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Report to Congressional Requesters

March 2000

PORT INFRASTRUCTURE

Financing of Navigation Projects at Small and Medium-Sized Ports

GAO

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Contents

Letter 3

Appendixes

Appendix I: Scope and Methodology 20

Appendix II: Summary of Selected Federally Sponsored Innovative Financing Mechanisms Used by Federal Transportation Projects 22

Appendix III: Summary of Results From GAO Survey of States With Small and Medium-Sized Ports 23

Appendix IV: Summary of 12 Projects Terminated for Financial Reasons 29

Appendix V: GAO Contacts and Staff Acknowledgments 31

Tables

Table 1: Phases in the Assessment Process for Specifically Authorized and Section 107 Projects 8

Figures

Figure 1: States Currently Providing Grants or Appropriations to Fund Navigation Projects at Small and Medium-Sized Public Ports 10

Figure 2: Funding Sources for Navigation Projects at Small and Medium-Sized Public Ports 13

Abbreviations

FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
GARVEE	Grant Anticipation Revenue Vehicle
TIFIA	Transportation Infrastructure Finance and Innovation Act

United States General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

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March 2, 2000

The Honorable Bob Smith
Chairman, Committee on Environment
and Public Works
The Honorable Max Baucus
Ranking Minority Member
Committee on Environment
and Public Works
United States Senate

The Honorable Barbara Boxer
The Honorable Bob Graham
United States Senate

While the public may be familiar with the role of large public ports like those in Los Angeles and New York, a sizeable amount of the nation's waterborne commerce is handled at 444 small and medium-sized ports that constitute the majority of the U.S. port system. These small and medium-sized public ports each have annual net revenues of less than $35 million but collectively handled over 1 billion tons of cargo in 1996.[1] They include such seaports as Wilmington, North Carolina, and Santa Cruz, California; such river ports as Vicksburg, Mississippi, and St. Louis, Missouri; and such lakeports as Duluth, Minnesota, and Toledo, Ohio. To improve access to their harbors, officials at these ports (port sponsors) sometimes seek navigational improvements, including dredging (to deepen channels), building breakwaters (to protect ships in harbors from rough water conditions), and constructing turning basins (to ease ships' access to and from ports). The U.S. Army Corps of Engineers (Corps of Engineers) is responsible for developing and building federally funded navigation projects at public ports. Until 1986, public ports could qualify to receive 100 percent federal funding for such improvement projects. Under the Water Resources Development Act of 1986,[2] all public ports have had to share in the cost of navigation projects with the Corps of Engineers by paying the

[1]We developed a list of about 461 recognized public ports in the United States. For the purposes of this review, we defined 17 of these ports as "large"—having annual net revenues in excess of $35 million.

[2]P. L. 99-662, Nov. 7, 1986.

nonfederal share of a project's cost, which ranges from 20 to 60 percent, depending on the type of project and the depth of the channel.[3] Other types of transportation projects, such as airport and highway projects, also have cost-sharing provisions. In the 1990s, the Department of Transportation initiated several innovative financing programs, such as guaranteed loans and other credit enhancements to lower interest costs, which helped sponsors of airport and highway projects meet cost-sharing requirements. However, it is the Corps of Engineers, not the Department of Transportation, that is responsible for developing and building federally funded navigation projects at these ports.

You asked us to examine the following issues concerning the Corps of Engineers' financing of navigation projects at small and medium-sized public ports. Specifically:

- How have small and medium-sized public ports financed the nonfederal share of the cost of navigation projects from 1986 through 1999?
- To what extent have projects been terminated or suspended at small and medium-sized public ports during this period because the ports were unable to demonstrate a feasible source of funding for the nonfederal share?
- Could federally sponsored innovative financing mechanisms help small and medium-sized public ports fund the nonfederal share of navigation projects?

We collected data on navigation projects at small and medium-sized public ports from the Corps of Engineers, the U.S. Maritime Administration, and several individual ports. To determine how small and medium-sized ports financed the nonfederal share of the cost of navigation projects, we surveyed 37 states that potentially had the Corps of Engineers' navigation projects at small or medium-sized public ports from 1986 through 1999 and examined whether those states had provided financial assistance to the ports. Due to limitations in the Corps of Engineers' record keeping, we were not able to collect information about all the ports and all the projects initiated during this time period. However, the Corps of Engineers did provide detailed information on the financing plans for 63 projects. To

[3]The cost-share provisions during the construction phase of a project are based upon the depth of the channel or harbor. The sponsor contributes 20 percent of the cost for projects creating channel depths of less than 20 feet, 35 percent for depths between 20 and 45 feet, and 60 percent for depths greater than 45 feet.

determine the extent that projects were terminated or suspended during this period, we analyzed 463 projects that the Corps of Engineers identified as having been initiated at small or medium-sized public ports from 1986 through early 1999. We discussed selected projects with Corps of Engineers and port officials. These projects were in various stages of development or, in many cases, had been terminated for a variety of reasons, including financing. We used this information to determine whether federally sponsored innovative financing mechanisms could help small and medium-sized ports fund the nonfederal share of navigation projects. Appendix I contains a more detailed description of our scope and methodology. Our work was performed from April 1999 through December 1999 in accordance with generally accepted government auditing standards.

Results in Brief

For most small and medium-sized public ports, states play a major role in financing the nonfederal share of the Corps of Engineers' navigation projects. Twenty-three of the 32 states where such projects have been conducted have provided all or a portion of the nonfederal share to the associated public ports through annual appropriations or grants. Our analysis of 63 projects, for which detailed financial information was available from the Corps of Engineers, corroborated the states' role in financing navigation projects. Our analysis showed that while most of these projects relied primarily on assistance from the states, some projects also used cash reserves, bonds, and grants from local communities to complete the nonfederal share of the financing package.

Only 12 of 463 navigation projects identified by the Corps of Engineers as having been initiated from 1986 through 1999 had been terminated or suspended because the ports had failed to raise the nonfederal share. These projects were located in ports and waterways where funding was limited or in states that did not provide financial assistance for them.

