the path of potential harm, (2) dumping would cause no adverse environmental impacts, and (3) monitoring of permit compliance and project impacts should be conducted largely on a case-by-case basis.

The lack of a detailed and mandatory Site Management and Monitoring Plan (SMMP) has long been a concern of ours and others within the conservation and fishing communities. EPA maintained that operational requirements could not be included in the rule designating the ocean site because "there are in many cases more than one methodology or technology that could be used to achieve the SMMP goals" and by concerns regarding agency flexibility. Nevertheless, the ocean site was designated with an express agreement that a detailed site monitoring and management plan shortly would be made available for public and review. 13c

> EPA will publish the 'SMMP Implementation Manual' based upon the SMMP. The SMMP Implementation Manual will provide operational details concerning site monitoring and management measures that are not [included] in the Final Rule designating the SF-DODS. The SMMP Implementation Manual will serve to document EPA's interpretation of the specific measures that are appropriate for implementing the provisions required in the Final Rule.

To our knowledge, EPA has yet to take these actions. We concur fully in the comments and recommendations of the Center for Marine Conservation in this regard.

The EIS/EIR flatly states that the monitoring of disposal operations at the site to date supports the original benthic impacts modeling in the ocean EIS regarding the dispersement of dredged sediments. (4-160) Support for this contention should be provided in the next iteration of the EIS/EIR. In addition, the document should be revised to include a full discussion of those monitoring efforts to date, particularly the frequency and effectiveness of permit compliance monitoring as well as impacts monitoring on pelagic species, marine mammals and seabirds. The recent sinking in the Sanctuary establishes that the concerns of those who questioned EPA's refusal to consider accidents and spills were well founded. The LTMS agencies may not rely on a specific EIS that failed to consider important environmental impacts associated with a major disposal option. 13d

B. <u>Aquatic Conditions of the Estuary</u> 14

The EIS/EIR contains a discussion of upland disposal and beneficial reuse capacity. We understand that the figures in this section are based largely on reports that were completed several years ago. Since that time, the federal and state governments have entered into a joint venture to address broad Bay-Delta problems referred to as the CALFED process. CALFED is now examining long-term management options for the Delta that may be substantially different from those employed when the upland/reuse studies for the LTMS were first conducted. It now appears that the agencies will be considering substantial conversion of Delta lands to tidal and seasonal wetland habitat, far more than was believed politically feasible even several years ago. 14a

We do not here suggest any need to redo all of the upland/reuse studies that have been undertaken as part of the LTMS. We do recommend, however, that the LTMS agencies

14a update the capacity estimates for reuse and upland disposal in light of the major changes that are being contemplated as part of the CALFED process as part of the next iteration of the EIS/EIR and certainly before any final document or management plan is issued.

14b In light of the pervasiveness of the CALFED process, and the substantial management implications for dredging throughout the Bay-Delta region, the EIS/EIR must be revised to acknowledge this process and discuss the potential interactions between LTMS management and CALFED over the planning horizon. The potential for additional reuse in the Delta is only the most obvious and immediate area of potential overlap between these programs.

14c In addition, we recommend that the EIS/EIR be revised to provide a more expanded discussion of the Sonoma Baylands and other habitat restoration projects relevant to the adoption of a long-term dredged sediment policy. Such a discussion is particularly important in light of suggestions throughout the EIS/EIR that beneficial reuse projects may conflict with current law and policy. The close connection between Sonoma Baylands and the LTMS process in particular should be disclosed. In addition, the EIS/EIR should provide the public and decision makers with final cost figures for Sonoma Baylands and compare them with early agency cost projections for that project. To the extent that impact monitoring results for the project are available, these should be disclosed in the EIS/EIR as well.

15 C. Regional Socioeconomic Setting

The EIS/EIR defines the regional economic environment in terms of the dredging community. As a preliminary matter, it is not clear that these issues are properly included in the context of an environmental impact statement/report when they admittedly have no

15a independent environmental impact. Setting this issue aside, however, the EIS/EIR fails to provide any reason for analyzing the economic issues associated with the dredging community to the exclusion of other economic sectors that could be affected by the selection of a long-term dredged material disposal policy.

For example, recreational and commercial fishermen have long maintained that Bay dumping adversely effects their industry. Ocean disposal has been cause for concern among recreational and commercial fishermen as well, particularly the potential for short dumping and accidents and increased vessel traffic. In addition, if a socioeconomic setting section is to be included in the EIS/EIR, it should examine as well the existing recreational opportunities to use the Bay, ocean and other environments for aesthetic activities that are potentially affected by dredging. For example, whale watchers and birders who travel to and through the Sanctuary are likely to be affected by substantially increased barge traffic, spills and short dumping. A major increase in barge traffic may also adversely affect recreational opportunities to use Bay waters for various water-related recreational activities.

15b The EIS/EIR should be revised to address the full range of socioeconomic activities that could be affected by the selection of a long-term disposal policy in the Affected Environment

section. 15b

D. Regulatory Environment 16

1. Existing Legal Mandates 16a

The Regulatory Environment section broadly covers the relevant statutes and regulations, but the discussion of existing legal mandates and requirements should be clearer and somewhat more complete. For example, the discussion of WRDA fails to mention the wetlands and beneficial reuse mandates of this statute cited above. These provisions are central to the current legal regime under which the LTMS agencies are authorized to conduct dredging policy. In addition, the EIS/EIR should be revised to provide the public and decision makers with a summary of the National Dredging Policy as it relates to the evaluation of the programmatic alternatives. (The EIS/EIR now references the policy but provides very limited substantive information.)

In addition, the EIS/EIR fails to identify the NED policy, as contained in the Water Resources Council's Principles and Guidelines, as part of the existing regulatory structure. (See Section 4.8.1.) However, the NED is later referenced as a major issue in the selection of the preferred alternative. As discussed above, it is our view that NED can be applied to the LTMS EIS/EIR only to the extent that it is consistent with and supportive of primary federal statutes and codified regulations. However, if the LTMS agencies foresee a major role for the NED in the selection and/or implementation of the programmatic alternatives in this document -- as it is suggested -- the NED policy should be included in Section 4.8.1 and the basis for its authority disclosed to the public and decision makers.

2. Ocean Dumping Rules 16b

The discussion of the ocean dumping rules focuses almost exclusively on the Green Book and fails to describe the basic requirements for sediment testing set forth in the promulgated regulations. This section (3.2.5.1) should be revised first to set forth the basic requirements in the formal regulations including, most significantly, the basic standard for ocean dumping; only trace levels of contaminants are allowed and anything above this strict standard is expressly precluded. There appears to be no way for the public or decision makers to ascertain from the EIS/EIR that such a standard exists. Since meeting this standard is the point of both the regulations and the Green Book, it obviously should be included as the basic point of departure for the sediment quality testing discussion. 16b(1)

In addition, prior to turning to the Green Book's procedures for meeting this rigorous standard, the EIS/EIR should contain at least as detailed a review of what the regulations actually require. It should also discuss the relationship between the Green Book and the promulgated regulations. 16b(2)

16b(3) The draft EIS/EIR's emphasis on the Green Book as distinct from the regulatory requirements is troubling and potentially misleading. For example, the document states that testing with two rather than three species is "recommended." (3-81) This Green Book recommendation is directly at odds with the regulatory requirement to test all three pathways with different species. The federal court has rejected EPA's assertion that the Green Book prevails when it is at odds with regulatory requirements. *Clean Ocean Action v York*, 57 F.3d 328 (3rd Cir. 1995).

16b(4) The EIS/EIR should also be revised to include a discussion about EPA's current proposal to revise the ocean dumping regulations. While maintaining the basic trace contaminant standard, the rule as proposed would confer extraordinarily broad authority upon the agency to adopt virtually any sediment quality test and would eliminate requirements in the federal regulations that establish the current baseline which sediment testing must now meet. In essence, the proposed rule would eliminate the current requirements for laboratory testing of actual dredged sediment on live organisms to determine the presence and levels of various harmful constituents. In place of testing on live organisms, the proposal indicated that EPA agency would accept risk analyses, testing on "similar sediments" and toxicological modeling. The proposal has met with substantial resistance among fishing and conservation organizations nationwide, and particularly on the east coast where ocean dumping of dredged sediments containing harmful levels of contaminants has been a substantial issue. NHI's comments on the proposal have been previously provided to EPA and are incorporated herein by reference in full.

