

Task 3 Report: Alternative Financing Mechanisms and Institutional Issues

This task report describes available financing methods and institutional issues related to funding dredging and dredged material management in the San Francisco Bay region. It describes existing cost-sharing policies; available financing methods, including the use of fees; and institutional issues that serve as barriers to financing the added costs of disposal at beneficial reuse and upland sites. Case studies of specific projects in the San Francisco Bay Area are also presented.

OVERVIEW OF LEGISLATIVE AND REGULATORY HISTORY

The U.S. Army Corps of Engineers' (Corps') responsibilities include dredging congressionally approved navigation projects ("federal projects" or "federal channels"); maintaining such federal channels; and regulating, through the permit process, the dredging work of other entities.

The federal legislation that set forth the basis on which federal funding will be available for congressionally approved navigation projects is Public Law 99-662, which is discussed below. This law requires that "non-federal interests" (referred to in this report as a "non-federal sponsor" or "local sponsor"), must pay stated percentages of different project costs to obtain federal funding. For such projects, the Corps takes responsibility for doing the work.

The U.S. Navy obtains permits for dredging projects from the Corps but is responsible for doing its own work.

Federal Dredging Projects

The Corps' involvement in dredging congressionally approved navigation improvements dates back to 1824. In the Bay Area, one of the Corps' first federal channel projects, improvements to Oakland Harbor, began in 1874.

Over the years, local ports and shippers have lobbied their congressional representatives to support local dredging projects and other local navigation improvements. When Congress decides to approve a project, the first approval generally funds a Corps reconnaissance study of the project. Depending on the outcome of this study, Congress might then approve funding a feasibility study. The local sponsor must pay 50% of the cost for any feasibility study. Based on the completed

feasibility study, the Corps might recommend that Congress approve federal funding to construct the project.

Before 1986, local sponsors usually were required to provide lands, easements, and rights-of-way for a project as their share of the cost. The federal government generally paid the remaining costs, including the costs of dredging and disposal. However, funding policies sometimes varied. The Corps designated disposal sites for dredging projects, typically designating open water disposal sites. For years, the Corps' preferred disposal site for most San Francisco Bay region projects has been one near Alcatraz Island in San Francisco Bay. It is Corps policy to accomplish the disposal of dredged material from new construction or maintenance dredging of navigation projects "in the least costly manner that is consistent with sound engineering practice and meeting all federal environmental standards". (Corps Regulation 1105-2-100, dated 20 March 1995).

For local dredging projects, the cost-benefit analysis has usually found that the low-cost Alcatraz disposal site is the least costly alternative.

Non-Federal Dredging Projects

Since the passage of the Rivers and Harbors Act in 1899, the Corps has had the authority to regulate dredging and other work in navigable waters. Local sponsors of non-federal dredging projects must obtain dredging permits from the Corps for **their work**, and they generally receive no federal financing. In the Bay Area, such dredgers include ports, major oil companies such as Chevron and Shell Oil, other shipping firms, fishing industry facilities, homeowner associations, and recreational marinas.

A separate and distinct regulatory process exists for environmental approvals for non-federal dredging projects. The Corps and the U.S. Environmental Protection Agency (EPA) designate disposal sites for such projects and have allowed such dredgers to use in-bay disposal sites. Additional permits for such dredgers are processed by the Bay Conservation and Development Commission (BCDC) under a separate legislative authority. Also, under separate authority, the Regional Water Quality Control Board (RWQCB) must certify that the dredged material disposal project meets water quality standards.

MAJOR LEGISLATION

Water Resources Development Act of 1986

After many years of discussion about cost-sharing, Congress reached a compromise among the various competing interests involved in navigation issues and enacted the Water Resources

Development Act of 1986 (WRDA 1986). This landmark piece of legislation set specific requirements for local sponsor cost-sharing, as discussed below.

Approved by Congress in 1986, this act, Public Law (PL) 99-662, introduced specific cost-sharing requirements for local sponsors of new construction projects. Based on the use and depth of the federal channel, the federal government can pay up to 75% of new construction costs.

Under this act, maintenance dredging of federal channels is federally funded. For channels used for commercial navigation, the act generally provides 100% federal funding of maintenance dredging. Some local sponsor cost-sharing is required for maintaining channels over 45 feet deep. Subchapter A of the Act also created the Harbor Maintenance Tax on shippers, which funds the Corps' operations and maintenance (O&M) costs, as discussed below.

