CHAPTER 7.0 IMPLEMENTATION OF THE SELECTED ALTERNATIVE

The preceding chapters of this EIS/EIR developed and analyzed four alternative approaches for management of dredged material in the San Francisco Bay Area for the next 50 years. The LTMS agencies have received public comments on the Draft EIS/EIR and have selected Alternative 3 as the preferred alternative. Alternative 3 achieves a balance between maximizing environmental benefits and minimizing environmental risks in an economically sound manner. This approach consists of a desired long-term distribution of dredged material among each of the three environments and a set of policy-level mitigation measures. A dredged material management system that fully achieves the goal of the selected approach requires detailed implementation measures. The LTMS agencies will be preparing a Management Plan for implementation following the finalization of this EIS/EIR. The Management Plan will describe the specific actions the agencies will take to implement that approach to the extent possible in the short-term and to achieve the long-term policy goal. This chapter initiates the process of developing the Management Plan by presenting a number of different options for achieving desired material distribution. The LTMS agencies are inviting public comment on these options and will consider these comments when drafting the Management Plan.

There are two sets of actions that the participating agencies will undertake to implement the policies established in this EIS/EIR. The first set consists of actions that can be carried out under existing authorities of the agencies within a short time after the EIS/EIR is finalized (section 7.1). Among these types of actions are those that address planning, sediment testing, site monitoring and management. The second set of actions consists of specific implementation options that have been identified during the course of the LTMS studies and through this EIS/EIR that need further development or cannot be implemented immediately. Some of these potential implementation measures may increase or decrease the overall costs of achieving the long-term desired material distribution or shift the financial responsibilities between federal and non-federal interests. These include different ways of allocating in-Bay disposal volumes (section 6.5.7) and financing increased beneficial reuse (sections 7.2 and 7.3). Some of the options in this second set can be implemented under existing authorities of the LTMS agencies. Other options, particularly those that could remove existing institutional barriers, lie outside existing agency authorities (section 7.4).

Nothing in this document is intended to influence, directly or indirectly, congressional representatives to favor or oppose any legislation. It is the policy of the Chief of Engineers that all Corps of Engineers (COE) personnel fully adhere to the spirit and intent of 18 U.S.C. 1913, which prohibits such advocacy. The purpose of presenting these options is to inform the public of the basic differences between potential administrative mechanisms that could achieve the long-term policy goal, to solicit comments from interested parties, and to present an array of other implementation options that are beyond the LTMS agencies' existing authorities.

7.1 ACTIONS TO BE TAKEN BY PARTICIPATING AGENCIES BASED ON THIS EIS/EIR

There are a number of actions that the LTMS agencies will take following the finalization of this document. First, the agencies will consider the public comments submitted pertaining to this Final EIS/EIR. Following any agency action in regard to these submittals, the COE and EPA will sign a Record of Decision (ROD) completing the federal requirements for finalizing the EIS process. The state lead agency, the State Water Resources Control Board, will also certify the final document pursuant to the requirements of the California Environmental Quality Act.

Following the Final EIS/EIR certification/ROD signing process, the LTMS agencies will jointly complete the Management Plan for the implementation of the LTMS selected preferred alternative. At the same time that the Management Plan is being completed, the agencies will be individually taking the following steps:

- EPA: Designate a permanent allowable disposal volume limit for the San Francisco Deep Ocean Disposal Site (SF-DODS);

- BCDC: Revise the Bay Plan and associated regulations to incorporate new policies pertaining to dredging activities; continue to issue a Coastal Zone Management (CZM) consistency determination for the COE's Maintenance Dredging using the findings in this EIS/EIR;

- SFBRWQCB: Revise the Basin Plan to incorporate new dredging policies and continue to issue Water Quality Certifications (under Section 401 of the Clean Water Act) for dredging projects using the findings in this EIS/EIR;

- COE: Confirm or revise Dredged Material Management Plans for existing maintenance projects in San Francisco Bay; perform NEPA reviews as needed, including supplementing the Final Composite EIS for Maintenance Dredging as necessary, using the findings in this EIS/EIR; and

- SWRCB: Revise statewide policies as appropriate to support the selected alternative.

7.1.1 Improved Sediment Evaluation and Testing Procedures

The LTMS agencies will take a variety of steps, both in the near term following completion of the EIS/EIR and continuously throughout the 50-year LTMS planning period, to institute scientific and regulatory improvements in sediment testing, site management, and monitoring.