16b(5) The proposed changes in the sediment testing protocols for ocean disposal are of substantial concern in terms of the draft EIS/EIR for several reasons. First, relatively little ocean dumping has occurred in the Bay Area to date. The adoption of a long-term policy appears virtually certain to alter that fact. Millions of cubic yards of dredged sediment will be barged through sensitive marine habitats and dumped in the ocean every year for the foreseeable future under either of the alternatives under serious consideration. No one has any concrete knowledge of ocean dumping affects flora and fauna, fish and wildlife resources, marine birds and mammals. Even less is known about the impacts of dumping at such deep levels and so far from shore. EPA's conclusion that ocean dumping would have limited harmful impacts is based on an admittedly limited (and highly controversial) data baseline.

Clearly the risks to the environment are far more significant when an increase in the volume of material barged out to sea is coupled with a potential decline in sediment quality. While the proposed change would retain the "trace contaminant" requirement, this is a fundamentally subjective standard. By eliminating the requirement for testing of live organisms and elevating risk assessments and modeling, the proposal opens the way for harmful sediments to slip through the system. This is particularly the case since, as drafted, the proposed rule provides EPA with discretion to accept virtually any sediment quality test method proffered by the regulated community. The proposal contains no performance standard for sediment quality tests, that is, there is no requirement that an alternative test be

shown to be as reliable as testing on live organisms in terms of determining the level of harmful constituents. (The agency's position in support of the proposed rule, like its argument against more stringent site management and monitoring rules, is the need for greater flexibility.) 16b(5)

It is not hard to imagine a future regulator approving the disposal of sediment in the ocean that "passed" the trace contaminants test according to a risk assessment model notwithstanding the actual presence of harmful constituents. Nothing in the proposed language would preclude such an outcome. Models are only as good as their assumptions and there is certainly a wide range of views and opinions as to what constitutes a "trace." Moreover, even "clean" material contains harmful contaminants. Our lack of knowledge regarding the impact increased volumes of dumping will have in combination with this apparent retreat from a basic performance standard for sediment quality testing argues strongly in favor of reducing the risk of exposure in the marine environment to the maximum extent possible.

Second, there is no question that an increase in harmful contaminants in the marine environment could have devastating impacts. Bioaccumulation of contaminants in plants, fish, mammals and sea birds is a major issue of concern. The EIS/EIR contains virtually no analysis of the potential adverse impacts of toxic contamination largely due to the assumption that such contamination is unlikely to occur given the testing now required.

Third, it is possible that a decline in sediment quality testing standards for ocean dumping may impact testing protocols for Bay dumping as well. The agencies have made permit streamlining a major priority and coordination of the testing required for ocean, bay and other disposal options is likely to occur under any of the alternatives selected.

We recommend that the EIS/EIR be revised to disclose the proposed changes (or the status of this proposal) to the sediment testing requirements for ocean dumping and the potential impacts of such rule changes on the quality of sediments targeted for ocean dumping, and the general terms of the public debate on this issue. In addition, the EIS/EIR should be revised to include information about contamination issues associated with the ocean dumping of dredged sediment in other regions. This information is critical for the public and decision makers trying to assess the costs and benefits of a long-term dredged sediment disposal policy for the Bay Area. 16b(6)

Finally, the entire discussion of the regulatory regime for sediment testing is probably more appropriately included in the Regulatory Environment section. Its placement in a separate section devoted to a general overview of dredged material characteristics was confusing and blurred the important point that the testing protocols are a major aspect of the existing regulatory regime. 16b(7)

17 | V ENVIRONMENTAL IMPACTS ANALYSIS

A. General Approach

17a | We agree with the "generic analysis" approach adopted by the LTMS agencies toward impact evaluation. As we have indicated for many years, programmatic level review of long-term disposal options is appropriate. In order for the public and decision makers to adequately assess programmatic options, potential environmental impacts must be presented in broad terms. We commend the LTMS agencies for their attempt to address this difficult task, balancing the requirement to be accurate and clear and complete against the limits of a programmatic document.

We agree as well with the agencies' decision to describe the generic impacts in terms of risk. Again, this is a programmatic document set against a 50-year planning horizon. It cannot be assumed that the vast number of issues encompassed in this study can be known today with substantial reliability, let alone certainty. The purpose of NEPA and CEQA is to provide the public and decision makers with information about potential impacts to make fully informed decisions. When information is inherently lacking, the discussion of impacts must shift to an evaluation of the risk of adverse (or beneficial) impacts. The lack of information does not translate into a lack of impacts. We appreciate the agencies' vision on this approach and agree with it. By discussing the generic impacts largely in terms of level of risk, the EIS/EIR sends an important message to decision makers and the public and signals the need for flexibility and vigilance in the next phases of the LTMS implementation.

17b | B. Evaluation of Impacts

While we agree with the "generic impacts" approach, the impacts analysis is inadequate for CEQA and NEPA purposes. A programmatic level review -- even a generic one -- does not relieve the agencies of their obligation to provide sufficient information to support the requisite "hard look." There is substantial room for improvement in the discussion of potential environmental consequences. The impact analysis associated with alternatives is the heart of the document. However, only the briefest information is provided and the analysis appears to be highly speculative, superficial and based on very limited actual study or data of species and their behavior.

We are especially concerned about the analysis of impacts to the marine environment of ocean disposal. This option is in a somewhat different category than either In-Bay or upland disposal or beneficial reuse options. Each of these will certainly go through additional environmental review prior to new or additional exposure to dredged sediment disposal. This is not the case with ocean dumping. Over our strong objections, and almost certainly in violation of NEPA, the LTMS proceeded with a site specific EIS for ocean dumping prior to conducting this programmatic review. *Thus, the site specific review for ocean dumping did not consider any alternatives to ocean dumping but only alternative ocean sites.*

Thus, this programmatic EIS/EIR is the last opportunity for the public and decision makers to consider alternatives to ocean dumping. It is therefore critical that the types of ecologic impacts and risks associated with ocean dumping of dredged sediment be fully assessed and arrayed against the types of impacts and risks associated with other forms of dredged material disposal. The very cursory review of ocean dumping impacts in the EIS/EIR fails to fulfill this requirement. 17c

The EIS/EIR concludes that the risk of adverse impacts from ocean dumping is low or negligible under each of the alternatives being considered. These conclusions are in each case based on the identical analysis. **First**, little is known about the actual impacts of ocean dumping on the marine environment in general. The EIS acknowledges, as it must, that little is actually known or documented about the ecological impacts of barging dredged sediment through the Sanctuary and dumping it at the designated site. Most of the impact analysis in the ocean EIS was derived from models and has yet to be corroborated. **Second**, the EIS/EIR fails entirely to provide the public and decision makers with a meaningful review (even generically) about the information that is available regarding potential impacts of dumping on marine resources. The document says nothing about the sea-surface micro layer (SMIC) although recent studies have demonstrated the importance of this layer in the ecological system. It includes no information about potential introduction of exotic species. It says nothing about impacts associated with temporary or recurring harassment of pelagic species, marine mammals or sea birds. 17d

Third, the EIS assumes that nothing will go seriously wrong in connection with ocean dumping. There will be no contaminated sediments problems, dumping will occur within the prescribed limits and only within the footprint of the site, there will be no major accidents, spills, or permit violations. Mammals, birds and fish will be able to avoid the site during disturbances without residual impacts. The Sanctuary will never be affected by barge traffic or migrating sediment. (6-3, 6-12, 6-21) We appreciate that Section 6.1 contains the LTMS agencies' "most likely" scenario for the impacts associated with dredged material disposal in the placement environments under review. We recommend that the EIS/EIR be revised to provide additional detail regarding potential impacts along the lines of "generic" worst case, or worse case, scenarios. Since the discussion has been framed in terms of risk, it is reasonable to provide the public and decision makers with additional information regarding the potential environmental impacts if all does not go as planned; if there are a high number of accidents, spills or permit violations, if for one reason or another, contaminated sediment is allowed to be barged out of the Bay and dumped into the ocean. Similar information should be developed for the other disposal media as well. While we do not recommend the conjuring of nightmare scenarios, it is simply prudent to consider reasonably foreseeable events associated with the long-term alternatives under review.