Certain types of federally sponsored innovative financing mechanisms, such as guaranteed federal loans and other credit enhancements to lower interest costs, conceptually offer desirable financing alternatives to fund navigation projects for some small and medium-sized public ports. However, their practical relevance in funding the cost-sharing requirement for navigation projects has been limited by two principal factors. First, unlike the sponsors of airport and highway projects, the sponsors of public port projects do not receive federal funds directly and do not have the opportunity to increase those funds in the private debt market to help them raise their nonfederal share. Second, the use of some federally sponsored

innovative financing mechanisms involves debt financing, which, by its very nature, requires a project's sponsors to eventually repay the debt. Although some sponsors of navigation projects could eventually repay such debt, generally, the 12 sponsors that had difficulty funding navigation projects did not have sufficient revenues to repay any type of additional debt.

Background

The federal government has long participated in developing and improving the nation's transportation infrastructure because a well-functioning infrastructure is important for commerce, international trade, and national defense. The federal government's financial participation in infrastructure development typically requires some type of cost-sharing arrangement among the federal government, the states, and other local entities. For navigation projects, these requirements were initiated in the Water Resources Development Act of 1986. The Act's requirements responded to a need to address federal budget constraints, a desire to encourage local communities to support such infrastructure, and a need to provide a means to prioritize which types of development are most important.[4] Public ports requesting navigation projects are required to share in their cost by providing funds and, in some cases, lands, easements, and rights-of-way, to the Corps of Engineers, which uses those funds in combination with funds appropriated by the Congress to design and build navigation projects.

For other types of infrastructure projects, such as those at airports and on highways, the federal government has initiated several innovative financing programs. Innovative financing programs within the Department of Transportation provide the sponsors of airport and highway projects with the ability to leverage federal dollars—that is, they are allowed to maximize federal aid by accessing several types of private capital, such as loan and bond financing, that they might not be able to obtain using their own resources. Innovative financing programs are not grants—borrowers are required to repay some loans or bonds at some specified time in the future (see app. II for a summary of some of the major innovative financing mechanisms used by the Department of Transportation and the Corps of Engineers).

[4]Prior to 1986, ports had some financial responsibility for navigation projects and had to provide land, easements, and rights-of-way, according to Corps of Engineers officials.

The Congress and the Corps of Engineers participate in examining potential navigation projects to determine if they should be pursued with federal funds. The Corps of Engineers assesses all proposed navigation projects to determine if they meet eligibility standards for federal assistance, including the availability of funding for the nonfederal share. When analyzing navigation projects for basic eligibility, the Corps of Engineers categorizes them according to two types, as defined by the Congress. The first type, called specifically authorized projects, reflects specific congressional interests and requires congressional authorization at various stages of their development. According to Corps of Engineers officials, these projects typically cost more than $4 million and take from 8 to 10 years or more to complete, depending on the scope of construction. The second type, called continuing authority or Section 107 projects (named after Section 107 of the River and Harbor Act of 1960) reflects specific interests of the Corps of Engineers, because it can fund projects without specific project-by-project congressional authorization. A Section 107 project cannot exceed $4 million. Table 1 shows the assessment process for these two types of projects.[5]

[5]Under federal law, public ports can be reimbursed by the Corps of Engineers for the federal share of all eligible costs incurred by a navigation project. According to Corps of Engineers officials, this provision is very rarely used.

Table 1: Phases in the Assessment Process for Specifically Authorized and Section 107 Projects

Project type	Assessment phase
Specifically authorized projects	Reconnaissance Study: The Congress may approve funding for a federally funded reconnaissance study conducted by the Corps of Engineers to identify potential solutions to particular navigation issues and determine whether further study is warranted. This study typically takes about 1 year. Feasibility Study: If funding is approved by the Congress, the Corps of Engineers will initiate a feasibility study whose cost is shared with the affected port or waterway sponsor. This study, which typically takes about 3 years, describes the economic, environmental, and social benefits and detriments of the navigation project and proposes alternatives (if necessary). Preconstruction, Engineering, and Design: During this phase, which typically takes about 2 years, a cooperation agreement is developed. This includes the project's plans and specifications, its costs, which are finalized during this process, and identifies various financial resources. Construction: If funding is approved by the Congress, construction can begin, which typically takes anywhere from 1 to several years to complete, depending on the project's scope.
Section 107 projects	Project Study: The Corps of Engineers initiates the project study, which combines the elements of the reconnaissance and feasibility studies and provides an overall assessment of the project. The cost of the project study is shared with the port or sponsor. Cooperation Agreement: Plans and specifications are developed, and the cooperation agreement finalizes the project's costs and identifies various financial resources. Construction: The Corps of Engineers allocates funds for construction from its Section 107 funds.

Source: Corps of Engineers.

States Have Provided the Majority of the Funds for the Nonfederal Share for Port Navigation Projects

Over 70 percent of the 32 states that we surveyed that have small or medium-sized public ports and that had a Corps of Engineers' navigation project from 1986 through 1999 provided the majority of the nonfederal share for port navigation projects. We also analyzed 63 projects' financial plans for some small and medium-sized ports, which corroborated the state's role in financing navigation projects, but also showed that other funding sources were used, including capital reserves, bonds, and grants from local municipalities.