Since the Draft EIS/EIR was published, the EPA and COE have adopted the Inland Testing Manual (ITM) for nationwide use. The LTMS agencies are publishing initial local guidance for using the ITM in the San Francisco Bay Area. That initial guidance will remain in effect until supplemented by the Regional Implementation Manual (RIM). The RIM will be published under a comprehensive LTMS Management Plan. It will include the current testing and evaluation guidance for all placement environments including detailed consolidated guidance on sediment testing under the ITM as well as the ocean dumping manual (Green Book). The RIM is expected to be a loose-leaf document that can be easily updated as new sediment evaluation approaches are developed (such as appropriate chronic toxicity tests, or numeric sediment quality criteria or objectives), or other regulatory or scientific advancements occur. For example, the proposed standardized LTMS testing system for NUAD-class dredged materials (described in section 3.2.5.2), when instituted through the Management Plan, would be included in the RIM, along with testing procedures for aquatic disposal at in-Bay and ocean sites.

In addition to instituting the standardized NUAD testing requirements, the LTMS agencies will continue to work with individual landfills, the Integrated Waste Management Board, and other agencies as appropriate, to get standardized NUAD testing requirements formally adopted as adequate and appropriate for dredged material disposal at landfills.

Also beginning in the near term, the LTMS agencies will work to systematically compile sediment quality data for individual dredging projects to help identify the appropriate level of future sediment testing. Data from previous dredging activities, if of sufficient quality compared to current testing methods, can often be used in "Tier I" of the sediment evaluation process (described under Tiered Testing in section 3.2.5.1). This can streamline future testing requirements for projects whose sediment quality does not vary substantially over time. These data can also serve to identify early in the planning process any focused areas where more intensive testing may be needed and reduce the need for expensive and time-consuming retesting.

Over a somewhat longer timeframe, the LTMS agencies will continue development work on numeric sediment quality criteria (federal) and objectives (state). As these become adopted, they will be incorporated into future versions of the RIM and Management Plan as appropriate. Numeric sediment quality criteria and objectives and other numeric chemical screening values that may be developed have the potential to streamline sediment testing needs by reducing the degree to which comprehensive toxicity testing (bioassays) need to be conducted on individual sediment samples.

7.1.2 Improved Site Management and Monitoring Procedures

As described in section 5.1.1.2, every disposal or reuse site for dredged material will be operated under a site management and monitoring plan. Depending on the specific site, the details of and timeframe for monitoring will vary. However, all site management and monitoring plans would include the ability to incorporate information obtained through previous monitoring at the site, with the possibility of modifying their management and monitoring parameters based on that information. Monitoring requirements at a particular site may be reduced as site performance is confirmed, or increased if aspects of site performance indicate cause for concern. In all cases, the range of appropriate management actions, up to and including termination of continued site use, will be identified in the site-specific management and monitoring plans.

In addition to continuously re-evaluating disposal or reuse site performance, the agencies will periodically re-evaluate the need for dredging projects as described in section 5.1.1.3. For proposed new construction projects, alternatives will be evaluated in light of public input, as part of the standard environmental review process. This may include review under the Metropolitan Transportation Commission's Seaport planning process coordinated with BCDC. For ongoing

maintenance dredging of existing federal channels, the COE will perform NEPA reviews as needed including supplementing the Composite EIS for Maintenance Dredging. These reviews will include consideration of channel widths, depths, and configurations, and potential structural measures that could reduce the volume of dredging necessary to meet the navigational needs of each project.

7.1.3 Improved Regulatory Coordination

As noted in section 5.1.1.4, the LTMS agencies are committed to improved regulatory compliance. This has occurred in part by establishing a multi-agency Dredged Material Management Office (DMMO) which provides a single point of contact for potential dredging project proponents. The DMMO utilizes a simplified permit application form that covers the information required by each of the participating state and federal agencies. The DMMO format is used to coordinate a streamlined time-frame for permit and sediment quality analysis reviews by the participating agencies. The intent is to identify all agencies' information needs early in the permitting process, and to make the individual agencies' review processes more concurrent rather than sequential. In the future, the LTMS agencies may also move toward a single, joint state-federal permit. However, this is currently outside the agencies' authorities and would require additional statutory changes.

Public review and comment will remain an integral aspect of any future regulatory process for dredging projects. All existing public input opportunities would remain under the coordinated DMMO that the LTMS agencies propose to establish in the short term. Although a single permit application is used, each of the individual agency actions that are required today would still be needed before dredging and disposal activities could begin. All of these actions include their own public review and comment processes, as described in section 4.8. If, however, statutory changes allow future development of a single permit, new procedures that guarantee adequate opportunity for public input would have to be included in the process.

Perhaps the most important aspect of improving the regulatory system, both in the short term and over time, will be the establishment of available and affordable multi-user rehandling and beneficial reuse options for the region. New, appropriately designed disposal and reuse alternatives will maximize flexibility for dredging interests, minimize regulatory complications, ensure adequate environmental protection, and provide for the environmental benefits of dredged material reuse.

7.1.4 Responding to a Changing Environment

This EIS/EIR has been developed using the best available scientific information generated under both the LTMS program and by numerous researchers and agency staff. The LTMS has also developed a full characterization of the technical, operational, regulatory, and financial characteristics of dredging and material disposal in the region. This information was also used to develop well-grounded projections of dredging needs, material volumes, and the suitability of sediment for a variety of uses. The quality of this information and the extent to which the preferred approach actually achieves the desired balance among environmental benefits, environmental risk, and economic costs depends on updating the management of dredged material disposal to keep pace with future changes.