This expanded discussion of generic impacts should also include, at a minimum: 17e

1. A clear discussion of data gaps regarding potential environmental impacts;

17e 2. Experiences in other regions with ocean dumping, and deep water disposal in particular, and the results of impacts monitoring associated with these other experiences;

3. Problems (if any) experienced in other regions with contaminated sediments in aquatic environments;

4. Rates of permit compliance associated with various compliance mechanisms (to the extent that permit compliance is directly related to environmental impacts);

5. Descriptions of studies regarding the behavior of pelagic species, marine mammals, seabirds and other marine life associated with similar types of temporary disturbances.

6. Potential impacts to the SMIC associated with proposed levels of dumping over both the immediate and long-term.

7. Potential for bioaccumulation of contaminants and impacts associated with bioaccumulation.

17f Finally, the EIS/EIR should more clearly list for the benefit of the public and decision makers the actual studies, data or reports on which the conclusions regarding the generic ecological impacts associated with the alternatives were based.

C. Mitigation Measures

18 The mitigation section suffers from the same superficiality discussed above. The EIS/EIR should be revised to document the bases of the conclusions provided.

18a ***1. Ocean Dumping Mitigation***

The brief paragraph regarding mitigation for ocean dumping through reliance on a Site Management and Monitoring Plan is wholly inadequate. As discussed above, EPA has prepared an extreme general SMMP, portions of which were included in the Final Rule designating the ocean site. It has yet to fulfill its commitment to prepare a detailed SMMP Implementation Manual or subject that manual to public scrutiny. Moreover, as acknowledged at several points in the EIS/EIR, the SMMP contains only vague requirements. Basic limits, such as seasonal restrictions or equipment requirements, as not included.

We appreciate the agency's desire for flexibility in implementing the ocean rule. However, agency flexibility must be balanced against the public's legitimate interest in the highest level of protection for the marine environment in light of the substantial unknowns associated with ocean disposal. These risks were demonstrated in 1988 by the improper near shore dumping that occurred and earlier this year when an entire barge load was released into the Sanctuary. The point is not that these acts were caused nefariously; to the contrary, **the point is that such acts will necessarily occur despite the best of intentions.** We share the concern of the Center for Marine Conservation and others that despite lengthy discussions with EPA several years ago, further site management and monitoring for the ocean dump site seems to have moved very little.

We recommend that the EIS/EIR be revised to provide the public and decision makers with (1) a description of the SMMP including those aspects of the SMMP that are enforceable and those that are not; (2) a review of the outstanding concerns regarding both the level of detail and the failure of the SMMP to include certain basic protections; (3) an update on EPA's progress with the SMMP since final designation of the ocean site two years ago. We join as well in the recommendation of others that the LTMS agencies prepare and circulate an ocean SMMP and implementation manual prior to the finalization of the EIS/EIR. 18b

2. In-Bay Fisheries Mitigation 18c

The In-Bay fisheries mitigation discussion (5-5) should be expanded to include other species of concern, in particular spring run Chinook salmon.[1] The EIS/EIR should contain a more thorough summary of the "fish windows" analysis contained in the Appendices. To the extent that species are excluded from the mitigation analysis, the EIS/EIR should so state and provide the public and decision makers with clear explanations for these recommendations.

VI EVALUATION OF THE FINAL ALTERNATIVES 19

A. Evaluation Criteria 19a

We object to the use of "regulatory certainty" as a criterion for the evaluation of the long-term policy alternatives. Regulatory certainty is not more or less inherent to any of the alternatives under review, but is instead primarily an implementation issue in the control of the administering agencies. We object as well to the elevation of economic considerations to the level of evaluation criteria in an environmental document. Economic considerations clearly have an exalted place in agency decision making, but not should not serve as primary evaluation criteria for purposes of environmental analysis. Finally, we recommend that the alternatives be evaluated based on the following criteria: (1) relative environmental risks and benefits; and (2) ability to meet the project goals (i.e., provide sufficient disposal capacity.)

1. Regulatory Uncertainty as an Evaluation Criterion

The EIS/EIR defines this criterion as the degree to which the option supports an understandable consistent regulatory framework providing reasonable predictability. However, nothing in the document establishes that ocean dumping or Bay dumping is any more or less

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[1]We are particularly concerned about the exclusion of spring Chinook from the mitigation discussion. This species has a long history of substantial population declines but until recently has not been the subject of endangered species listing petition. The reason for this was that agencies and stakeholders have been working together to avoid the need for a listing. It is an unfortunate trend in fisheries management that the "squeaky" or listed species seem to obtain the attention required to prevent their extinction.

"reliable" than reuse options or upland disposal. The reliability of these options is fully and entirely within the control of the implementing agencies. Ocean dumping was not "certain" until EPA went through the process necessary to designate the site. Making reuse of dredged sediment "reliable" was and remains a major goal of the LTMS and national dredging policy. A basic problem with trying to use regulatory certainty as a criterion, demonstrated throughout this section, is that the options under review are intended to be long-term policy alternatives that will be phased in over time. The "regulatory certainty" of any of them will change as they are implemented. We agree with the broad outline of the analysis in this section -- as an implementation issue. We do not agree that this discussion is at all appropriate in the context of evaluating the efficacy of the alternatives

19b

We appreciate that the EIS/EIR distinguishes perceptions of "certainty" as between "dredging project proponents" and "members of the public concerned about enhancing over all environmental quality." Nevertheless, we are troubled that the EIS/EIR defines as inherently "better" those options that are available to dredgers today. Yet this is the bottom line effect of making "regulatory certainty" a criterion for evaluating the options. This is ironic indeed since the lack of alternatives to open water dumping is precisely the reason for the much maligned "mudlock," the reason for the court battle over ocean dumping and the reason ultimately for the entire LTMS process.

19c

The EIS/EIR is simply wrong factually and legally in its repeated insistence that there are insurmountable barriers to beneficial reuse of dredged sediment or upland disposal. (6-39) As demonstrated above, the Corps is fully authorized to promote reuse in the context of dredging projects or to participate in projects in which such actions are the primary responsibility of cooperating state, local or regional agencies. (The EIS/EIR does not indicate that Corps ownership or operation is a requisite to implementation of such options.) The EIS/EIR fails utterly to demonstrate why the alternative that most directly tracks statutory direction and national dredging policy "cannot actually be implemented." (6-39) Moreover, even if one accepts this position, the document acknowledges that the issue is one of implementation, not the ability of the policy to meet the stated goals of the project. In our experience, what is considered "feasible" or "implementable" in dredging shifts radically in very brief spaces of time. Eight years ago dumping off of the Outer Continental Shelf was regarded by the Corps as utterly "unimplementable" and outside the "zone of siting feasibility." Today it is a major component in the most feasible option from the perspective of the dredging community. No doubt it will be more complex to actually implement a set of policies that differs in some way from the status quo. However, it is improper to establish a criterion that effectively makes the status quo the best alternative simply because change is more difficult.

Indeed, the problem with the regulatory certainty criterion is demonstrated by the difficulty the EIS/EIR has in applying it. **First**, a major factor affecting certainty for the dredging community is the absence of permitted sites for non-suitable material. This is consistent across the board -- no one alternative addresses this issue any better than any other alternative. **Second**, the no-action alternative is described as the "least certain" and most likely

to retain mudlock. However, Alternative 1 is found to be the "most certain" of the alternatives primarily because it is the *closest* to the status quo and would require the fewest implementation changes. (6-40) In short, the EIS/EIR appears to take the position that open water dumping is the most feasible option because it is the status quo, and all that is required to move the no action alternative from the bottom of the regulatory certainty analysis to the top is official policy sanction. 19c

The EIS/EIR should be revised to remove regulatory certainty from the evaluation of the options and move this discussion into the implementation chapter.