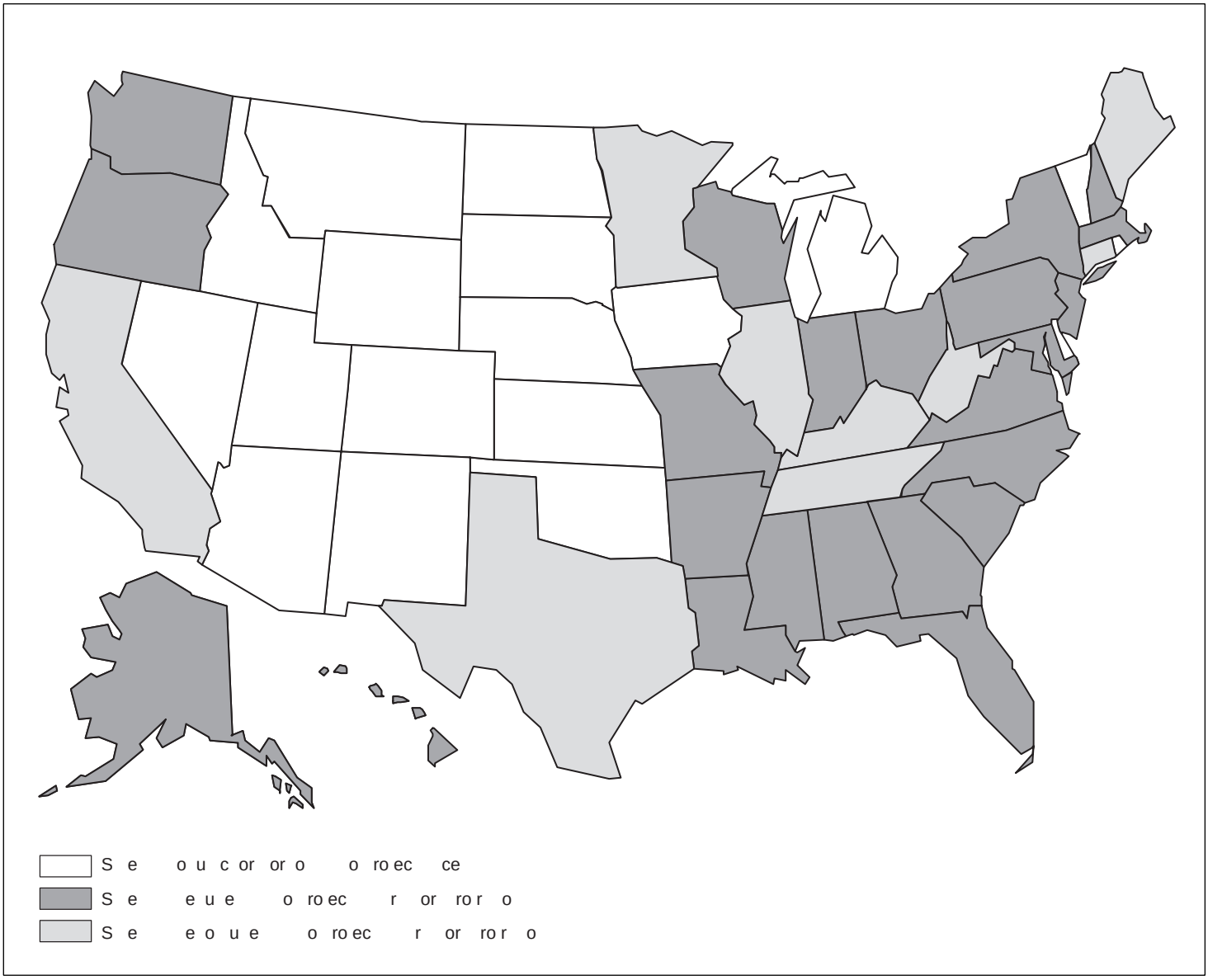
Most States Provide Grants or Appropriations to Small and Medium-Sized Ports

Only 9 of the 32 states with small and medium-sized public ports that we surveyed that had Corps of Engineers' navigation projects from 1986 through 1999 did not provide grants or appropriations to help fund the

nonfederal share of the projects' costs (see fig. 1).[6] The nine states that did not provide financial assistance to those ports are California, Connecticut, Illinois, Kentucky, Maine, Minnesota, Tennessee, Texas, and West Virginia.

[6]Iowa and Vermont have funding programs but do not have public ports; therefore they fund only privately operated ports. Rhode Island and Delaware have several public ports but reported that they have not had a Corps of Engineers' navigation project since 1986. Michigan ports are owned and operated by public and private entities, but they reported that they had not had a Corps of Engineers' navigation project since 1986.

Figure 1: States Currently Providing Grants or Appropriations to Fund Navigation Projects at Small and Medium-Sized Public Ports



Source: GAO.

The extent of states' assistance to small and medium-sized public ports is significant. Of the 23 states that have provided financial assistance to ports

for navigation projects, 20 have provided up to 100 percent of the nonfederal share for the Corps of Engineers' navigation projects.[7] Three other states have provided at least half of the nonfederal share. Most states told us that in order to receive financial assistance for the nonfederal share of a project, a port had to demonstrate that the project would provide significant economic benefits to that state (see app. III for information on the ports in each state).

States have used a variety of financing mechanisms to help fund the nonfederal share of the Corps of Engineers' navigation projects. These mechanisms include direct legislative appropriations, grant programs, and bonds. Some states also allow local sponsors flexibility in raising their own funds by levying property taxes or issuing general obligation or revenue bonds.[8] The following examples illustrate the range of financing mechanisms that states have taken:

New Hampshire: The Port Authority of New Hampshire manages one major international seaport and three smaller harbors that have commercial traffic. The nonfederal share of the Corps of Engineers' navigation projects in New Hampshire is funded directly through appropriations from the state's general fund.

Oregon: Ports in Oregon consult with the state's Economic Development Department before initiating a navigation project. If it is approved, the Economic Development Department funds the entire nonfederal share for the Corps of Engineers' project. These funds are earmarked specifically for this purpose from state lottery revenues.

Wisconsin: Wisconsin provides up to 50 percent of the nonfederal share of the Corps of Engineers' navigation projects. Ports in Wisconsin are able to levy property taxes and issue general obligation and revenue bonds without voter approval to raise funds to finance the remaining nonfederal share of these projects.

[7]Six of these states (Georgia, Hawaii, Indiana, New Hampshire, Oregon, and South Carolina) always provide 100 percent of the nonfederal funds on all navigation projects.

[8]General obligation bonds issued to support projects are generally paid for through taxes implemented by state or local governments. Revenue bonds are issued to support a particular project and are typically paid for out of the revenues generated by that project.