The participating agencies are committed to responding to the changing environment and will periodically review and modify LTMS policies and implementation measures. There are several issues that staff expect will be the subject of review in the near term. First, there will be a review of sediment testing requirements based on a careful examination of project history and new approaches to classifying sediment. As the LTMS Management Plan is formulated, the COE must provide economic justification when major new investments or other significant increases in maintenance cost are identified. Where projects or portions of projects are not justified for continued maintenance, a separate management plan for the project shall provide appropriate adjustments in the maintenance program, including deferral of dredging, minimization of project dredging dimensions, or the orderly curtailment of maintenance.

It is expected that the agencies will be involved in the development and approval of new disposal and reuse sites. As monitoring data from restoration projects become available, the agencies expect to review the projections of regional environmental benefits and habitat goals. Finally, as new species are listed as threatened or endangered at the state or federal level, the agencies will update LTMS policies as needed to ensure that material disposal does not adversely affect such species.

There are a number of actions that were not considered in the development of this policy EIS/EIR that the participating agencies may take in the future. These include consideration of new in-Bay sites in addition to acquiring and operating rehandling facilities or confined disposal facilities. Demonstration of

consistency with LTMS policies and a complete, separate state and federal environmental review would be required for each project.

7.2 OPTIONS FOR ACHIEVING THE LONG-TERM DESIRED DREDGED MATERIAL DISTRIBUTION: LIMITING AND ALLOCATING AQUATIC DISPOSAL

The previous section described a number of specific actions that the LTMS agencies will take immediately following the completion of this EIS/EIR. Section 6.5 also describes the initial transition to the preferred alternative based on the LTMS agencies' existing authorities. However, none of the proposed actions specifically addresses the question of how LTMS will achieve the long-term goal for the UWR environment that is part of the preferred approach.

Several of the LTMS's upland technical studies have triggered additional efforts and analyses regarding potential upland/reuse sites in the Bay area. For instance, the U.S. Army Corps of Engineers — San Francisco District prepared a reconnaissance report in 1995 regarding the establishment of rehandling facilities at several sites, which were determined to have significant potential through the LTMS, including the Leonard Ranch site in Sonoma County as well as two other alternative locations, the Praxis/Pacheco in Contra Costa County and the Cargill Salt crystallizer ponds in Napa County (LTMS 1995d). The COE's analysis assumed that use of the rehandling facilities would be only for dredged material that was suitable for unconfined aquatic disposal and that dried material would be taken only by existing end-users (markets). The COE's investigation concluded that further feasibility studies not be prepared for the Leonard Ranch site due to economic considerations.

The difference in the outcome of the COE and LTMS studies was likely due to the assumptions used by the COE including the restriction of rehandling facilities to "suitable" rather than "unsuitable" material only and to "existing" rather than "potential" markets only. Despite its conclusion, the COE recommended that rehandling facilities be developed and further site studies be undertaken in order to reduce the volume of material disposed at in-Bay sites and increase the volume of material available for beneficial use at upland sites.

One study currently underway is examining the feasibility of restoring tidal and seasonal wetland habitat at the former Hamilton Army Airfield in Marin County, which is currently in the base closure process. The potential area for wetland restoration at this site also includes the adjacent properties including the decommissioned Hamilton Antenna Field, which will be available for transfer once site remediation is complete, and the Bel Marin Keys Unit V site, whose current owners are interested in selling the property. This study will determine, among other things, whether the 2,700-acre site would best be restored by using dredged material or by relying on natural sedimentation to raise existing elevations to facilitate marsh development. The LTMS studies found that the reuse potential for wetland restoration was high at the Hamilton Army Airfield and adjacent properties, and that up to 30 mcy of dredged material could be accommodated at the combined project site (LTMS 1995d).

The Hamilton feasibility study is being managed by the state Coastal Conservancy and the San Francisco Bay Conservation and Development Commission in close coordination with the City of Novato and the Hamilton Restoration Group, which is comprised of federal, state, and local government representatives, as well as technical experts, non-profit organizations, and interested citizens. The restored site would provide habitat for endangered and special status species, waterfowl using the Pacific flyway, anadromous and resident fish species, flood protection to adjacent properties, and water quality improvement functions. The technical studies needed to develop a conceptual wetland restoration plan and assess the project's feasibility were completed in April 1998. Presently, the final restoration plan is being developed and the CEQA/NEPA process for the project has been initiated. It is presently anticipated that the site will be ready for restoration near the end of 1999, and, if determined feasible, ready to accept dredged material starting in January 2000.