For new construction projects, the act links federal cost-sharing percentages to the costs of the project's General Navigation Features (GNFs). The local sponsor must pay all project costs that do not qualify as GNF costs; must apply for and obtain all required permits; and must also provide all lands, easements, rights-of-way, utility relocations, and disposal sites.

GNFs are the structural components of harbors and waterways. As identified in Corps Engineering Regulation (ER) 1105-2-100, such features include locks, dams, and river training works; offshore, approach, and harbor entrance channels and their breakwaters or jetties; mainstem or main and branch channels that are waterways; basins, areas, or widened channels for vessel maneuvering, turning, passing, anchoring, or mooring incidental to transit of locks or channels; bridges required by new or realigned channels; and ice control structures.

Water Resources Development Act of 1992

Approved by Congress in 1992, the Water Resources Development Act of 1992 (WRDA 1992), PL 102-580, included specific congressional authorizations affecting dredged material management both nationally and in the San Francisco Bay Area. The following are among its many provisions:

- It authorized the Sonoma Baylands project, a demonstration project for wetlands restoration using dredged material, and approved the cost-sharing arrangement discussed later in this report.
- In Section 202, it increased to \$25 million the funds previously available under Section 1135 of WRDA 1986. Section 1135 provides 75% federal cost-sharing for modifications to projects already constructed to improve the environment in the public interest. Individual Section 1135 projects cannot exceed \$5 million without the approval of Congress.

- In Section 204, it gave the Corps a general program authority to undertake environmental projects, such as habitat creation and wetlands restoration, on a national basis. Such environmental projects must be done in connection with disposal of dredged materials from the construction, operation, or maintenance of an authorized project. The Corps was authorized to spend up to \$15 million per year nationally on such projects, paying 75% of the added cost of beneficial reuse.
- It authorized a study of the need for changing federal law, policies, and cost-sharing of dredged material disposal areas for harbor maintenance.
- It amended the law dealing with ocean disposal of dredged material to give the EPA the lead responsibility for managing ocean disposal sites.

Environmental Laws and Regulations

In recent decades, the growing body of environmental legislation has significantly raised the environmental standards that affect dredging and disposal activities. Testing techniques have also become more sophisticated and costly for dredgers. The number of federal and state agencies concerned with dredging and disposal activities has grown substantially. Key legislation that has established the current framework of environmental regulations includes the following.

Clean Water Act

Section 404 of the Clean Water Act (CWA) authorizes the Corps to regulate discharges of dredged or fill material in waters of the United States through a permit process. Guidelines for evaluating proposed discharge actions are provided in Section 404(b)(1) of the CWA. EPA, which can veto a permit under Section 404(c) of the CWA, maintains general environmental oversight. In the Bay Area, EPA now develops guidelines and criteria that the Corps uses to evaluate the water quality impacts at dredged material disposal sites of a proposed dredging project.

Federal law delegates management of water quality standards to the states. Section 401 of the CWA requires dredgers of both federal and non-federal projects to seek water quality certification from the State of California for their dredging projects. The San Francisco Bay RWQCB issues Section 401 certificates.

In 1990, the San Francisco Bay RWQCB issued more stringent water quality standards for aquatic disposal of dredged materials. In the late-1980s, San Francisco Bay RWQCB established volume limits on the quantities of dredged materials that could be approved for in-bay disposal.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) provides for the comprehensive management of coastal resources. The act covers all federal activities, including private activities under federal permits and licenses and federal financial assistance to local government. Under the CZMA, federal agencies are required to be consistent to the maximum extent practicable with environmental standards set by state coastal zone management agencies, including BCDC and the California Coastal Commission. BCDC has policies that dredged material should be disposed in-bay only if there are no feasible alternatives. The policies also state that dredged material should be used as a resource whenever possible.

Endangered Species Act

The federal Endangered Species Act (ESA) established that all federal departments and agencies must ensure that the activities they fund, authorize, or carry out do not jeopardize the continued existence of threatened or endangered species or adversely affect or destroy designated critical habitat. The act requires the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) to formally evaluate proposals for federal action, including the issuance of permits for port dredging and dredged material disposal, that may affect species listed as threatened or endangered.

Fish and Wildlife Coordination Act

Under the Fish and Wildlife Coordination Act, federal agencies proposing actions, including the issuance of permits that will affect any body of water, must consult with USFWS, NMFS, and the state's fish and wildlife management agency. The Corps is required to give full consideration to the views of these agencies, and to the views of the public, before making permit decisions.