2. Economic Impacts as an Evaluation Criterion

We agree that it is appropriate for the agencies to analyze the potential economic costs and benefits associated with the alternatives. Our critique of the estimates in the EIS/EIR is below in Section VII of these comments. Separately, we are concerned with the agencies' decision to include economic considerations as an evaluation criterion. The document does not provide an explanation for this and it appears to be a highly unusual criterion in an environmental review document. CEQA allows for review of socioeconomic impacts but only to the extent that such impacts themselves could have adverse impacts on the environment. Moreover, unlike the sections dealing with the other criteria, the economic considerations section does not provide the public and decision makers with a clear indication of how the agencies intend to use the economic information as a criterion -- the EIS/EIR simply lists the assumptions that went into the cost estimation and the projected costs associated with each option. Is it simply assumed that the cheaper alternatives rank higher under this standard? 19d

We recommend that the EIS/EIR be revised to remove economic considerations from the evaluation criteria. These criteria should be limited to evaluation of the alternatives from an environmental perspective. The cost estimates should be contained in a distinct chapter of the EIS, and the role that this information is intended to play in the selection of the preferred alternatives should be clearly set forth. 19e

VII COST ESTIMATES 20

A. Cost Estimate Methodology Skewed Costs Toward the High End

The EIS/EIR reveals that the agencies adopted the opposite approach in conducting the cost estimates than they did in conducting the environmental assessments. Instead of attempting to develop a reasonable or "most likely" case scenario, the agencies adopted highly conservative assumptions compounded one upon another. The net result of these assumptions must be to far overstate the costs associated with dredged material disposal.

For example, while a range of costs was developed, the agencies relied upon the high end of the range in each case rather than the likely mid-range. (6-42) On top of that, it was

assumed that the highest level of disposal would take place, rather than the most likely level. On top of that, the agencies adopted the patently impossible assumption of immediate implementation. On top of that, is the fifty year planning horizon that of course serves to multiply the totals even higher. The trouble with this "conservative" approach is that it results in "hard" looking numbers that have little basis in reality but will nevertheless probably serve as the focus of debate. Obviously skewing the economic analysis to a worst case also skews the discussion of alternatives toward the cheapest options.

We are concerned by the double standard evidenced in this conservative/worst case approach to economic impact evaluation compared with the best case approach to
20a environmental impacts. The EIS/EIR should be revised to include cost figures that reflect a "most likely" case scenario. In addition, the cost section should contain a comparison of the estimated and ultimate costs of ocean disposal and the Sonoma Baylands and other actual projects. In adopting long-term policy in which cost projections will play a major role, it is vital that the public and decision makers have the benefit of past experience -- both in terms of actual costs as well as the demonstrable flaws and virtues of cost estimation procedures.

20b **B. <u>The Cost Estimates Fail to Include Environmental Costs and Benefits</u>**

The cost estimates do not appear to include the economic costs and benefits associated with potential environmental damage or ecological benefits. Natural resource valuation is a basic component of cost estimation. Failure to include these costs and benefits further skews the analysis away from options that have significant environmental benefits and overstates the value of treating dredged sediment as a waste. This is directly to national policy which requires recognition of the resource value of dredged sediment.

We request that the cost estimates be revised to include appropriate economic valuation of both environmental benefits and costs. In addition, we request clarification of how (or whether) the cost estimates comply with the provision of WRDA that provides with regard to benefit-cost evaluations of Corps water projects:

> the benefits attributable to measures included in a project for the purposes of environmental quality including improvements of the environment, and fish and wildlife enhancement, shall be deemed to be at least equal to the costs of such measures.

33 USC 2284.

21 **VIII IMPLEMENTATION MEASURES**

Chapter 7 seems to be a summary or rough outline of what will become the Implementation or Management Plan. However, this section is confusing to the extent that the role of this analysis in the agencies' ultimate selection of the preferred alternative for dredged

sediment disposal, if any, is not identified. Moreover, while the summary of options provided is a good beginning, it is not a complete assessment of implementation options, particularly with respect to beneficial reuse. Finally, the Chapter fails entirely to shed much light on how the disposal alternatives under review could be implemented – and in particular how the agencies would affect a shift from relying principally on ocean and bay dumping to additional upland disposal and beneficial reuse options. We concur with the recommendations of the Center for Marine Conservation that the LTMS agencies should prepare and circulate draft implementation plans for each of the alternatives prior to finalization of the EIS/EIR. 21a 21b

IX RECIRCULATION OF EIS/EIR

In conclusion, we urge the LTMS agencies to revise and recirculate the programmatic EIS/EIR. The stakes are considerable in light of the role this document will play guiding dredging policy over the next decades. While we appreciate there is likely to be some reluctance to further delay finalization of this document, we believe the rational course is to take the extra weeks required to produce a defensible and useful document rather than rush to finalization only to be delayed further in mudlock.

Thank you very much for your consideration of our views. We look forward to working with the LTMS agencies as this lengthy process finally glimpses the light at the end of the tunnel.

Sincerely,

Cynthia L. Koehler
NATURAL HERITAGE INSTITUTE

cc: Pietro Parravano
Zeke Grader

Responses to the NHI — Natural Heritage Institute, letter dated July 18, 1996

1. The LTMS agencies reaffirm that this is not a project-specific document, but rather a policy EIS/programmatic EIR whose purpose is correctly stated as "selection of a long-term strategy that will guide the regional agencies' dredged material management decisions." As such, this EIS/EIR does not itself make decisions about any specific project and does not authorize any actual dredged material disposal. Project-specific disposal decisions will continue to be made on a case-by-case basis, albeit in light of the overall strategy set forth in the preferred alternative.

   Regarding annual dredging volumes, this EIS/EIR specifically uses the most up-to-date dredging volume estimates available (see Chapter 2 and Appendix E). However, the LTMS agencies recognize that dredging needs may change over time. For this reason, revisions to the Management Plan will be made, as needed, every 3 years. Every 6 years a major programmatic review of and revisions to the Management Plan will be undertaken. In addition, on a 6-year cycle, any necessary amendments to the San Francisco Bay and Basin Plans will be initiated.

2. Statement noted. Please see the response to BayKeeper comment 2a.

3. Sections 2.2.2 and 4.5.4 have been expanded to reference the designation of the early ocean disposal site, site B1B.

4. This EIS/EIR has used the most up-to-date dredging volume estimate available. The volume estimate available during scoping was revised by LTMS, and showed substantially reduced dredging (25 percent lower than the previous figures). The EIS/EIR uses the high-end assumptions from that new evaluation, as prudent, for planning purposes. In addition, the LTMS agencies have committed to a program review at least every 6 years that will reconsider basic assumptions, including whether volume estimates should be further revised (also see response to NHI comment 1).

   The Final EIS/EIR has been corrected to reflect that the 400 mcy cumulative 50-year dredging volume estimate was derived in an early LTMS evaluation (the LTMS Phase I Report), and was not an SFEP figure.

5. The EIS/EIR prediction of 300 million cubic yards of dredged material over 50 years (average of 6 mcy per year) is not based only on historic dredging, but also includes potential future "new work" projects. Historical dredging projects that no longer exist (e.g., as a result of base closures) have also been eliminated from the estimates (see Chapter 3 and Appendix E). Also, annual deviations in dredging volumes have been taken into account in that the EIS/EIR repeatedly notes that disposal site capacity cannot be set to correspond only to the long-term dredging average.

   In response to the comment that the point of the EIS/EIR should be to develop a reasonable estimate of future dredging requirements, we disagree. However, the LTMS program must reflect reasonable numbers regarding dredging requirements over time.

   The LTMS agencies believe that the revised dredging volume estimate used in the EIS/EIR is appropriate, adequate, and reliable for planning-level purposes. The estimates were derived via an LTMS study, coordinated through an LTMS work group open to interested parties, and the full study results were distributed more broadly to the public along with the Draft EIS/EIR. (Also, see the response to NHI comment 4.) In addition, the program will be reviewed every 6 years to determine whether changes such as dredging estimates should be changed. Please see the response to BayKeeper comment 2a.

6. The Draft EIS/EIR already contains a section setting forth reasonably foreseeable new work dredging projects over the 50-year planning period; see Appendix E. Please also see the response to NHI comment 5.

7. Statement noted. Please see the response to NHI comment 8.

8. The Final EIS/EIR indicates that Alternative 3 is the preferred alternative and a transition to Alternative 3 is described in section 6.5 of the document. The basis for the selection of Alternative 3 is to maximize beneficial reuse to the extent practicable (provided there are no other significant impacts) and, in addition, to minimize in-Bay disposal to the extent practicable. Alternative 3 involves significantly reduced in-Bay disposal than currently practiced and increased UWR. Alternative 3 will be phased in as LTMS agencies push for more UWR. In the short-term, we are focusing on increasing UWR. At the same time, we are reducing the risk of aquatic impacts by using more ocean disposal, instead of in-Bay disposal, when UWR is not available.