Other efforts currently underway to implement upland/reuse projects include the Montezuma Wetlands and rehandling facility project in Solano County. Approximately 17 mcy of dredged material could be accommodated over time at the wetland restoration portion of the project, while up to 2.0 mcy of material could be processed annually at the rehandling facility. The Final EIR/EIS for the project is currently being finalized and is scheduled for completion in August 1998. Subsequently, the permitting process would start; it is presently scheduled to be completed in early 1999. In the event environmental review and permitting occur as presently scheduled, the project will likely commence sometime in mid-1999.

Another effort involves the existing dredged material disposal ponds at the former Mare Island naval shipyard in Solano County, whose reuse potential was determined high (LTMS 1995d). With the closure of the shipyard, the ponds are no longer being used exclusively by the U.S. Navy, and could provide capacity for over 1.0 mcy of material per drying cycle if used as a rehandling facility, or for over 10.0 mcy of material if used as a confined disposal facility. In September 1997, the City of Vallejo completed an evaluation of the ponds as a multi-user rehandling and/or confined disposal facility, and concluded that further evaluation should be conducted regarding their potential as a facility for dredged material that is unsuitable for unconfined aquatic disposal.

7.3 FINANCING OPTIONS TO PROMOTE BENEFICIAL REUSE

It is a national COE policy to select the "least-cost, environmentally acceptable" alternative for federal maintenance projects (federal standard) and the "national economic development" (NED) plan (described in Chapter 4), which maximizes net economic development benefits in the selection and authorization of new work projects. The "federal standard" and NED have resulted in disposal of most material at in-Bay sites.

Two conditions, working in concert, effectively promote material placement at in-Bay sites. The first is a disparity between federal funding policies for open water sites (for which site development and monitoring costs are largely borne by the federal government) and beneficial reuse and confined disposal (for which similar costs are largely non-federal). This creates a strong economic incentive for a non-federal sponsor to urge the use of in-Bay disposal sites, which are seemingly "free" to the non-federal sponsor, especially if suitable upland and nearshore sites are not already owned by the non-federal sponsor. The second condition is the lack of available regional upland or nearshore sites that would allow consideration of practical alternate placement options for each project. There is currently no authority for any of the LTMS agencies to acquire and manage multi-user upland or wetland reuse sites. If such sites were available, the added costs for acquisition, development, and management may not be economically prohibitive to prospective individual users. In combination, these conditions serve to focus disposal on existing in-Bay and ocean sites, create a disincentive for the beneficial reuse of material, and may potentially result in local economic inefficiencies.

To fully implement any of the alternatives that include reducing in-Bay disposal, increased beneficial reuse must also be made available and financed. Some of these actions are beyond the control of the LTMS agencies and are mentioned here as options that could satisfy the regional need to make available dredged material placement sites other than the existing aquatic sites. Changes to existing institutional policies may also need to be adopted to accommodate the beneficial reuse of dredged material associated with maritime projects in the region. In addition, there is also a need to provide for use and/or disposal of material that is unacceptable for unconfined aquatic disposal. The following sections describe alternate options that could fully implement the objectives and goals of the LTMS through an integrated regional dredged material management system.

7.3.1 Federal Financing

There are several existing options for financing the federal share of project costs. These are summarized below from *Financial Analysis of Implementation Approaches for the Long-Term Management Strategy, Task 3 Report: Alternative Financing Methods and Institutional Issues* (LTMS 1995b; see also Appendix Q). The funding described below could be used for individual projects or the development of multi-user disposal sites. Where applicable, changes in funding policies provided by WRDA '96 have been noted. For further detain on WRDA '96 provisions, see section 4.8.

7.3.1.1 Develop More Dredging-Related Wetlands Restoration Projects

New regulations issued by the COE in draft form in April 1995 (EC 1105-2-209) encourage commanders at the division and district level to implement programs using the COE's new authority in Section 204 of the Water Resources Development Act (WRDA) of 1992. This authority allows the COE to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands, collectively referred to as "ecosystem restoration projects." A national appropriations limit of $15 million per year has been approved. These funds would also be subject to actual annual appropriations by Congress and availability. Requests for such programmatic funds are submitted nationwide. WRDA '96 provisions have modified the cost sharing of O&M activities to be the cost sharing of the general navigation feature, including design and construction of UWR sites.

An ecosystem restoration project with incremental costs in excess of the base plan can be approved by the COE for a navigation project, provided the monetary and non-monetary benefits of the ecosystem restoration justify the added cost. If such a project is recommended, the project can receive up to 75 percent federal financing of construction costs. The non-federal sponsor must also agree to pay 100 percent of the future costs for the operation, maintenance, replacement, or rehabilitation of the ecosystem restoration project.