Marine Protection, Research, and Sanctuary Act

The Marine Protection, Research, and Sanctuary Act, also known as the Ocean Dumping Act, authorizes the Corps to issue permits allowing the transportation of dredged material for the purpose of ocean dumping. The act requires the Corps to use EPA-developed environmental impact criteria in its permit decisions. It also guides Corps decisions concerning issuance of permits (subject to EPA review and concurrence) and requires the Corps to use EPA-designated disposal sites to the maximum extent feasible.

National Environmental Policy Act

The National Environmental Policy Act is the national charter for the protection of the environment. It requires a full consideration of the environmental consequences of major federal

actions. It requires the preparation of environmental impact statements or environmental assessments to provide government agencies and the public an avenue to review and comment on the environmental impact of proposed federal projects.

Other Regulatory Agencies

Other agencies are also involved in decisions affecting disposal of dredged materials. At the federal level, this includes the National Oceanic and Atmospheric Administration of the Department of Commerce, which oversees the NMFS; the Maritime Administration in the Department of Transportation, which is empowered under the Merchant Marine Act of 1920 to investigate matters that promote the use of ports by vessels, including improvements to ports. State agencies involved include the California Environmental Protection Agency, BCDC, the San Francisco RWQCB, SWRCB, the California Department of Fish and Game, the California Coastal Commission, and the State Lands Commission.

Impact of Regulatory Trends

As a result of a growing awareness of physical capacity constraints at the Alcatraz site and the tightening of water quality standards, the quantities of dredged materials that can be deposited at Alcatraz or other in-bay sites have been significantly reduced. At the same time, the new environmental standards and testing techniques have greatly increased the quantities of dredged materials that were found "unsuitable" for open water disposal. Current estimates indicate that dredgers will need to dispose of about 6 million cubic yards per year over the next 50 years. Of this amount, as much as 20%, or 1.2 million cubic yards per year, may be considered unsuitable for unconfined, open water disposal.

COST-SHARING POLICIES

Dredging and disposal costs for federal channels are shared by the federal government and local non-federal sponsors based on cost-sharing policies set forth in federal law (see discussions above on WRDA 1986 and WRDA 1992). Before recommending a navigation improvement, the Corps must determine that a federal interest in the project exists. The Corps does not recommend federal cost-sharing when the project improvements serve only a single private organization or individual.

New projects must meet the criteria of the National Economic Development Plan (NED Plan), which requires a comprehensive economic analysis. The analysis determines whether the project is likely to produce enough incremental net economic benefits as compared to not investing in the project. The average annual economic benefits must exceed the average annual cost of the resources

used by the project. The environmental quality effects are also considered, but generally in a qualitative manner.

Cost-sharing requirements vary depending on the type of project under consideration. Different policies apply depending on whether the proposed project represents maintenance dredging or new construction dredging and on whether the project is used for commercial navigation or recreation. Projects funded by the federal government are generally constructed by the Corps. The cost-sharing policies do not apply to work by the U.S. Navy, which does its own dredging. Cost-sharing also does not apply to dredging done by private companies such as Chevron and Shell Oil. The cost-sharing policies also depend on whether the disposal method is aquatic or upland. Since upland and beneficial reuse sites are not included in the definition of GNF presented in ER 1105-2-100, Section 4.6a(1) and thus are not normally part of the NED Plan alternative for which federal cost-sharing is available, the local sponsor typically must finance such items with its own funds.

All new construction studies and projects undertaken by the Corps are listed in the annual Energy and Water Development Appropriations bills that fund the work of the Corps.

Maintenance Dredging

The Corps provides 100% federal cost-sharing for O&M work on congressionally authorized commercial navigation channels and harbors with a depth of 45 feet or less. For depths of more than 45 feet, the federal government pays 50% of the O&M costs incurred above those that would have been incurred at a depth of 45 feet, as shown in Table 1 (Title 1 of WRDA 1986).

For maintenance dredging projects, federal funding is based on the dredged material disposal alternative that is the least costly alternative that is consistent with sound engineering practice and that meets environmental standards established by the CWA's Section 404(b)(1) evaluation process or ocean dumping criteria (33 CFR 335.7).