9. Since the Draft EIS/EIR was prepared, substantial changes to some key aspects of federal law and cost-sharing requirements were enacted by Congress in the Water Resources Development Act of 1996 (WRDA 96). The Final EIS/EIR has been revised to reflect these changes. However, it is important to emphasize that the LTMS agencies expect that future federal funding alone will continue to be inadequate, at least at times, to fully realize the goals of Alternative 3. In other words, full implementation of Alternative 3 is expected to require some actions by others that are outside either the authorities of or appropriations to the federal agencies, even under WRDA 96. The LTMS agencies will encourage others in actions that further the goals of Alternative 3.

   There is no statute precluding adoption of Alternative 3 as the "strategy that will guide the regional agencies' dredged material management decisions." In fact, Alternative 3 has been selected for adoption as the preferred alternative in this EIS/EIR, and Chapter 6 includes a discussion of the transition from current conditions to the goals of Alternative 3 (see section 6.5). However, the LTMS agencies expect that it will not be possible to fully realize the goals contained in Alternative 3 until new upland and/or beneficial use alternatives become available and practicable.

10. Federal laws and policies regarding beneficial reuse of dredged material were summarized in Chapter 4 (section 4.8), Chapter 7 (sections 7.3 and 7.4), and Appendix Q of the Draft EIS/EIR. Constraints to beneficial reuse were discussed in section 7.3 and in Appendix Q. These sections have been expanded in the Final EIS/EIR to reflect, for example, the new authorities and requirements contained in the Water Resources Development Act of 1996 and other changes to laws and regulations (such as the CALFED Program) that have occurred since preparation of the Draft EIS/EIR.

11. Please see the response to Department of Commerce comment 1. Chapter 7 (section 7.4) describes some of the barriers to the full implementation of Alternative 3. Additional NEPA/CEQA documentation and evaluation for beneficial reuse sites would be completed on a site-specific and project-specific basis and not in the policy EIS/programmatic EIR. Please see the response to NHI comment 9.

    It is the Corps of Engineers' policy to secure the maximum practicable benefits through the use of material dredged from navigation channels and harbors, provided such use is in the public interest. Such use of suitable non-contaminated dredged materials can include creation of wetlands, nourishment of shorelines, erosion control of river banks, and land reclamation. Section 204 of Public Law 102-580 authorized the Secretary of the Army to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands. Project implementation is contingent on non-federal interests entering into a cooperative agreement to provide a percentage of the cost of construction and agree to pay 100 percent of operation, maintenance, repair, and rehabilitation costs. Section 207 of the Water Resources Development Act of 1996 directs that in carrying out navigation projects, the Secretary may select a disposal method that is not the least cost option if the incremental costs are reasonable in relation to the environmental benefits realized. However, the incremental operation and maintenance costs associated with the above non-least cost disposal alternative must be paid by the non-federal interests.

12. Chapter 4 emphasizes current conditions and chapters 5 and 6 emphasize impacts. In addition, Chapter 3 has been expanded to discuss general dredging impacts.

13. Please see the following responses 13a through 13d.

13a. The SF-DODS EIS gives a complete evaluation of potential impacts to the ocean environment, including resources outside the immediate vicinity of the SF-DODS. Please see the responses to CMC comments 4, 13, 17, and MAS comment 20b.

13b. The SF-DODS EIS thoroughly discusses biological resources in the ocean environment in relation to selection of the preferred alternative ocean disposal site. The discussion included previous studies conducted in the region as well as studies conducted by EPA for the ocean site designation, the combination of which constitutes an adequate baseline of information. In its selection of the preferred alternative in the Final Rule, EPA noted that there are no unique biological resources within the SF-DODS that are not found elsewhere in the Gulf of the Farallones region. EPA also expected that there would be temporary localized impacts from dredged material disposal (i.e., turbidity plumes) within site boundaries. In contrast, there would be no expected long-term impacts outside the site boundaries. Finally, the Final Rule stipulates that site monitoring is required for use of the site. There are specific regional monitoring requirements, including: seafloor mapping and sampling of dredged material deposits to assess site performance; and surveys of fish, seabirds, and marine mammals to assess potential local and regional impacts. Permit compliance requirements are developed on a project-by-project basis. The SMMP Implementation Manual, which describes site monitoring and permit compliance requirements, has been published.

13c. Please see the response to CMC comment 4 which indicates that the SMMP Implementation Manual has been published.

13d. Please see the response to Marin Audubon Society comment 18ff. This discussion is included in the first year monitoring report. See also the response above to Marin Audubon Society comment 20b. The following summarizes the most recently available physical monitoring results from the *Monitoring Report for 1995 and 1996* for the SF-DODS (USEPA 1998b).

Vertical sediment profiles, using a vertical profile photography system, were taken of a minimum of 25 stations radiating outward from the center of SF-DODS. The thickness and areal extent of the dredged material footprint were mapped with this photographic system. No accumulations in excess of 5 cm were detected near the boundaries of the SF-DODS. The photographs depict a thick deposit at the center of the disposal site, and only very thin deposits away from the center, consistent with the site designation EIS (USEPA 1993a) and the U.S. Navy monitoring results. During both 1995 and 1996, deposition of recently disposed dredged material did not exceed 5 cm (the Tier 1 management threshold) outside the SF-DODS boundary. Thus a need for Tier 2 and Tier 3 physical monitoring was not indicated.

14. Please see the following responses 14a through 14c.

14a. Statement noted. Please see the response above to DOI comment 25h. Revised capacity estimates for upland/wetland reuse are discussed in the response to DOI comment 25j and the new discussion of the transition to Alternative 3 (Chapter 6). See also revised section 4.4.4.5 (UWR Reuse Scenario Estimates).

14b. CALFED represents a potentially significant cost-sharing partner, particularly for beneficial uses of dredged material in the Delta and the San Pablo Bay area. Interactions between LTMS and CALFED are described in new discussions added to chapters 2 (section 2.2.5) and 7 (section 7.3.3.1).

14c. The Final EIS/EIR includes a discussion for the Sonoma Baylands restoration project in section 4.4.5.1. Additional information on the Sonoma Baylands Project has also been added to Appendix

K.2. This information includes a summary of the 1997 monitoring report (the full report is available from the COE) and a report on an adaptive response program.

The total project costs for Sonoma Baylands were $8 million, which includes site preparation and the additional cost of placing material from the Oakland Harbor 42-foot deepening project at that site, instead of ocean disposal.

Although many state and federal resource and regulatory agencies, as well as other public and private entities, were involved in the development and implementation of the Sonoma Baylands Wetland Restoration Project, the project itself was not implemented by the LTMS. In regard to the perceived conflict between current law and policy and beneficial reuse, please see the response to NHI comment 19a.

15. Please see the responses below to comments 15a and 15b.

15a. The LTMS agencies recognize the many opportunities to use the Bay, ocean and other environments for commercial and aesthetic purposes. However, the discussion of the regional socioeconomic setting and the associated economic evaluation is included in the EIS/EIR for disclosure purposes and is not the primary factor in selecting the preferred alternative. The document discusses recreational and commercial fishing in the context of associated dependency upon dredging and includes discussion of the dredging related impacts to these enterprises. Inclusion of the non-dredging related economic impacts to commercial and recreational opportunities could be difficult to quantify and will not affect the selection of the preferred alternative.

15b. Please see the response immediately above to NHI comment 15a.

16. Please see the responses below to comments 16a through 16b(7).

16a. The Regulatory Environment section of Chapter 4 has been expanded to more clearly address the underlying intent of key statutes and regulations.

Section 2.2.4 of the EIS/EIR briefly discusses the relationship of the LTMS to the National Dredging Policy. Also, a copy of the National Dredging Policy was included as Appendix D of the Draft EIS/EIR.

The COE requirement to identify the "NED" (National Economic Development) Alternative does not apply to selection of a programmatic alternative in this EIS/EIR. NED policy will continue to apply to the COE's determinations regarding cost-sharing for specific new-work projects. The Regulatory Environment section has been expanded to describe both the NED policy (for new-work projects), and the "Federal Standard" (which applies to federal maintenance dredging). A new discussion of the Water Resources Development Act has also been added to section 4.8.

16b. Please see the responses below to comments 16b(1) through 16b(7).

16b(1). The discussion of federal laws has been expanded in the Final EIS/EIR to include more detailed information about the laws and regulatory requirements applicable to dredged material testing and disposal (e.g., the intent and provisions of the London Convention, the MPRSA, and EPA's Ocean Dumping regulations are summarized, in addition to the testing guidance in the Green Book). See new discussions in section 4.8.1.2 of the Final EIS/EIR.