In contrast, some states, such as the following, provide no direct grants or appropriations to help fund the nonfederal share of the Corps of Engineers' navigation projects:

California: California provides no grants or appropriations to ports trying to finance the nonfederal share of the Corps of Engineers' navigation projects. However, the state provides low-interest loans to local governments to create or improve harbors for small crafts. For the Corps of Engineers' navigation projects, the loans are limited to constructing breakwaters and basins and are not available for channel dredging.

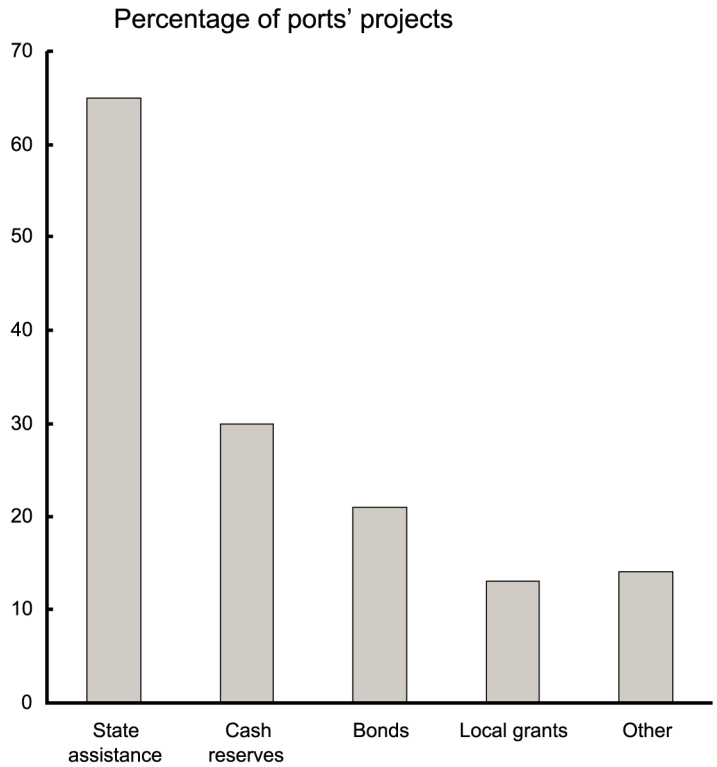
Maine: The Maine Department of Transportation uses funds raised by general obligation bonds to develop recreational and commercial ports' landside facilities (such as docks, piers, roads, and wharves) but does not provide any financial assistance to improve their navigational access.

Analysis of Selected Projects' Financing Plans Affirms Reliance on State Support

Our analysis of the financing plans for 63 navigation projects from 1986 through 1999 that were provided by the Corps of Engineers showed the reliance of small and medium-sized public ports on the states' support.[9] Our analysis showed that 65 percent of the 63 projects relied, at least in part, on assistance from the states to help finance the nonfederal share of their Corps of Engineers' navigation projects. In addition to this assistance, the ports also used a variety of other financing sources, but data were not consistently available to show the magnitude of the financial contribution supplied by each source. The proportion of projects that used various financing sources is shown in figure 2.

[9]For the purposes of this analysis, we were only able to obtain information from the Corps of Engineers on the financing plans for 63 projects. Corps of Engineers officials told us that there were other projects that were constructed from 1986 though 1999, but their financing plans either could not be located or had not been retained. The 63 projects were about equally divided between specifically authorized projects (costing more than $4 million) and Section 107 projects (costing less than $4 million).

Figure 2: Funding Sources for Navigation Projects at Small and Medium-Sized Public Ports



Notes: The total percentage presented is more than 100 percent because 24 of the ports used more than one source to finance the nonfederal share of a navigation project.

The "other" category includes direct loans to ports, operating income, and tax revenue.

Source: The Corps of Engineers' project data.

The cost or size of a project had little apparent influence on the types of financing mechanisms used, except as might be expected, specifically authorized projects tended to use multiple sources of funds to finance their share, while smaller Section 107 projects tended to use a single source of funding. For example:

Humbolt Bay Harbor, California: A small harbor used by commercial fishermen and timber interests, located along the northern California coast, Humbolt Bay Harbor District developed a financing plan for its specifically authorized project that used a combination of cash reserves, a grant from the local city of Eureka, loans, fee increases, the imposition of a tariff, and

debt restructuring to finance the $5.2 million nonfederal share of its $15.2 million dredging project.

Virginia: Virginia was the local sponsor for a Section 107 project to improve navigation to the entrance channel to the York River, located west of the Chesapeake Bay and north of Norfolk. According to the project's financing plan, Virginia pledged to contribute the entire nonfederal share of $1.49 million toward the $4.26 million improvement project.

Few Projects Were Terminated or Suspended for Lack of Funding for the Nonfederal Share

We analyzed databases obtained from the Corps of Engineers and found that 12 projects, or less than 3 percent, of the approximately 463 navigation projects initiated or in progress from 1986 through early 1999 were terminated or suspended because the port was unable to obtain funding for the nonfederal share,[10] according to Corps of Engineers and port officials. Generally, these projects, such as the two examples that follow, were located in states that did not provide grants or appropriations for the nonfederal share or in states where the funding sources of local sponsors were limited (see app. IV for a summary of each project and the main reasons provided by local officials for the inability to secure nonfederal funding).

- The Port of Sacramento, California, proposed a dredging project to deepen the channel of a 39-mile section of the Sacramento River and the Sacramento Deepwater Channel from 30 feet to 35 feet. The nonfederal share of the project amounted to $12 million. In fiscal year 1998, the port had net revenues of $153,000. According to the port director, the port could not fund the project through its cash flow or issuing new debt. New taxes were politically unacceptable, and local governments were either unable or unwilling to fund the sum. The port is attempting to increase its revenues by developing its real estate into business parks.

[10]To develop this list of 463 projects, we used the Corps of Engineers' databases on its specifically authorized and Section 107 projects. According to Corps of Engineers officials, the database on specifically authorized projects includes projects that were initiated or in progress in 1989 and the Section 107 database includes projects that were started or in progress in 1986. In addition, we added six projects that Corps of Engineers district officials identified as being terminated or suspended for financial reasons, but which were not in these databases. These projects were in various stages of development or, in some cases, had been terminated or suspended. We limited our analysis to projects proposed at small and medium-sized ports.