A lump sum amount for O&M projects is included in the Corps' annual budget request each year. The Corps performs and pays for the O&M work. The costs of each eligible O&M project are reported to the U.S. Treasury, which reimburses the Corps from the Harbor Maintenance Trust Fund for 100% of these costs. To provide cash for expenditures during the year, the U.S. Treasury advances monthly amounts from the Harbor Maintenance Trust Fund. Such advances are often based on the prior year's actual O&M expenditures (Koch pers. comm.). In fiscal year 1994, the San Francisco District's O&M expenditures were about \$20 million.

Table 1. Non-Federal (Local Sponsor) Share of Construction Costs for New and O&M Commercial Navigation Projects

Type of Costs	Depth of Dredging Project			
	Recreation Navigation (percent)	Up to 20 Feet (percent)	20-45 Feet (percent)	Over 45 Feet (percent)
New projects				
General Navigation Features	50%	10%	25%	50%
Additional amount due	0	10	10	10
Aids to navigation	0	0	0	0
Service facilities (e.g., berths)	100	100	100	100
Lands, easements, rights-of-way, relocations, and disposal	100	100	100	100
O&M projects				
General Navigation Features	100%	0%	0%	50%
Aids to navigation	0	0	0	0
Service facilities (e.g., berths)	100	100	100	100

New Construction Dredging

For new, congressionally authorized dredging projects, including the deepening of existing federal channels, the federal share of costs is based on channel use and depths (Table 1). Typically, 75% of the project's GNF costs are funded by the federal government, and the local non-federal sponsor pays the balance of the total construction cost. In addition, the local sponsor must pay an additional 10% of GNF costs in cash over a period not to exceed 30 years. Upland and beneficial reuse sites are not included in the definition of GNF presented in ER 1105-2-100, Section 4.6a(1) and thus are not normally part of the NED Plan alternative for which federal cost-sharing is available. Therefore, the local sponsor typically must finance such items with its own funds.

ER 11-5-2-100 also limits the federal cost-sharing for recreational projects.

Large projects require strong political support and are the subject of specific congressional actions. It typically takes years before Congress provides any funding for large projects. Once Congress is involved in a project, a reconnaissance study by the Corps is normally funded to

determine the extent of the federal interest, to estimate if the economic benefits are greater than the costs of the project, and to determine what should be included in a detailed feasibility study of the project. If, after the reconnaissance study, there is interest in proceeding with the project, the next step is a detailed, preauthorization feasibility study. Section 105 of WRDA 1986 requires the local sponsor to pay 50% of the cost of such a study before a proposed new dredging project is eligible for federal cost-sharing. As a result, ports that have declined to participate in a feasibility study, such as the Port of San Francisco, are now receiving no federal funding for deepening projects. Based on the results of the feasibility study, the project may be dropped, revised, or recommended by the Corps for congressional approval.

Acquisition of Disposal Sites

The local non-federal sponsor usually is required to pay all the costs for land, easements, rights-of-way, utility relocations and dredged material disposal areas. Thus, the local sponsor must pay the often substantial costs of acquiring and developing upland and beneficial reuse disposal sites and the cost of postconstruction monitoring and management of such disposal sites.

Cost-Sharing Procedures

As indicated above, WRDA 1986, Section 905(b), requires the Corps to pay 100% of the cost for reconnaissance studies. The local sponsor must pay 50% of the cost of preauthorization feasibility studies for the project. The cost for preconstruction engineering and design work is shared by the non-federal sponsors during the first year of construction, using the same cost-sharing percentage rate as for construction of GNF facilities.

The non-federal share of a new project's construction costs varies with the type of use and water depth. Projects used for commercial navigation require less cost-sharing from local sponsors than projects used for recreation navigation.

For commercial navigation channels with a depth between 21 feet and 45 feet, the local sponsor pays 25% of the GNF costs and the federal government 75%. For channels under 21 feet deep, the local sponsor pays 10% of the GNF costs and the federal government 90%. For channel depths greater than 45 feet, the local sponsor's cost share is 50% of the excess cost resulting from the depth being greater than 45 feet.

As a further cost-sharing requirement for new commercial navigation projects, Section 101 of WRDA 1986 requires the local sponsor to pay an amount equal to 10% of the GNF construction costs that are cost-shared on completion of construction or over time with interest, up to 30 years. Credit against this 10% contribution is allowed for the value of lands, easements, rights-of-way, utility relocations, and disposal areas (LERRD) provided by the project sponsor.