7.3.1.2 Develop Projects that Use Funds Designed to Restore or Enhance Habitat Associated with Already-Constructed Navigational Projects

The COE's authority in Section 1135 of WRDA 1986 could be used for this financing option. This section now provides up to $25 million per year nationally, limited to not more than $5 million per project, to modify existing water resource projects to improve the quality of the environment in the public interest. A non-federal, cost-sharing partner must contribute 25 percent of the restoration project costs, which may include required land costs. Normally, the non-federal sponsor would be responsible for 100 percent of operation, maintenance, repair, and replacement costs. Funds are subject to actual annual appropriations and other nationwide requests. WRDA '96 provisions have modified the cost sharing of O&M activities to be the cost sharing of the general navigation feature, including design and construction of UWR sites.

7.3.1.3 Use Exceptions Presently Allowed to the NED Plan Process to Approve More Projects with Upland Disposal and Beneficial Reuse Features

Although outside of the regional COE decisionmaking authority, the Assistant Secretary of the Army for Civil Works may grant an exception to recommending the NED plan when there are overriding reasons such as provisions of significant environmental outputs (ER 1105-2-100 paragraph 5-16c). The Assistant Secretary of the Army has approved several such exceptions. Environmental restoration is presently a COE budget priority and, therefore, an acceptable reason for an exception. Such exceptions, made where regional environmental restoration could dictate, would allow for 75 percent federal financing of additional disposal costs for an environmentally beneficial disposal option at an upland site for congressionally authorized projects. Although it may be possible for a District Engineer to recommend a deviation, such approvals are not routine, nor are such deviations intended to circumvent the statutory cost-sharing requirements. WRDA '96 provides that, rather than being treated as an exception, cost sharing for environmentally beneficial reuse of dredged material and design and construction of UWR sites now shall be treated as a general navigation feature and cost shared accordingly.

Another exception to adopting the NED plan that has been utilized is the development of a locally preferred plan. In the case where the locally preferred plan is more costly than the NED plan, and the increased development is not sufficient to warrant full federal participation, the local sponsor would be required to pay the difference in cost between the NED plan and the locally preferred plan. Federal participation in the more costly locally preferred plan is limited by the federal share of the federally supportable plan, one that maximizes net economic development benefits while satisfying environmental requirements. In such cases where a locally preferred plan is recommended, the plan is usually approved with the level of federal participation based on the NED plan.

7.3.1.4 Expand Use of the Harbor Maintenance Trust Fund

Although beyond the authority of the regional offices of the COE, expansion of the use of the Harbor Maintenance Trust Fund through a broadening of what the COE defines as "operations and maintenance" work could be considered. The WRDA of 1986 gives the COE the authority to identify eligible operation and maintenance costs that are part of ". . . all operations, maintenance, repair and rehabilitation, including maintenance dredging reasonably necessary to maintain . . . a harbor; but exclude: provision of land, easements, rights-of-way, dredged material disposal areas, or performing relocation." Some of the needs identified with operations and maintenance work regionally include, for example, construction of diking for confined aquatic disposal, site preparation of planned upland disposal sites, added costs of transporting and offloading of "unsuitable" materials at upland sites, and site monitoring.

7.3.1.5 Identify Beneficial Reuse Projects Appropriate for Supplemental Environmental Projects Undertaken through Enforcement Actions

EPA and the COE take enforcement action against entities that violate federal water quality or ocean dumping laws and regulations. In some cases, violators are given the option of sponsoring "supplemental

environmental projects" in exchange for a monetary reduction in fines. The first step in funding individual or multi-user beneficial reuse projects with such funds is to identify appropriate projects within the region and to make the list available to parties in enforcement cases.

7.3.1.6 Wetland Mitigation Banking

Mitigation Banking is the restoration, creation, enhancement and, in some exceptional cases, the preservation of wetlands or other aquatic resources expressly for the purpose of providing compensatory mitigation in advance of authorized adverse impacts to similar resources. The objective of a mitigation bank is to provide for the replacement of chemical, physical, and biological functions of (or equivalent to) wetlands or other aquatic resources that are lost as a result of authorized impacts. Using appropriate methods, the newly established functions are qualified as mitigation "credits" that are available for use by the bank sponsor or other parties to compensate in advance for adverse impacts ("debits"). The existence of appropriate mitigation banks can thus speed the permitting process. Mitigation banks can also provide more certainty that adverse impacts will be adequately compensated, as well as a greater degree of environmental benefit, since the new habitat ("credits") must be established in advance of adverse impacts ("debits").

National Mitigation Banking Guidance has been developed jointly by the COE, EPA, the Department of Agriculture, the U.S. Fish and Wildlife Service, and the Department of Commerce. The Mitigation Banking Guidance document, which became effective on December 28, 1995, sets forth the conditions under which the agencies will consider and approve mitigation banks. In the San Francisco Bay Area, mitigation banks could potentially be proposed and constructed by ports and other dredging interests, and used as mitigation for future approved dredging or filling projects. The LTMS agencies would follow the National Mitigation Banking document, and supplemental technical documents developed subsequently, as guidance in the consideration of any such proposals.