Also, the port is hoping that California will authorize a program to help local sponsors leverage federal funds.

- A project for Appalachicola, Florida, a city with a population of less than 3,000, involved deepening a channel and boat basin so commercial shrimp boats could enter and exit the port's basin more efficiently. The estimated cost of a feasibility study ranged from $300,000 to $400,000, with the local community having to share half the cost. According to the Corps of Engineers' documents and city officials, the project was terminated because the city could not pay its share of the feasibility study.

Federally Sponsored Innovative Financing Mechanisms Have Limited Relevance for Public Ports

While access to federally sponsored innovative financing mechanisms, such as those offered to airport and highway sponsors by the Department of Transportation, may be desired by some ports, most of the ones we examined would currently have limited practical relevance for navigation projects at small and medium-sized ports. Unlike sponsors of airport and highway projects, sponsors of navigation projects currently do not receive federal funds directly and therefore do not have the opportunity to leverage those funds in the private debt market to help them raise their nonfederal share. Even if ports directly received federal funds, innovative financing alone might not assist the ports we identified that were unable or unwilling to raise the nonfederal share.

Since 1994, the Department of Transportation has developed several innovative financing mechanisms, such as guaranteed loans and other credit enhancements to lower interest costs, for local sponsors to raise additional private capital for highway and airport projects. These mechanisms are currently used by the Federal Highway Administration (FHWA) and the Federal Aviation Administration (FAA). For example, both FHWA and FAA allow states or airports, respectively, to use federal grants to pay the interest on loans obtained for approved capital development projects.

Our analysis indicates that most of the financial mechanisms used by FHWA and FAA to fund infrastructure projects would currently have little practical value in raising funds for the nonfederal share of navigation projects because FHWA and FAA operate on a different model than that of the Corps of Engineers. Currently, the Congress appropriates capital funds to FHWA and FAA, which, in turn, allocate the federal funds directly to states or individual sponsors, who then contract the projects out for private-sector construction. Those states or individual sponsors can then

leverage the federal funds in the private debt market. However, according to Corps of Engineers officials, public ports do not receive federal funds directly from the Corps of Engineers because it is not a grant-making agency. Instead, the Congress appropriates funds on a per-project basis to the Corps of Engineers' budget, which are then used to develop and construct port projects. The ports have no opportunity to leverage federal funds in the private debt market because they never receive federal funds directly.

Even if ports were allowed to leverage federal funds, much as airport and highway agencies do, innovative financing alone would probably provide little benefit to the 12 ports that could not raise the nonfederal share of funding for their navigation projects. Leveraging still requires repaying the borrowed money, and most of these ports indicated that either the short-term or the long-term cash flow required for repayment could continue to be a problem. Three of the 12 ports indicated that, short of a total subsidy, there was little that the federal government could do to help their proposed navigation project because they did not have the ability to repay the loans or the debt that would be incurred through various types of innovative financing.

Officials at 5 of the 12 ports indicated that perhaps some types of innovative financing, such as low-interest loans combined with a delayed payment schedule, might help them finance the nonfederal share.[11] However, the ability of these ports to repay debt was uncertain. For example, port officials at Pillar Point Harbor in California said they needed some form of short-term financial assistance that would allow them to develop their port's facilities and establish new sources of revenue. The officials expected that the combination of adding a new $4 million pier (that is not eligible for federal funds) and building a deeper channel would enhance their revenue stream. However, while the new pier and the deeper channel are being built, the port would have no new revenue stream, and port officials said they could not accommodate the additional debt required to complete both projects. They surmised that low-interest loans, coupled with some form of delayed repayment, could help the port reach a point at which additional revenues could be generated to pay off the port's share of the projects' costs. However, they also said that they did not have firm

[11]We were unable to contact officials at the remaining four ports to discuss whether innovative financing, if available, would have been useful in financing the nonfederal share of their navigation projects.

commitments from businesses ready to use the new facilities. Overall, officials at three of the five ports said that, while they believed that innovative financing might help them finance navigation projects, they had not yet performed economic or other analyses to estimate future revenues and show how they could repay any incurred indebtedness.

Conclusions

Available information for navigation projects from 1986 through 1999 suggests there is no compelling reason to change the current cost-sharing ratio (ranging from 20 to 60 percent) between the Corps of Engineers and public ports for financing navigation projects. We believe that the conditions that existed when the Congress enacted the Water Resources Development Act of 1986, such as constraints on the federal budget and a desire to encourage states and local communities to prioritize and support infrastructure projects, continue to be relevant today. Our analysis showed that most states provide some assistance to public ports to finance the nonfederal share of navigation projects. Moreover, only a small number of port projects—less than 3 percent—were terminated or suspended because of an inability to raise the nonfederal share. We believe that such a small number of projects suggests that the Act, which emphasized a local role in prioritizing port projects, is working as designed, and communities are prioritizing their resources accordingly.

Agency Comments

GAO provided copies of a draft of this report to the Department of Defense and to the Department of Transportation for review and comment. The Department of Defense indicated that it had no comments on the draft report. In responding for the Department of Transportation, the Maritime Administration provided technical clarifications, which were incorporated into the report as appropriate.

We will send copies of this report to the Honorable Rodney E. Slater, Secretary of Transportation; the Honorable William S. Cohen, Secretary of Defense; the Honorable Lewis Caldera, Secretary of the Army; Lt. General Joseph N. Ballard, Chief Engineer, U.S. Army Corps of Engineers; Admiral James M. Loy, Commandant, U.S. Coast Guard; and Clyde Hart, Administrator, U.S. Maritime Administration. We will also make copies available to others on request.

If you or your staff have any questions about this report, please call me at (202) 512-2834. Appendix V lists key contacts and contributors to this report.