If the project use is for recreation navigation, the local sponsor must pay 50% of the project's GNF costs and 100% of the O&M costs (WRDA 1986, Sections 103c [4] and 103 [1] and ER 1105-2-100 of December 28, 1990).

Table 2 summarizes federal cost sharing available for various dredging and disposal activities.

Table 2. Non-Federal (Local Sponsor) Cost Share to Deepen Existing Channel to 42 Feet, by Type of Placement Environment Used

Type of Cost	In-Bay (percent)	Ocean (percent)	Upland (percent)
Site acquisition	0%	0%	100%
Site development	0	0	100
Dredging and disposal	25 + 10	25 + 10	25 + 10
Added costs of upland disposal	0	0	100
Monitoring	0	0	100

Note: Percent of GNF costs for least-cost alternative.

FINANCING METHODS AVAILABLE TO FUND DREDGING ACTIVITIES

Financing Methods Currently Used

Dredging and disposal costs typically are shared by federal agencies and local sponsors based on federal cost-sharing policies. Various financing tools are used to finance the 25% or more of capital costs that typically are the responsibility of local project sponsors. States, local governments, ports, special assessment districts, and the private sector are the main sources of such local sponsor financing.

Financing from Non-Federal Sources

Financing methods available to finance the non-federal portion of dredging and disposal activities are identified in Table 3. The table describes how different financing methods work, who uses them, and the activities funded by each method. The financing methods that are described include port revenue bonds, revenue bonds with bond insurance, assessment district bonds, general obligation bonds, port commercial paper, state land trust funds, port operating revenues, and private sector joint ventures.

Capital investments for new dredging work made by local sponsors are financed most frequently with debt instruments, such as bonds. The Ports of San Francisco and Oakland have used either revenue bonds or their port operating revenues to finance dredging activities. The use of revenue bonds, which can be repaid from only specified revenue sources, involves paying higher interest rates than does the use of general obligation (GO) bonds.

Competing west coast ports typically use forms of financing less costly than revenue bonds. Seattle and Portland issue GO bonds to finance port-related capital improvements. Because GO bonds are backed by property taxes and other revenues of the political entity issuing the bonds, they carry a lower interest rate than revenue bonds. Los Angeles and Long Beach issue short-term commercial paper (equivalent to short-term IOUs) at low, short-term interest rates. Because they have a backup line of bank credit and strong operating revenues, they are able to repay maturing paper by issuing new paper. Investors know these ports would use the bank line to repay them in an emergency.

The Port of Richmond has formed an assessment district to help finance harbor deepening. The district is authorized to make annual assessments on property located within its boundary to pay for the non-federal share of the investment required to deepen the harbor to 38 feet. The port can sell bonds that are backed by annual assessments, allowing the bonds to carry a lower interest rate than if revenue bonds were used.

State land trust financing is available for projects that meet **special criteria**. The Sonoma Baylands project was able to benefit from such financing from the California Coastal Conservancy to acquire, study, and develop a site for wetlands restoration. The restoration will provide a disposal site for 2.5 million cubic yards of dredged sediments.

Some dredging and disposal activities are paid for by ports using their annual operating revenues. However, this limits the amount of dredging that can be paid for in any one year.

Financing from Federal Sources

For maintenance dredging of existing federal channels, federal funds are now provided by the Harbor Maintenance Trust Fund (HMTF) as discussed below. Funds for the HMTF are collected through a tax on those domestic shippers not subject to the inland waterways fuel tax and on shippers importing cargoes or exporting cargoes to foreign countries. Passenger revenues are also covered by this tax.

For construction of new federal channels, federal funds are provided through specific congressional appropriations.

Table 3. Financing Methods Currently Used to Fund Dredging and Disposal Activities