16b(2). Please see the response immediately above to NHI comment 16b(1).

16b(3). In response to the U.S. Third Circuit Court of Appeals' decision in *Clean Ocean Action vs. York*, EPA in 1996 issued formal rulemaking clarifying and amending testing requirements under the ocean dumping regulations (61FR190, 51196 [September 30, 1996]). The amendment reaffirmed EPA's

long-standing interpretation that the benthic bioassay testing can be conducted using two species, so long as together those species represent the three categories of organisms defined in the regulations. The amendment also clarified that both bioassay tests and other scientifically valid methods (such as calculations of theoretical bioaccumulation potential) could be used as appropriate to assess the potential impacts of disposal. Note that the amended regulations in no way weaken ocean protection, or alter either existing practices for assessing material proposed for ocean dumping, or the criteria for ocean dumping. Note also that the Green Book (referred to in NHI's comment) has been superseded by the Inland Testing Manual (ITM).

16b(4). Please see the responses to CMC comment 20 and NHI comment 16b(3).

16b(5). Please see the responses to CMC comments 4 and 20. The LTMS is not weakening sediment testing protocols.

The potential impacts of contaminants in sediments, including exposure pathways and other differences between the placement environments, are extensively discussed in Chapter 3 (see sections 3.2.3 and 3.2.4). Section 3.2.5 describes in some detail how sediment tests are designed specifically to address these potential impacts and exposure pathways to ensure that appropriate evaluations are conducted for each dredging/disposal project. The appropriate testing is required under provisions of the Ocean Dumping regulations, Clean Water Act 404(b)(1) Guidelines (40 CFR Part 230), or applicable state regulations depending on the specific disposal or reuse location proposed. Dredged material that does not meet the required testing standards for a particular disposal site may not be disposed there, unless appropriate restrictions are applied or measures taken to address the potential effect identified by the testing.

The existing sediment testing requirements for ocean disposal are conservative (environmentally protective) by design; however, the Final Rule for the SF-DODS also stipulates that monitoring of the SF-DODS is required for use of this disposal site. Annual (Tier 1) monitoring includes: seafloor mapping of the dredged material deposits to ensure that the site is performing properly (in accordance with modeling predictions), confirmatory sediment chemistry analysis, and monitoring of seabirds and marine mammals in conjunction with disposal operations. To date, the SF-DODS is performing as expected and no significant adverse impacts have been detected.

16b(6). Existing and future sediment testing requirements must always be in compliance with national regulations. Updates to testing protocols are inevitable over time, and any changes will be incorporated with full disclosure under a public review process that is established for rule-making (regulations) or public notice (Management Plan or Regional Implementation Manual). Although changes in protocols are expected, no fundamental changes in the basic framework for sediment testing are anticipated.

The basic sediment testing requirements are implemented nationwide. Regionally, there may be modifications, such as the suite of contaminants of concern (e.g., different industries and associated wastes); specific sampling protocols (e.g., local limitations on equipment that can be used); and inclusion of locally important test species.

The potential impacts of contaminants in sediments, including exposure pathways and other differences between the placement environments, are extensively discussed in Chapter 3 (see sections 3.2.3 and 3.2.4). Section 3.2.5 describes in some detail how sediment tests are designed specifically to address these potential impacts and exposure pathways to ensure that appropriate evaluations are conducted for each dredging/disposal project. Section 3.2.6 discusses considerations for the management of contaminated dredged material, and Appendix G provides more detail about one such option (Confined Aquatic Disposal).

16b(7). Statement noted. The LTMS agencies wanted to separately present the framework for, and emphasize the importance of, sediment testing; but sediment testing is a subset of the regulatory process, not the process itself.

17. Please see the responses below to comments 17a through 17f.

17a. The comment notes that NHI agrees with the "generic analysis" approach adopted by the LTMS agencies toward impact evaluation. Statement noted.

17b. The LTMS agencies believe that the overall evaluation of impacts is appropriate for the programmatic decision being made.

Impacts of ocean disposal on the marine environment were evaluated in appropriate detail in the SF-DODS EIS. The LTMS EIS/EIR is the programmatic evaluation of alternatives to ocean disposal. The LTMS agencies determined during public scoping that all alternatives undergoing detailed evaluation should include disposal in a combination of all three placement environments. In addition, Alternative 2, which the LTMS fully evaluates, includes minimal ocean disposal.

17c. The LTMS agencies believe the analyses presented are adequate for the programmatic decisions being made at this time. Nothing in this EIS/EIR affects the requirement for individual dredging proposals to undergo project-specific alternatives analysis, and this EIS/EIR does not authorize any ocean dumping for any individual project. The public will continue to be able to comment on the appropriateness of ocean disposal for individual projects through those project's public notices and NEPA/CEQA documents. In addition, the LTMS agencies have committed to develop an overall Management Plan that can be revised, as needed, every 3 years based in part on public comments. Every 6 years a major programmatic review of and revisions to the Management Plan will be undertaken. In addition, on a 6-year cycle, any necessary amendments to the San Francisco Bay and Basin Plans will be initiated. See the new discussion of the transition to Alternative 3 (section 6.5).

17d. The SF-DODS EIS thoroughly discusses the existing information regarding the potential impacts of ocean dumping of dredged material on the marine environment. Further, the SF-DODS EIS and Final Rule address the issue of sea-surface microlayer. Although this phenomenon may be ecologically important and significant in relatively quiescent bodies of water, it is not expected to be significant in the relatively turbulent open ocean environment of the SF-DODS and the continental shelf of the Gulf of the Farallones region.

It was determined in the SF-DODS EIS that the potential for introduction of exotic species to the environment of the SF-DODS was insignificant, given that the physical characteristics of the open ocean (water column) and deepsea (seafloor at 10,000 feet depth) are so different from the relatively shallow, enclosed Bay waters. Required annual monitoring includes observations of seabirds and marine mammals during disposal operations to document potential adverse impacts. Regional monitoring includes collection of pelagic fish species and examination of their condition relative to potential adverse impacts resulting from ocean disposal of dredged materials. To date, no adverse impacts have been determined.

The SF-DODS EIS determined that the increase in vessel traffic associated with dredged material disposal operations would be insignificant (an increase of approximately 2%). Accidents can and are expected to happen, but the environmental risk would be very small relative to spills of oil from tankers and spills of other industrial materials. To minimize the potential for accidental release, the Final Rule contains mandatory requirements for the loading and transportation of dredged material. In addition, based on experience gained as a result of two weather-related incidents that resulted in dredged material being discharged in the National Marine Sanctuaries (described in the SF-DODS Monitoring Report), clarifications will be made to several of the mandatory requirements that should further reduce the risks of accidents occurring. These clarifications will be made in the 1998 site designation final rule and reflected in the SMMP Implementation Manual. See also the response to MAS comment 20b.

We have expanded the Generic Analysis in section 6.1.7 (see the response above to NHI comment 17c). In general, the Generic Analysis considers reasonable "worst-case" scenarios, in that it includes evaluation of potential impacts of "high" levels of disposal in each placement environment. Ultimately,

the Generic Analysis resulted in the elimination from consideration of "high" disposal volumes in any one placement environment.

17e. Every region is distinct with regard to its assemblage of biological resources. The SF-DODS site designation studies collected an appropriate baseline of physical, chemical, and biological data that are currently being augmented by annual regional monitoring surveys. To date, there is no indication of adverse impacts as a result of transportation and disposal of dredged material at the SF-DODS. Seafloor mapping surveys have also been conducted to assess site performance. To date, the site is performing as predicted by modeling described in the SF-DODS EIS. Confirmatory chemistry analysis of sediments collected from the SF-DODS indicate that the dredged material deposited at the site has not resulted in elevation of chemical contaminants that can be harmful to the benthic organisms. These issues are discussed in detail in the references listed in the response to CMC comment 4.

For all these reasons, the LTMS agencies do not believe it is necessary to significantly expand the impacts analysis in the Final EIS/EIR in the manner suggested. An annual monitoring report has been published, describing the results of the site monitoring to date, information on volumes disposed and permit compliance, and accidents reported to the EPA and the COE.