Phyllis F. Scheinberg
Associate Director,
Transportation Issues

Scope and Methodology

To determine how small and medium-sized public ports financed the nonfederal share of the Corps of Engineers' navigation projects, we examined financing plans from cost-sharing agreements between local sponsors at small and medium-sized ports and the U.S. Corps of Engineers (Corps of Engineers). We obtained the financing plans at the Corps of Engineers headquarters and through a data query to its district offices. We analyzed the plans to determine the sources of financing that sponsors used to pay for the nonfederal share. In addition, we sent a written survey to 37 states that potentially have public ports. In developing the survey, we pretested it with officials in the following states: Alaska, Massachusetts, North Carolina, Oregon, Texas, and Washington. We also developed a list of small and medium-sized ports based on our analysis of several Corps of Engineers' databases because a single one does not contain a list of all public ports. We used data from publications by the Corps of Engineers Navigation Data Center and the agency's U.S. Waterways Data CD, Volume 4, April 1998. We supplemented this list by comparing the data with the list of public ports found in the U.S. Maritime Administration's Report to the Congress on the Status of Public Ports in the United States, 1996-1997. For the purposes of this study, we defined 17 of the ports in the list as large ports—having net revenues in excess of $35 million and excluded them when we examined the Corps of Engineers' navigation projects. We asked officials from the Corps of Engineers, the Maritime Administration, and the Coast Guard to review our list for completeness and to review our proposed definition of large ports for accuracy. The officials did not suggest any additional ports that should be included in the list and, in general, they agreed with our definition of large ports. Finally, we interviewed Corps of Engineers officials, and we reviewed agency documents on the process and the requirements for navigation projects.

To determine whether projects had been terminated or suspended at small and medium-sized ports because they were unable to demonstrate a feasible source of funding for the nonfederal share, we analyzed the Corps of Engineers' databases on its specifically authorized and Section 107 projects. Based on information in these two databases, we initially identified 52 projects at small and medium-sized U.S. ports that may have been terminated for financial reasons. We sent a query to all 37 of the associated Corps of Engineers district offices requesting them to verify the reasons why these projects had been terminated and to identify any other projects that had been terminated for financial reasons. Based on responses from officials at the 37 districts and port officials, we identified 12 projects that had been terminated or suspended for financial reasons. Finally, we visited 3 of the 12 projects, (Sacramento, California; Noyo

Harbor, California; and Pillar Point, California) to discuss financing issues specific to those projects. Officials at the Corps of Engineers districts provided us with 19 additional projects that may have encountered financing difficulties, but we did not include them in our analysis because they did not meet the requirements established by the Corps of Engineers.

To examine some examples of federally sponsored innovative financing mechanisms that could potentially help small and medium-sized ports fund the nonfederal share of navigation projects, we obtained and reviewed program information about innovative financing mechanisms under development at the Department of Transportation's Federal Highway Administration (FHWA) and the Federal Aviation Administration (FAA). We discussed innovative financing of transportation projects with officials at FHWA and FAA. We also examined the methods used to appropriate funds to FHWA, FAA, and the Corps of Engineers for transportation infrastructure projects. Finally, we discussed innovative financing mechanisms with port and waterway officials who were unable to obtain the nonfederal share of navigation projects to determine if any of those mechanisms might have been useful.

Summary of Selected Federally Sponsored Innovative Financing Mechanisms Used by Federal Transportation Projects

Financing mechanism	Agency	Purpose
State infrastructure banks[a]	FHWA	Allows states to use federal funds to provide loans, credit enhancements, or other forms of financial assistance to projects.
Commercial bond insurance or other credit enhancement	FAA (pilot) and FHWA (within state infrastructure banks)	Lowers the cost of financing projects that use general obligation or revenue bonds as part of their financial package.
Grant Anticipation Revenue Vehicle (GARVEE) bonds	FHWA	Allow states to leverage future federal highway apportionment funds toward the payment of principle and interest, thereby securing future federal funding before it is actually appropriated.
Flexible match (using a variety of funding sources)	Corps of Engineers	Allows for in-kind donations of land, easements, and rights-of-way to be applied toward the nonfederal share of project cost.
Flexible match (altering the percentage of the nonfederal share)	FAA	Rules are relaxed governing the percentage of nonfederal funds required for projects. For example, some states that receive funds for airports have used this financing mechanism to require general aviation airports to pay more than the traditional 10 percent of the nonfederal share of projects, thus providing more funding for more projects.
Payment of interest cost on debt	FAA (pilot) and FHWA (within state infrastructure banks)	Can be used to pay the interest cost on debt.
Transportation Infrastructure Finance and Innovation Act (TIFIA)	FHWA	Provides federal credit assistance to major transportation investments of critical national importance (over $100 million) by offering secured loans, loan guarantees, and standby letters of credit. New funding was provided for this program. The projects anticipate user fees or other nonfederal dedicated funding sources to repay the loan.

[a]Infrastructure or other revolving loan programs have been established in California, Mississippi, Missouri, and Washington. Only the fund in Mississippi has offered loans so far, but that fund is not used by many ports

Summary of Results From GAO Survey of States With Small and Medium-Sized Ports

•**Alabama:** The Alabama State Docks Department operates one deepwater port and ten inland river ports. The state estimates there are five other ports in the state that are operated by municipalities, counties, and private entities. The ports are funded through the state's general fund and port user fees, general obligation bonds that require voter approval, and revenue bonds that do not require voter approval.

•**Alaska:** With 33,900 miles of coastline on the mainland and islands, Alaska has 25 state-owned-and-operated ports, 22 state-owned and locally operated ports, and 51 locally owned and managed ports. Although state assistance to these ports comes through legislative appropriations, many water-dependent communities, especially in rural areas of Alaska, do not qualify for federal navigation projects due to their inability to meet the Corps of Engineers' benefit/cost tests.

•**Arkansas:** Ports in Arkansas receive state assistance through appropriations and grants. The Arkansas legislature appropriated approximately $4 million to pay the entire local share of financing on the White River in 1999. Ports can use property taxes, general obligation bonds, and revenue bonds, all of which require voter approval, as well as fees and guaranteed loans.

•**California:** California provides no grants or appropriations to ports trying to finance the nonfederal share of the Corps of Engineers' navigation projects. However, the state provides low-interest loans to local governments to create or improve harbors for small craft. For the Corps of Engineers' navigation projects, the loans are limited to the construction of breakwaters and basins; they are not available for channel dredging.