Financing Tool	How Financing Tool Works
Local (Non-Federal) Sponsor's Financing	
Port revenue bonds	<p>Sponsor sells bonds to investors, using funds for project. Sponsor pledges port's net operating revenues after expenses for repayment of bonds. Investors can look only to the port's net revenues after operating expenses for repayment.</p> <p>Financing used for capital costs (includes initial design, site acquisition, dredging, and disposal) and cost of refunding prior debt issues.</p> <p>Users include Ports of Oakland, San Francisco, and Seattle and other ports and districts.</p>
Port revenue bonds, with bond insurance	<p>Same as revenue bonds, except that sponsor gives investors added security by buying a policy from an insurance company that agrees to repay the bonds if the sponsor fails to do so. With a municipal bond insurance policy, port bonds can receive high-quality ratings from rating agencies and thus lower interest costs.</p> <p>Financing used for capital costs, debt refunding, and financing costs.</p> <p>Users include Port of Oakland, State of Hawaii, and other ports and districts.</p>
Assessment district revenue bonds	<p>The sponsor creates an assessment district with taxing powers. The sponsor then finances the project by selling bonds that will be repaid from the future assessments collected by the district.</p> <p>Financing used for capital costs, debt refunding, and financing costs.</p> <p>Users include Port of Richmond.</p>

Table 3. Continued

Financing Tool	How Financing Tool Works
General obligation bonds	<p>A sponsor finances a project by selling bonds that are backed by the full faith and credit of the issuing city, county, state, or district. Thus, the issuing government pledges to repay the bonds by using its taxing power and its other revenue sources. Some GO bonds set a cap on the maximum ad valorem property tax rate that could be used to repay the bond.</p> <p>Financing used for capital costs, debt refunding, and financing costs.</p> <p>Users includes Ports of Seattle and Portland, Oregon, and other ports and districts.</p>
Port commercial paper	<p>A sponsor finances capital improvements by selling investors low-interest-rate, short-term notes maturing in less than 12 months. The notes are repayable from net operating revenues or a bank line of credit. By continuing to issue new notes as old notes mature, the sponsor effectively lengthens the maturity of the financing.</p> <p>Financing used for capital costs, debt refunding, and financing costs.</p> <p>Users include Ports of Long Beach and Los Angeles.</p>
Port operating revenues	<p>A sponsor uses its net operating revenues to pay for its dredging and disposal costs each year.</p> <p>Financing used for capital costs, debt refunding, and maintenance dredging.</p> <p>Users include Ports of Oakland and San Francisco; other ports and districts.</p>

Table 3. Continued

Financing Tool	How Financing Tool Works
Private sector joint venture	<p>Private firms fund development of property as a disposal site. (For example, an environmental engineering and science firm and a major landowner agreed to invest 1,800 acres of land and arranged for loans to develop the property as a multiuser disposal site.) Fees charged for disposal of sediments will cover operating costs, pay off the 10-year debt, and provide a return on their investment to the project sponsors.</p> <p>Financing used for site acquisition and development, disposal, site maintenance, and site monitoring.</p> <p>Users include developers of Montezuma Wetlands.</p>
Financing for Local (Non-Federal) Share	
State land trust funds	<p>A sponsor works with an entity, such as the California Coastal Conservancy, which can obtain State Land Trust funds to buy an upland site for disposal of dredged materials.</p> <p>Financing used for site acquisition.</p> <p>Users include Port of Oakland.</p>
Marine infrastructure bank	<p>After it receives initial capital funds from federal and state sources, bank plans to issue bonds to raise additional capital. (Note: Bank is not yet funded.)</p> <p>Financing used for wide variety of loans, including channel improvements, lands, easements, rights-of-way, systems and facilities for utilities, piers, docks, cranes, dredge disposal sites, buildings, parks, and remediation.</p> <p>Criteria: The primary or predominant use of the above investment must be of direct benefit to the port or harbor.</p>

Table 3. Continued

Financing Tool

How Financing Tool Works

Harbors and Watercraft Revolving Fund

Expected users include joint powers authorities, public harbor agencies (i.e., ports, districts, cities, counties, or other public entities operating a port or harbor in the state).

This fund, managed by California Department of Boating and Waterways, lends only to marinas used for recreational boating. Marinas pledge assets. Loan budget for fiscal year 1986 is \$40 million, funded by boating fees and gas taxes.

Financing used for capital investment, not maintenance. Can be used for new marina, rehabilitation, or expansion. Can be used for breakwater, dredging basin for new marina, and buildings.

Users include public and private marinas in California used for recreational boating.

Federal Share of Costs

Harbor Maintenance Trust Fund

U.S. Customs Service collects a tax of 0.125% of value of cargo entering or leaving the United States, including passenger fares. The U.S. Treasury receives the tax receipts and manages them in the Harbor Maintenance Trust Fund.

Financing pays for 100% of the Corps' costs for operations, maintenance, dredging and disposal of existing federal channels and harbors projects.