In addition, the SF-DODS EIS considered an annual maximum disposal volume of 6 million cubic yards (mcy) for modeling purposes and for evaluation of the potential for accidents and other adverse impacts. The figure of 6 mcy was determined at the time of that EIS to be the maximum volume (in effect, the worst case) of ocean-suitable material generated as a part of annual dredging needs for San Francisco Bay. The SF-DODS EIS concluded that no significant adverse impacts would occur with disposal of up to the full 6 mcy per year that was evaluated. The LTMS EIS/EIR uses new (lower) estimates of average dredging volumes; the Generic Analysis (and the selected alternative) reflects these new volume estimates. Therefore, the potential impacts evaluated in the Generic Analysis are even lower than was identified in the SF-DODS EIS.

17f. Please see the response above to NHI comments 17c and 17d.

18. The EIS/EIR contains extensive requirements for mitigation in Chapter 5 (policy-level mitigation measures) including lists of the kinds of potential impacts that would need to be evaluated for mitigation if necessary on a project-by-project basis. Also, additional policy-level mitigation measures have been added in Chapter 5, based in part on public comments. Ultimately, the full list of specific mitigation measures necessary for any individual project has to be determined on a case-by-case basis.

18a. The SF-DODS Final Rule and SMMP are not extremely general. They describe the overall site use and monitoring requirements, and the kinds of management actions that EPA can implement at any time. Usually, decisions about the need for management actions will be made on an annual basis following analysis of the site monitoring results. If the information gathered from monitoring at any time is not sufficient to base reasonable conclusions about whether disposal at the SF-DODS might be endangering the marine ecosystem, then EPA can either intensify the monitoring at a higher level (tier) or institute management actions, as appropriate. If monitoring establishes that disposal operations are endangering the marine ecosystem, then EPA can require modification, suspension, or termination of site use.

Some management actions have already been taken by EPA, based on experience gained as a result of two weather-related incidents that resulted in dredged material being discharged in the National Marine Sanctuaries (described in the SF-DODS Monitoring Report). These actions involved clarifying several of the mandatory requirements so that the risks of accidents occurring in the future should be reduced.

The SMMP Implementation Manual has been completed. See the response above to CMC comment 4.

There are no overall seasonal restrictions on disposal at the SF-DODS site. However, specific conditions that must be met for disposal to occur (such as sea state conditions, barge loading

limitations, numerous equipment requirements, etc.) are included in the SMMP. Although there are no seasonal restrictions on *disposal* at SF-DODS, there may be seasonal restrictions on *dredging* for individual projects that dispose at SF-DODS (see Chapter 5). Please see the response below to NHI comment 18c.

18b. The SMMP and SMMP Implementation Manual are incorporated into the EIS/EIR by reference. The SMMP is in the Final Rule and, therefore, all of its provisions are enforceable. More detailed requirements are included in individual permits which are also fully enforceable by EPA. The LTMS agencies (including EPA) believe that the SMMP provides appropriate requirements for the adequate protection of the marine ecosystem. Regarding the SMMP status since the original designation of SF-DODS, please see the responses above to CMC comment 4, and NHI comments 17d, 17e, and 18a.

With regard to the recommendation that the LTMS agencies circulate an ocean SMMP and implementation manual before finalizing the LTMS EIS/EIR, this has been done. See the response above to CMC comment 4.

18c. The fish windows analysis has been updated and expanded through consultation with the resource agencies and is included in the Final EIS/EIR. Please see the response to MAS comment 18c for information on spring run salmon.

19. Please see the response below to comments 19a through 19e.

19a. The LTMS agencies believe that Regulatory Certainty is an appropriate evaluation factor, in combination with the other factors used in Chapters 5 and 6. Chapter 2, section 2.5, describes how Regulatory Certainty as a factor came about as a result of the public scoping process.

The LTMS agencies believe that the planning-level economic evaluation presented in the EIS/EIR is appropriate to the programmatic issues being addressed. Consideration of the potential overall socioeconomic effects is necessary to help the LTMS agencies and the public understand how the programmatic alternatives balance all the LTMS goals.

As section 2.5 of the EIS/EIR outlines, Evaluation Criterion C (Effects on Dredging Related Sectors) is used to determine the socioeconomic impacts that could result from implementation of the proposed dredged disposal management alternatives. Socioeconomic analyses are a required and important aspect of an environmental document; however, socioeconomic considerations do not serve as the primary evaluation criteria in the EIS/EIR. Instead, a socioeconomic analysis provides additional information to aid in decision making once environmental impacts are determined. Once the environmental impacts of the disposal options are determined, economic considerations are used to determine the feasibility of different disposal options and to choose the disposal option that can best be used to the advantage of the dredging community.

Relative environmental risks and benefits are directly evaluated in Chapter 6. The "Generic Analysis" (section 6.1) includes evaluation of all alternatives in terms of potential impacts and benefits to water quality, fish and wildlife habitat, special status species, air quality, archaeological and cultural resources, and transportation systems. Section 6.2 then further evaluates the shorter list of final alternatives in terms of benefits and risks to ecological systems, regulatory certainty, dredging-related economic sectors, and air quality.

The alternatives are programmatic approaches, not projects of a specific size/volume. Nevertheless, each of the alternatives is adequate to accommodate the projected annual average dredging volume of 6 mcy. This would be true even if no dredged material were to be sent to UWR sites, since the combined disposal capacity of the existing multi-user aquatic disposal sites (three in-Bay sites, plus the SF-DODS) already exceeds this projected average. Therefore, an Evaluation Criterion based on whether the alternatives provide sufficient disposal capacity would not serve to differentiate the alternatives. (Also, please see the response below to NHI comment 19c.)

19b. The LTMS agencies believe that regulatory certainty, as defined in the EIS/EIR, is appropriate to retain, along with the other impact analysis categories and evaluation criteria. Regulatory certainty was identified during the public scoping process as an important criterion for this document. It reflects the ability of the LTMS agencies to provide an understandable and consistent regulatory framework that offers increased predictability to LTMS stakeholders in managing the environmental risks associated with dredging projects. While there was some initial concern that this criterion would favor the status quo, the preferred alternative places the most emphasis on non-traditional (and more expensive) disposal sites.

19c. The Draft EIS/EIR clearly states that beneficial reuse is feasible, both legally and in terms of the ability to implement reuse projects. The LTMS agencies, in general, do not believe there are any insurmountable barriers to beneficial reuse. Please see the new discussion of the transition to Alternative 3 (section 6.5) in the Final EIS/EIR.

The LTMS agencies, through public involvement, have selected Alternative 3 as the best alternative to meet the goals established at the onset of the LTMS process. We believe that the many existing federal laws and policies encourage beneficial reuse of dredged material, and that Alternative 3 best reflects the National Dredging Policy. In fact, the LTMS was cited as a model in the National Dredging Policy document. Nevertheless, it is also true that Alternative 3 is unlikely to be fully implemented under present funding authorities and cost-sharing policies if based primarily on federal funding. The EIS/EIR discussions of authorities and constraints has been updated to reflect significant new authorities, including those contained in WRDA 1996, that did not exist when the Draft EIS/EIR was being prepared (see the response to NHI comment 10, above). The LTMS agencies have committed to development of an initial Management Plan that implements as much of Alternative 3 as is feasible and reasonable under existing authorities and funding. The transition into Alternative 3 also includes a mechanism to systematically further reduce in-Bay disposal over time, by providing incentives for dredgers to develop alternatives to in-Bay disposal even if the agencies are constrained by existing laws and policies. See the new discussion of the transition to Alternative 3 (Chapter 6) in the Final EIS/EIR.

Improved regulatory certainty is an objective of the EIS/EIR (see section 2.4.1, Purpose of Action), and is an appropriate factor for comparison of the alternatives. Please see the response above to NHI comment 19b. Therefore we have retained it as an evaluation criterion in Chapter 6. However, both the Regulatory Framework discussion in Chapter 4 and the implementation discussions in Chapter 7 are expanded in the Final EIS/EIR with additional detail regarding the implementation of Alternative 3. Please see the response above to NHI comment 19a.

19d. As section 2.5 of the EIS/EIR outlines, Evaluation Criterion C (Effects on Dredging Related Sectors) is used to determine the socioeconomic impacts that could result from implementation of the proposed dredged disposal management alternatives. Socioeconomic analyses are a required and important aspect of an environmental document; however, socioeconomic considerations do not serve as the primary evaluation criteria in the EIS/EIR. Instead, a socioeconomic analysis provides additional information to aid in decision making once environmental impacts are determined. Once the environmental impacts of the disposal options are determined, economic considerations are used to determine the feasibility of different disposal options and to choose the disposal option that can best be used to the advantage of the dredging community. Please see the response to NHI comment 19a above, and NHI comment 19e below.