7.3.2 State Financing Options

7.3.2.1 Mitigation Funds

One option for making state funds available to promote beneficial reuse is through the use of mitigation funds. Currently, state agencies collect fines from violators of environmental laws and regulations. The Regional Board, for example, deposits monies from fines into the statewide Cleanup and Abatement account. The account is then used to fund restoration projects at high priority sites such as abandoned mines around the state. Within the San Francisco Bay region, entities that are responsible for violating water quality laws and regulations are given the option of identifying supplemental environmental projects in exchange for a reduction in the amount of a monetary penalty. Usually, these supplemental projects restore or enhance wildlife or aquatic habitat near where the violation occurred, but can also include pollution prevention and reduction work, environmental auditing, and public awareness (SFBRWQCB, Enforcement Policy, February 1994). The State Lands Commission and BCDC have also established similar funding systems.

Funds to support the beneficial reuse of dredged material could be made available through application to the Cleanup and Abatement funding process, or by listing specific reuse projects as acceptable supplemental environmental projects that dischargers may choose when considering this option under the Regional Board's Enforcement Policy. Another option would be to establish a special fund or new joint powers district exclusively for dredging-related fines and beneficial reuse projects.

Funds from fines are used to make dredging-related loans or grants. Financing could be used for capital costs to acquire and develop upland disposal sites. Users could include ports, districts, and other public sector dredgers.

7.3.2.2 State Regional Dredging Trust

Through new legislation, the state could authorize the formation of a regional dredging trust to collect all dredging fees. These would replace dredging fees now collected or would authorize additional fees. The amounts collected would be used to cover regulatory costs and to fund a newly created trust that could make loans. Financing could be used for capital costs to acquire and develop upland disposal sites or as operating expenses for state-run rehandling or reuse facilities. Users could include state agencies, such as the California Coastal Conservancy, authorized to acquire upland sites. Public and private sector local dredgers would use such uplands sites to meet environmental requirements.

7.3.2.3 Allow Privately-Owned, Multi-User Disposal Sites to Receive Limited Financial Incentives

A regional dredging trust, formed as described above, allocates a portion of its loan funds for financing multi-user sites managed by private sector firms. Such multi-user sites could repay some or all of this financing by accepting agreed quantities of sediments at a zero or discounted tipping fee (explained in more detail in Chapter 4), using contract procedures issued by the regional dredging trust. Financing could be used for capital costs to acquire and develop upland disposal sites. Users of financing could include firms developing multi-user upland disposal sites.

7.3.2.4 Fund Staff Position to Identify Markets and Uses for Dredged Material During Project Planning Phase

At the current time, there are no staff resources from any of the LTMS agencies assigned specifically to the task of "brokering" dredged material and identifying a range of beneficial uses during the initial planning phases of each project. Allocating staff resources specifically for identifying construction and other upland projects needing fill material and organizing beneficial reuse early in the project planning phase would help maximize the environmental benefits of reuse and identify those cases when dredged sediments are marketable commodities. The same information could be used to identify beneficial reuse projects that could be matched with enforcement fines.

7.3.2.5 New State or Regional Tax

A new tax or assessment could be implemented at the state or regional level. This tax could be used to spread the costs of dredging and disposal over a wider economy than ports, marinas, etc. The revenue from this tax or assessment could be used to implement UWR projects and subsidize some or all of the cost differential between in-Bay disposal and disposal at the SF-DODS or UWR sites. At one extreme, the tax could be levied on all residents of the state or region, on the theory that everyone benefits from a healthy maritime economy. On the other extreme, the tax could be more narrowly focused on those sectors that benefit more directly from any given dredging project, such as shippers, boaters, etc. This approach could be modeled after the tax on outboard motors in Louisiana that is used to help fund wetland restoration efforts there.

7.3.3 State and Federal Financing Options

7.3.3.1 CALFED

The LTMS could coordinate with other state/federal programs that have overlapping interests and goals and that can provide sources of revenue to fund mutually beneficial projects. The Bay-Delta CALFED program is a perfect match with the LTMS. CALFED is providing extensive funding for projects that meet the program's goals. Dredged material can be used for habitat and/or levee projects pursuant to the CALFED program, thus providing benefits to both programs.

7.4 FACILITATING AN EFFICIENT REGIONAL DREDGING MANAGEMENT SYSTEM

Full implementation of the alternative approaches presented in this EIS/EIR will require the development of several different systems to ensure that the desired material placement distribution is attained. The Management Plan will address these implementation needs. At the same time, however, there are institutional barriers that currently limit the administrative tools that can be used to develop an effective implementation plan. The potential for changes described in this section may allow a greater degree of flexibility in designing an effective, efficient, and integrated dredged material management system.