Administered by the Corps, whose district offices approve maintenance dredging for channels and harbors used for commercial navigation. Inland waterways are not included.

Table 3. Continued

Financing Tool	How Financing Tool Works
Annual appropriations, U.S. Army Corps of Engineers	<p>Congress appropriates funds each year for the operations of the Corps, including new dredging projects budgeted by the Corps. Congress may also approve other special new projects it wants. The Corps uses the appropriations to complete these projects.</p> <p>Financing used for costs of new projects, including projects to deepen channels and harbors.</p> <p>Users include local sponsors of new federal navigation projects.</p> <p>Note: The added costs for using upland disposal sites and for disposing of unsuitable sediments are not covered.</p>

Other financing methods that could be applied to the non-federal share of dredging and disposal costs are summarized in Table 4. Many of these financing methods could finance the capital investment needs for disposal site acquisition and development, including upland sites, in addition to dredging and disposal activities.

Federal Share

Other potentially available methods for financing the federal share of project costs also are described in Table 4, and include the following:

- **Undertake more dredging-related wetlands restoration projects.** New regulations issued by the Corps in draft form in April 1995 (EC 1105-2-209) encourage commanders at the division and district level to implement programs using the Corps' new authority in Section 204 of WRDA 1992. This authority allows the Corps 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.

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

- **Develop projects that use funds designed to upgrade already constructed navigational projects.** Use of the Corps' authority in Section 1135 of WRDA 1986 could be expanded. This section now provides \$25 million per year, 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.
- **Increase use of exceptions allowed to the NED Plan process to approve more projects with upland disposal and beneficial reuse features.** The Secretary of the Army has approved several such exceptions. Such exceptions, made where environmental considerations dictate, would allow for 75% federal financing of disposal costs at an upland site for congressionally authorized projects.

- **Expand Use of the Harbor Maintenance Trust Fund through a broadening of what the Corps defines as “operations and maintenance” work.** This is within the power of the Corps to define and could include, for example, construction of diking for confined aquatic disposal, site preparation of planned upland disposal sites and added costs of transporting and offloading of “unsuitable” materials at upland sites. A revised definition of “operations and maintenance” work could also include ongoing site monitoring as a maintenance activity.

- **Expand use of the Harbor Maintenance Trust Fund by changing federal law.** Section 210(a) of WRDA 1986 could be broadened to allow the trust fund to pay the costs for the deepening of federal channels used for commercial navigation. This work would be consistent with the GATT requirements. Also, by moving such expenditures out of the regular budget, the Corps may be able to create budget “savings” that would offset the budget impact from increased use of the trust fund. This would have the benefit of reducing the surplus in the trust fund.

Table 4. Other Potentially Available Financing Methods

Financing Tool	How Financing Tool Works
Local (Non-Federal) Sponsor's Financing	
Sale of vendable outputs from dredging	<p>A landfill may pay a dredger a price per cubic yard to truck in clean output. A construction contractor could pay a dredger to buy clean output for land cover. A cement company could buy sand output for making concrete. The sale proceeds, less processing and administrative costs paid to the Corps for managing the work, would be available to the dredger.</p> <p>Financing used for non-federal sponsor's share of project capital costs. Could also be used for non-GNF costs, including acquisition and development of upland disposal sites; payment of interest; and repayment of prior debt.</p> <p>Users include ports, districts, and other public and private sector dredgers.</p>
Financing based on take-or-pay contracts with major users of disposal site	<p>In developing a multiuser site, the operator gives a discounted rate per cubic yard to major dredgers or users who enter into multiyear contracts guaranteeing a minimum revenue level to the site. These revenues are pledged to a lender to obtain financing to build the project. The incentive for the dredger to enter such contracts is a discounted tipping fee.</p> <p>Financing used for capital costs to construct disposal sites and site monitoring costs.</p> <p>Users include ports, districts, and other public and private sector dredgers.</p>