The alternatives evaluated in the EIS/EIR are not "ranked" per se based solely on potential economic effects. In fact, Alternative 3, selected as the preferred alternative is potentially the most costly of the alternatives considered in detail. Assumptions behind the economic discussions are presented in the EIS/EIR to help readers consider potential effects given specific dredging project situations. Overall, the LTMS agencies are seeking the best balance of all the LTMS goals, only one of which is that the program must be economically sound.

19e. Please see the responses above to NHI comments 19a and 19d.

20. Please see the responses below to NHI comments 20a and 20b.

20a. A "most likely" case cost scenario is not possible to develop at this time, given the significant uncertainty about the future availability of specific upland or wetland placement sites and reuse opportunities, and given the great variability in costs that can be associated with individual sites. The EIS/EIR therefore evaluates ranges of costs for different kinds of projects, and emphasizes the assumptions behind estimating the costs, so that readers may consider potential effects given their own specific dredging project situations. For comparison among alternatives and in order to address reasonable worst-case scenarios, the EIS/EIS uses the assumptions that tend to over-estimate the likely costs for all alternatives. Also please see the response above to NHI comment 19d. Note that relatively higher worst-case costs did not deter the LTMS agencies from selecting Alternative 3 as the preferred alternative. However, including the worst-case costs does help to focus attention on the fact that finding ways to fund alternative disposal sites/methods is a significant issue.

20b. Appendix L of the EIS/EIR presents an economic valuation of potential benefits associated with upland or wetland reuse alternatives to aquatic disposal. The economic evaluation in the EIS/EIR is primarily for comparison purposes. It does not serve as a primary evaluation criteria.

The EIS/EIR cost estimates present a range of potential costs for dredging and disposal activities; these costs are independent of who pays, or what cost-sharing requirements may apply, for individual projects. In addition, the EIS/EIR now contains a discussion of the new authorities and cost-sharing possibilities brought about by WRDA 1996 (see section 4.8).

21. Please see the responses below to NHI comments 21a and 21b.

21a. Chapter 7 was not meant to be an exhaustive discussion of all possible long-term implementation options, but rather to generate initial comments on what will, of necessity, be an on-going issue for all future iterations of the Management Plan. A new discussion of the initial transition to Alternative 3 has been added to the Final EIS/EIR (Chapter 6). It includes periodic reviews, during which any available new implementation mechanisms may be evaluated and instituted as appropriate.

21b. Please see responses to CMC comment 2.

The Public Trust Group

is dedicated to promoting an ecologically and socially healthy San Francisco Bay Region through the application of the Public Trust Doctrine.

July 19, 1996

Ms. Karen Mason
U. S. Army Corps of Engineers
311 Main Street
San Francisco, California

Dear Karen,

The Public Trust Group is a coalition of environmental and community groups and individuals. We support the use of San Francisco Bay and the uplands surrounding the Bay subject to the public trust for trust uses such as wildlife refuges, recreation, ports, water-oriented commercial recreation, such as marinas and water related industry, such as fishing. Our group thus supports the preparation of a long term management strategy (LTMS) for the disposal of dredge material for port uses that are public trust uses. 1

However, this LTMS benefits some uses such as ports and marinas but will have a significant detrimental impact on other trust uses such as fishing and wildlife habitat. For example, the alternatives propose increased disposal in the ocean and continued and increased disposal in San Francisco Bay to the detriment of fishing and fisheries resources and disposal in seasonal wetlands to the detriment of wildlife habitat. 2

EIR/EIS Inadequate

The EIR/EIS on the LTMS is inadequate because it fails to objectively evaluate the environmental consequences of the project. The EIR/EIS does not include a full range of alternatives. It does not provide a sufficient degree of analysis and it does not include adequate evidence for decision makers to make an informed decision. 3

Alternatives

The EIR/EIS is inadequate because it fails to provide information sufficient to permit a reasonable choice of alternatives (CEQA Guidelines 15126). For example, one alternative which should be analyzed is using the dry land upland sites that have become available through the base reuse for the disposal of dredge material. Although the existing dredge ponds at Mare Island are considered an upland option, at least some of these are in fact mitigation for other projects or needed by the Fish and Wildlife Service. 4

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4 The upland/wetland alternative should be bifurcated into two alternatives, one which evaluates the use of only dry land, focusing on dry land at the military bases. As part of base reuse the first consideration is given to federal agencies who may be able to use these lands. The bases could clearly be made available to federal agencies for use as dredge material disposal areas in the short term and perhaps some could be used on a long term basis.

The EIR/EIS assumes that the upland areas at bases are not immediately available perhaps because local development projects are proposed on the bases. However, most of the land at the bases is subject to the public trust and cannot be used for the office, research
5 and development and housing uses proposed by the local governments. Use for dredge material reuse is a public trust use that is a feasible and viable alternative use. In addition, the dredge material projects could provide valuable cover for toxic waste sites on the bases. Furthermore, ports could pay a tipping fee and thus revenue could be generated for base cleanup or shared with local government o provide seed money for capital improvements. Jobs could also be created on the bases immediately.

6 Furthermore, the EIR/EIS does not discuss the alternative of reducing dredging. As part of the seaport planning process, many port designations were deleted from the future use. The EIR/EIS should analyze the effect of the removal of port uses on future dredging needs.

Insufficient Degree of Analysis

7 The EIR/EIS is inadequate because it does not provide a sufficient degree of analysis to allow decisions makers to make intelligent judgments as required in CEQA Guidelines 15151. The proposal to "lump" wetland and dry land together as part of the "upland" alternative does not provide a decision maker adequate information regarding the impact to wetland resources. For example, if the alternative resulted in 95% of the material to be disposed in seasonal wetlands and 5% on dry land a very different set of impacts would result than if the reverse were true.

8 The Public Trust Group supports the use of dredge materials to create wetlands on areas which do not presently have wetland vegetation, such as Hamilton field. However, seasonal wetlands in the north bay can be enhanced without filling and expensive engineering, simply by stopping pumping or regulating water levels by installing water control structures. Freshwater wetlands which are in scarce supply can be created by controlling the amount and type of water on the site. Cullinan Ranch is a good example of inexpensive water control creating a valuable freshwater wetland. The Rich Island Duck Club is a good example of an engineered dredge disposal project which destroyed rather than created habitat. Over 10 years has passed and this Corps project remains an enforcement problem.

Inadequate Evidence

The EIR/EIS does not include adequate evidence upon which the decision making bodies can find that there will be no significant effect on the environment from the placement of dredge materials in existing wetlands. Disposal in wetlands is assumed to be a benefit to habitat in the EIR/EIS although no monitoring results from the existing wetland creation projects are yet released to the public nor is any data included in the EIR/EIS to provide a factual basis for the conclusions reached in the document. Furthermore, no mitigation is proposed for destruction of seasonal wetlands. The results of future studies and projects are cited as the solution to any impacts created. Future studies and reports are not mitigation. Further, the EIR/EIS does not discuss the specific institutional and management arrangements to assure wetland creation projects will be successful. 9

Recommendation

The EIR/EIS should include an alternative that reduces placement of dredge material in the Bay and in the ocean and increases the amount of material that is placed on dry upland sites. Over 12,000 acres are available to the federal government as part of base closure and base reuse. This alternative is feasible for a federal agency to undertake, although it may be politically unpopular. However, the state and federal laws which guide the preparation of EIR/EIS's are based on findings which state that maintenance of a quality environment is a matter of great concern, that all necessary actions should be taken to provide a quality of environment and that fish and wildlife species should not be detrimentally affected by man's activities. It is thus the responsibility of the Corps of Engineers to base its analysis on these principles rather than political considerations. 10

The EIR/EIS should consider an alternative of reducing dredging. Further, if an alternative includes wetland creation, the EIR/EIS should provide specific targets, goals and deadlines for habitat creation by which to measure success. Also, specific habitat mitigation measures which must be undertaken by for each agency or applicant must be included in the EIR/EIS to assure no wetland losses will occur. 11

Sincerely yours,

Nancy Wakeman

Nancy Wakeman
Vice President.