7.4.1 Institutional Barriers Limiting the Flexibility of Regional Disposal Planning

This section first describes several institutional barriers that limit the flexibility of regional disposal management planning, then several alternate options that could address these barriers (LTMS 1995b). The institutional barriers described below have emerged during the regional LTMS process. They are also the subject of a discussion on national dredging policy (see Appendix D). The recent improvements provided by WRDA '96 in facilitating a more efficient dredging management system are noted in the following sections. Section 207 allows the Assistant Secretary of the Army to select disposal methods that are not the least cost option if incremental costs are reasonable in relation to the environmental benefit, including creation of wetlands and shoreline erosion control.

7.4.1.1 Developing Cost-Sharing Arrangements to Include All Local Beneficiaries Can Be Difficult

When a channel to an upstream port, such as the Port of Sacramento, is deepened, many small harbors along the route also benefit. It is difficult, however, to project the benefits to small harbors, and it may be impractical to obtain their agreement to provide some financing for the project. Additionally, beneficiaries of deepening projects often include foreign-owned ships. Designing a structure that allows for cost sharing among such a widely dispersed group of benefiting parties is difficult.

7.4.1.2 Federal Cost-Sharing Policies for Dredging Activities Favor Aquatic (in-Bay and Ocean) Disposal Methods

O&M dredging work is based on the "federal standard." This standard requires that the COE perform its maintenance dredging and disposal work in the least costly manner that is consistent with sound engineering principles and meets all applicable federal and state environmental standards. Current practice utilizes, for the most part, the least costly in-Bay site meeting environmental requirements.

For new construction work, the cost-sharing formulas are based on the approved NED Plan for the project. This would be the plan with the highest net economic benefit consistent with protecting the environment. In theory, it does not have to be the lowest cost plan, especially if the environmental benefits from using a beneficial reuse or upland disposal site are expressed in monetary terms or included in benefit-cost analysis in a way that increases the net economic benefit. However, in actual practice, the lower costs of available, in-Bay disposal sites appear to have a major influence on the selection of the NED Plan.

The use of an upland site requires the local sponsor to pay all the added costs for disposal at such a site, regardless of whether a deviation from the NED Plan is granted (see section 7.4.1.3 for a more complete discussion of this option). This provision is specified in the 1986 WRDA. The transportation costs associated with using a site provided by the local sponsor, however, would be considered a project cost subject to federal-local sponsor sharing. In addition, the local sponsor must provide the site itself, paying for the costs for land, easements, rights-of-way, and utility relocations. WRDA '96 has now provided for cost sharing for this purpose. Section 217 allows for the design and use of excess capacity in authorized dredged material disposal facilities at the request and expense of a non-federal interest.

7.4.1.3 Absence of Programs for Federal and State Government Participation in the Acquisition and Development of Disposal Sites for "Unsuitable" Materials

Federal and state regulation changes in recent years have increased significantly the quantities of dredged sediments that are considered "unsuitable" for unconfined aquatic disposal. Local cost-sharing sponsors for federal projects, such as the Port of Oakland, must now provide a disposal site and must pay all the added cost of disposing of such sediments. Although the increased need for such disposal sites arose from federal and state regulatory actions to protect environmental quality and prevent further environmental degradation, no government programs exist to help local sponsors finance the acquisition of land or the development costs needed to create disposal sites for "unsuitable" sediments.

7.4.1.4 Prerequisites to Qualify for Federal Financing of New Project Dredging Can Be Costly

Federal law requires ports to pay 50 percent of the cost of pre-authorization feasibility studies and planning work for a dredging program in a lump-sum payment to the COE. This requirement, which can be relatively costly, has caused some ports to fund dredging costs without federal assistance on a pay-as-you-go basis.

7.4.1.5 Revenues Available to Disposal Sites are Limited

The Sonoma Baylands project sponsors initially had hoped to charge a tipping fee for accepting dredged materials from the Port of Oakland's deepening project. The project sponsors eventually decided against charging a tipping fee because of the additional cost burden that the tipping fees would impose on the Port of Oakland under the COE's cost-sharing requirements. Without tipping fees or other income for debt repayment, a disposal site or habitat restoration sponsor will be unable to raise sufficient private sector financing for long-term needs such as monitoring, site management, or future expansion.

7.4.1.6 Absence of Governmental Funds for Site Monitoring of Beneficial Uses

After material from dredging projects has been deposited at a beneficial reuse site, the dredging project

is considered complete. The financial burden of continued monitoring and management of the site rests with the owner and users. No federal or state cost-sharing funds are usually available for such site monitoring costs. An exception to this practice was approved by Congress specifically for the Sonoma Baylands project; however, monitoring costs typically must be borne by local sponsors or by other public agencies. No long-term mechanisms are available for monitoring; current funding is on an ad hoc basis. WRDA '96 has now provided for cost sharing for this purpose. Section 201 states that land-based and aquatic dredged material disposal facilities for construction and O&M will now be considered general navigation features and cost shared in accordance with Title I of WRDA '86.