Table 4. Continued

Financing Tool	How Financing Tool Works
Revolving grant fund from environmental consortium	<p>Consortium of major environmental groups and companies could finance a revolving fund to make grants for local sponsor costs to develop upland disposal sites for dredging projects with special environmental appeal. Multituser disposal sites would repay grants over time from user fees.</p> <p>Financing used for capital costs to construct disposal sites and site monitoring costs.</p> <p>Users include ports, districts, and other public and private sector dredgers.</p>
Loan guarantee fund from environmental consortium	<p>Consortium of major environmental groups could pledge part of their portfolios of investment assets, earning a guarantee fee, to provide credit support for tax-exempt bond issues.</p> <p>Financing used for environmentally significant projects, including acquisition and development of upland disposal sites.</p> <p>Users include ports, districts, and other public and private sector dredgers.</p>
Public-private partnership with private operator	<p>A partnership is formed in which a private firm agrees to build and operate a disposal site on a publicly owned property. The private firm could have a turn-key construction contract and could operate the site under a contract that gives the public entity an ongoing share of revenue or of profits.</p> <p>Financing used for capital costs to construct disposal sites and site monitoring costs.</p> <p>Users include ports, districts, and other public sector dredgers.</p>

Table 4. Continued

Financing Tool	How Financing Tool Works
Sale-leaseback	<p>A public entity sells land to a private operator and leases back a facility that the private operator constructs on the land. The private operator could also operate the facility under a contract. The private operator gains the tax benefits of depreciation on the new (or upgraded) facility. The public entity gets lower construction costs and can limit its liability.</p> <p>Financing used for capital costs to construct disposal sites and site monitoring costs.</p> <p>Users include ports, districts, and other public sector dredgers.</p>
Tax-exempt leases	<p>A private financial partner acquires title to the assets to be financed, leasing them to a public entity at discounted rates. At the end of the lease term, the public entity can acquire title to the assets. The lease would not count against the public entity's funded debt limits. The interest portion of the lease would be tax-exempt income to the financial partner.</p> <p>Financing used for capital costs to construct disposal sites and site monitoring costs.</p> <p>Users could include ports, districts, and other public section dredgers.</p>
State Financing for Local (Non-Federal) Share	
Mitigation bank	<p>State agency (or new joint powers district) collects fines from violators of environmental laws and regulations. These fines are deposited in a mitigation bank organized by the state or by a new joint powers district. Funds from fines are used to make dredging-related loans or grants.</p> <p>Financing could be used for capital costs to acquire and develop upland disposal sites.</p>

Table 4. Continued

Financing Tool	How Financing Tool Works
State regional dredging trust	<p>Users could include ports, districts, and other public sector dredgers.</p> <p>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.</p>
Allow privately owned, multiuser disposal sites to receive limited financial incentives	<p>Financing could be used for capital costs to acquire and develop upland disposal sites.</p> <p>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.</p> <p>A regional dredging trust, formed as described above, allocates a portion of its loan funds for financing multiuser sites managed by private sector firms. Such multiuser sites could repay some or all of this financing by accepting agreed quantities of sediments at a zero or discounted tipping fee, using contract procedures issued by the regional dredging trust.</p>
	<p>Financing could be used for capital costs to acquire and develop upland disposal sites.</p> <p>Users of financing could include firms developing multiuser upland disposal sites.</p>

Table 4. Continued

Financing Tool	How Financing Tool Works
Federal Share of Costs	
Undertake more dredging-related wetlands restoration projects	<p>Expand use of Corps' authority in Section 204 of WRDA 1992. Make greater use of 75% federal cost sharing for ecosystem restoration projects in connection with construction, operation, or maintenance of a federal navigation project.</p> <p>Financing could be used for protection, restoration, or creation of aquatic and related habitat, including wetlands.</p> <p>Users could include ports, districts, and other public sector dredgers.</p>
Develop projects to use funds available to upgrade existing navigational projects	<p>Expand use of Corps' authority in Section 1135 of WRDA 1986, which allows budget funds, limited to \$5 million per project, to modify existing water resource projects to improve the quality of the environment.</p> <p>Financing could be used for beneficial reuse and upland disposal projects linked to existing projects.</p> <p>Users could include ports, districts, and other public sector dredgers.</p>
Increase use of exceptions allowed to NED Plan process to approve more projects with upland disposal and beneficial reuse features ^a	<p>The Secretary of the Army is allowed to approve exceptions to the NED Plan process when circumstances warrant (e.g., the Houston Ship Channel wetland project). When environmental considerations require upland disposal of sediments, more such exceptions could be requested and approved.</p>
Expand use of Harbor Maintenance Trust Fund by broadening Corps' definition of O&M work ^a	<p>For maintenance projects, allow costs for disposal of dredged materials at upland sites to be paid, or cost-shared, from this trust fund when the use of such a site is needed to comply with federal environmental regulations.</p>