•**Connecticut:** Connecticut does not operate any ports but does own a pier in the Port of New London. The ports are owned by municipalities or private entities. No state assistance is available for the Corps of Engineers' projects, but, in 1999, the state guaranteed a percentage of a bank loan obtained for a port employees' financial agreement.

•**Delaware:** Delaware operates one public port in the state and a private entity operates the other public port. There has not been a new Corps of Engineers' navigation project undertaken in Delaware since the enactment of the Water Resources Development Act of 1986.

•**Florida:** Florida has a program to issue grants totaling up to $8 million per year for 14 deepwater seaports to fund up to 50 percent of the nonfederal share of the Corps of Engineers' projects. Florida also offers up to $15 million per year to be used to pay half of the debt service on bonds issued by the ports for their share of

the Corps of Engineers' projects. These funds originate from the proceeds of motor vehicle licenses and fuel taxes.

•**Georgia:** The Georgia Port Authority operates the state's four public ports; it receives legislative appropriations and can also use general obligation and revenue bonds that do not need voter approval to meet cost-sharing requirements.

•**Hawaii:** All public ports in Hawaii are operated by the state. They are funded through general obligation and revenue bonds that do not require voter approval.

•**Illinois:** Independent port authorities manage all of Illinois' ports. The state does not offer any assistance to the port districts to meet the nonfederal share of the Corps of Engineers' navigation projects. A state official stated that the options ports had for funding their share were all site specific.

•**Indiana:** Indiana's three public ports are operated by the state. They use appropriations, general obligation bonds, and revenue bonds that do not require voter approval, and guaranteed loans to fund their share of the Corps of Engineers' projects.

•**Iowa:** All ports in Iowa are privately owned and do not qualify for the Corps of Engineers' navigation projects.

•**Kentucky:** While Kentucky law gives the state authority to oversee public ports, it does not manage or oversee any of them or offer funding assistance for their navigation projects. From 1966 through 1992, it assisted with infrastructure and equipment funding, but it has since disbanded that funding mechanism. Public ports are operated by independent river port authorities that have authority to issue revenue bonds with or without voter approval.

•**Louisiana:** Louisiana has provided funding assistance to the Corps of Engineer's navigation projects through legislative appropriations. Larger projects, such as the Mississippi River deepening have received 100 percent state funding for the nonfederal share. The current governor has generally moved to make local authorities pay 30 percent of the nonfederal share. Louisiana also has a Port Construction and Development Priority Program to pay for landside port improvements.

•**Maine:** The Maine Department of Transportation uses funds raised by general obligation bonds to develop recreational and commercial ports' landside facilities (such as docks, piers, roads, and wharves) but does not provide any financial assistance to improve the navigational access to these ports.

•**Maryland:** Maryland operates the port of Baltimore and private entities operate four other public ports in the state. The state funds the local share of the Corps of Engineers' navigation projects through appropriations.

•**Massachusetts:** Massachusetts operates three ports in the state, which receive funding through the state's Harbors, Rivers, and Inland Waterways Programs. These programs offer grants to provide 75 percent of the local share of the dredging costs and 50 percent for other types of waterways projects. Local sponsors can use general obligation bonds and revenue bonds, both with voter approval, to meet the remaining costs.

•**Michigan:** Michigan ports are owned and operated by public and private entities. To date, there have been no cost-shared projects with the Corps of Engineers.

•**Minnesota:** Minnesota does not offer any assistance for the Corps of Engineers' projects at five public ports. It does offer assistance for improving the infrastructure, marketing, and dredging of nonfederal waterways through its Port Development Assistance Program.

•**Mississippi:** Mississippi operates two ports. The largest port (by tonnage), Pascagoula, received $20 million in general obligation bond funds from the state in 1998. Ports in Mississippi can apply for loans from the state's revolving loan fund, which makes $2 million available each year. The ports can request up to $500,000 a year to be paid off in 10 years at 3 percent interest.

•**Missouri:** In Missouri, all public ports are operated by independent port authorities. Missouri lends support to these ports through legislative appropriations to the Missouri Department of Transportation. The appropriations are specifically directed for the ports' capital needs. The Department then allocates the money to specific ports. The ports can use revenue bonds with voter approval and user fees to help fund the Corps of Engineers' navigation projects.

•**New Hampshire:** The Port Authority of New Hampshire manages one major international seaport and three smaller harbors with commercial traffic. The nonfederal share of the Corps of Engineers' navigation projects in New Hampshire is funded directly through appropriations from the state's general fund.

•**New Jersey:** In New Jersey, four ports are operated by state entities, and one port is operated by a private entity. New Jersey supports its public ports with

legislative appropriations. The ports can also use revenue bonds that do not require voter approval, guaranteed loans, and user fees to pay their share of the Corps of Engineers' navigation projects.

•**New York:** In New York, four ports are operated by state entities and one port is operated by a private entity. New York has provided its public ports with legislative appropriations, grants, and loans. The ports can also use general obligation bonds without voter approval, guaranteed loans, and user fees to pay their share of the Corps of Engineers' navigation projects.

•**North Carolina:** Four ports are operated by the North Carolina State Ports Authority and 31 other ports are operated by municipalities, counties, and private entities. State financial assistance for the Corps of Engineers' navigation projects is provided through legislative appropriations and grants. Local sponsors can use local sales taxes, general obligations and revenue bonds, and property taxes without voter approval as well as user fees to fund their share.

•**Ohio:** In Ohio, ports are operated by independent port authorities. Although Ohio's State Infrastructure Bank can offer loans for transportation projects of all kinds, no loans have been made for port projects. Two small harbor projects have received state assistance through the Ohio Department of Natural Resources.

•**Oregon:** In Oregon, ports consult with the state's Economic Development Department before initiating projects. If the project is approved, that Department provides funding for the entire nonfederal share for the Corps of Engineers' projects. These funds are earmarked specifically for this purpose from state lottery revenue.