7.4.1.7 Federal Guidelines for Carrying Out Section 404(b)(1) of the Clean Water Act Can Be a Barrier to Wetland Restoration Projects in Sensitive Jurisdictional Wetland Areas

The existing 404(b)(1) guidelines were specifically designed to avoid loss of wetlands to development and to establish safeguards when development must occur. These guidelines require a project sponsor to analyze alternative sites and identify the one where development would cause the least adverse impact. Recent experience indicates that the same guidelines that require an alternatives analysis have hindered wetland enhancement and restoration projects. The main barrier is that the current guidelines do not effectively distinguish between development and environmental restoration projects, and can require extensive analysis of alternate sites by restoration project sponsors.

7.4.2 Options for Facilitating Effective and Efficient Disposal Planning

There are many actions that could remove the institutional barriers to efficient dredged material planning and full implementation of the policies identified in this EIS/EIR. Some of these actions are within the existing authorities of the LTMS agencies, but many others lie outside those authorities. This section presents different options that could remove or reduce the barriers listed in section 7.4.1; specific options that could be taken are matched with the agency or governmental body that has the authority to take those actions. Similar options are the subject of discussion at the national level (see Appendix D). Changes in federal legislation including WRDA '96 (see section 4.8) now provide the capability for increased federal participation in alternatives to in-Bay disposal scenarios. The cost of upland disposal site development and maintenance may now be cost shared or 100 percent federal funded using the Harbor Maintenance Trust Fund.

7.4.2.1 Change Federal Cost-Sharing Formulas

Many of the barriers listed in section 7.4.1 identify different elements of the federal cost-sharing requirements that, if modified by Congress, could facilitate the use of dredged material in beneficial reuse projects. These options include allowing new project exemptions from the NED least-cost alternative requirements when EPA determines that alternative disposal sites are required to meet environmental standards. For maintenance dredging projects eligible for federal cost-sharing, this would allow 100 percent federal funding for NED-exempt projects, including federal funds for the costs of disposing of "unsuitable" dredged materials. Cost-sharing policies also could be changed to allow 75 percent federal cost-sharing for development of confined aquatic and upland disposal sites, such as was provided for the Sonoma Baylands project. Finally, cost-sharing policies could also be changed to reflect the cost of site monitoring and maintenance following material disposal (including consideration of that portion of tipping fees necessary to cover such ongoing costs).

7.4.2.2 Authorize an Agency to Acquire and Oversee Upland Disposal Sites

Proposed changes to existing federal legislation have recommended that a state agency, such as the California Coastal Conservancy, be allowed to acquire and manage land for upland disposal sites of dredged material. Changes in state law would also be needed. Using funds in the regional dredging trust proposed below, the management agency would invest in development costs for its sites. The management agency also would have authority to enter into public-private partnerships to obtain private financing to develop sites and to obtain site management and monitoring services.

7.4.2.3 Replace the Existing State Lands Dredging Fee, the BCDC Dredging Fee, and the SFBRWQCB Permit Fee with a Single Regional Dredging Fee

This option requires a change in state law. A fee would be paid when dredging applications are submitted to the "single stop" dredging permit office now on a pilot basis. The dredging fee would be set at a level to cover the costs for permit processing and provide funds to

invest in upland and beneficial reuse sites. The fee should be high enough to provide a significant revenue stream into the proposed regional dredging trust for expanding the use of upland sites.

7.4.2.4 Authorize the Creation of a State Regional Dredging Trust

Such a trust could be created through new legislation. The dredging fees collected from dredgers, except for amounts needed to fund regulatory agency costs, would be deposited in a newly created trust. The amounts collected from year to year would vary with the level of dredging activity. The funds in the trust would be reserved to finance acquisition and development of sites for upland disposal of "unsuitable" dredged sediments and the beneficial reuse of dredged sediments. Such funds could also be used for site monitoring. These funds could not be spent for other state government purposes.

7.4.2.5 Change Policies on the Use of the Harbor Maintenance Trust Fund

The harbor maintenance trust fund and the policies regarding its use are established by Congress. One option that would facilitate local policies would be for Congress to modify the policy so that the fund pays the federal 75 percent cost share for channel-deepening projects serving commercial navigation. WRDA '96 (see section 4.8) now provides for the use of the Harbor Maintenance Trust Fund in funding construction of confined disposal facilities for O&M projects. Section 601 provides that the Harbor Maintenance Trust Fund will be the source of the federal portion of funds for construction of dredged material disposal facilities for O&M.

7.4.2.6 Streamline Federal Requirements under 404(b)(1) Guidelines for Restoration Projects

There are several options for streamlining the 404(b)(1) guidelines to support environmental restoration projects. At the local level, the LTMS agencies could commit to a streamlined process for restoration projects that meet certain criteria. A second option would be for the COE to issue a national regulatory guidance letter that spells out how restoration projects using dredged material would be reviewed under the 404(b)(1) guidelines. A third option would be for the COE and EPA to amend federal regulations and add a streamlined process for restoration projects. A fourth option would be for Congress to amend the Clean Water Act.