•**Oklahoma:** In Oklahoma, two public ports are operated by local port authorities. There have been no Corps of Engineers' navigation projects in Oklahoma since 1986.

•**Pennsylvania:** Pennsylvania operates one port and one port is operated by a municipality. The state has not assisted with any of the Corps of Engineers' projects to date, but a major deepening project of the Delaware River is in the planning stages. The state is planning to offer direct appropriations for a portion of the local share of that project and to develop an infrastructure bank.

•**Rhode Island:** Rhode Island operates four ports and private entities operate two ports. While state assistance is theoretically available for local cost sharing, no dredging has occurred in state waters since 1986.

•**South Carolina:** All public ports in South Carolina are operated by the South Carolina State Ports Authority. The state funds its ports through legislative appropriations and general obligation bonds.

•**Tennessee:** The Tennessee Transportation Equity Trust Fund was established to help with projects and programs related to railways, aeronautics, and waterways. The fund has a $1.5 million balance but has not made any loans for the Corps of Engineers' navigation projects.

•**Texas:** Texas does not offer any support to its ports for the Corps of Engineers' navigation projects. Cities and navigation districts that act as local sponsors can fund their share of the nonfederal cost for a project through general obligation and revenue bonds that need voter approval as well as user fees and guaranteed loans.

•**Vermont:** Vermont has no publicly owned ports.

•**Virginia:** The Virginia Port Authority operates the Port of Hampton Roads. One other port in the state is operated by a city. The state has used legislative appropriations and grants to fund a portion of the local share of the Corps of Engineers' navigation projects.

•**Washington:** Ports in Washington have received state assistance through legislative appropriations. The local sponsors have to pay some of the nonfederal share to obtain state support. A state infrastructure bank is being established, but it will not have sufficient funds to help with the Corps of Engineers' navigation projects for some time. Ferry terminals are considered part of the state highway system and receive 100 percent state funding for the Corps of Engineers' projects.

•**West Virginia:** West Virginia has assisted with port projects, but not for the local share of the Corps of Engineers' navigation projects.

•**Wisconsin:** Ports in Wisconsin are able to levy property taxes, issue general obligation and revenue bonds without voter approval, and use user fees in order to raise funds to finance the nonfederal share of Corps of Engineers projects.

Summary of 12 Projects Terminated for Financial Reasons

Location	Project description	Reason for termination
1. Kenai, Alaska	Dredge a channel to fish-processing plants on the Kenai River and build a bulkhead to minimize beach erosion Estimated cost: $3.8 million	According to the Director of Public Works, City of Kenai, the project was terminated because of the difficulty in funding the nonfederal share. The Finance Director said that the city has $6.7 million in cash reserves; however, it is hesitant to use these funds since the interest from investments help pay for operating costs. The Finance Director said that low-interest loans would be helpful.
2. Saxman, Alaska	Develop a new harbor Estimated cost: $12 million	According to the City Manager, Saxman (a native village with a population of about 400) is unincorporated and it does not have the ability to raise taxes.
3. Ochlocknee Bay, Florida	Deepen a channel to 8 feet Estimated cost: $1.2 million	According to a Corps of Engineers official, the county indicated that it was unable to pay for the project and decided that it would not sponsor a feasibility study.
4. Appalachicola, Florida	Deepen the channel from 9 feet to 11 or 12 feet Estimated cost: $150,000 to $200,000 (for a feasibility study)	According to the City Clerk for Appalachicola, the city only had $120,000 in cash reserves in 1999. It had no funds to pay for a large project. The city has a population of less than 3000, and the county is in a rural area of Florida. The Clerk said that a grant or long-term low interest loan would be helpful in paying for a project.
5. West Sacramento, California	Dredge a 39-mile channel to increase the depth from 30 feet to 35 feet Estimated cost: $50 million	According to the Port Director, the port cannot fund its share of the project with cash flow or new debt, new taxes were politically unacceptable, and local governments were either unable or unwilling to fund the sum.
6. Fort Bragg, California (Noyo Harbor)	Build a breakwater Estimated cost: $31 million	According to the Commissioner, Noyo Harbor Port District, the project is one of many capital projects that it is considering and that currently it is not a top priority. Overall, he estimates that the district has other capital needs of $1.5 million. Because of these other needs, the port finds it difficult to raise capital in debt markets.
7. Pillar Point, California	Deepen the channel from 12 feet to 13 feet to permit fishing vessels to transit to and from the new pier Estimated cost: $3 million	According to the Executive Director, San Mateo County Harbor District, the harbor district is not in a position to handle more debt. The need for the Corps of Engineers' dredging project is linked to the port's ability to finance a new loading and unloading pier for the commercial fishing industry. Currently, district officials estimate that the cost of a new pier is greater than $2 million, and the district is not able to pay for it. Any loan that could be deferred would help the district, according to the Executive Director.
8. Machiasport, Maine	Expand the anchorage at the harbor Estimated cost: $160,000 (for a feasibility study)	According to the First Selectman, Machiasport, the project was terminated because the town did not have $160,000 for a feasibility study. The town is now resubmitting its proposal to the Corps of Engineers because the fishing industry is much stronger and the town now has the financial capability to pay for the project.

Continued

Location	Project description	Reason for termination
9. Beals Island, Maine	Expand the anchorage and improve access to the channel Estimated cost: $125,000 (for a feasibility study)	According to a Corps of Engineers official, this project was terminated because of the town's inability to pay for a feasibility study.
10. Milbridge, Maine	Expand the anchorage Estimated cost: Not available	According to the former harbormaster, Milbridge's inability to finance the project was the reason why the project was terminated.
11. Stonington, Connecticut	Build a breakwater Estimated cost: $100,000 (for a feasibility study)	According to a Corps of Engineers official, the project was terminated due to the town's inability to pay for the feasibility study.
12. Devalls Bluff, Arkansas	Build a slackwater harbor Estimated cost: Between $311,000 and $804,000	According to the Mayor of Devalls Bluff, Arkansas, the project was terminated due to the town's inability to finance the project.

Continued from Previous Page

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