United States General Accounting Office

GAO

Report to the Chairman, Subcommittee on Surface Transportation and Merchant Marine, Committee on Commerce, Science, and Transportation, U.S. Senate

September 2002

MARINE TRANSPORTATION

Federal Financing and a Framework for Infrastructure Investments

GAO-02-1033

Contents

Tables

Figures

Abbreviations

DOD	Department of Defense
DOJ	Department of Justice
DOT	Department of Transportation
GAO	General Accounting Office
HHS	Department of Health and Human Services
ICMTS	Interagency Committee on the Marine Transportation System
MTS	Marine Transportation System
NAC	Marine Transportation System National Advisory Council
USDA	U.S. Department of Agriculture

GAO
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, DC 20548

September 9, 2002

The Honorable John Breaux
Chairman, Subcommittee on Surface
Transportation and Merchant Marine
Committee on Commerce, Science,
and Transportation
United States Senate

Dear Mr. Chairman:

As the world's leading trading nation, the United States depends on a vast marine transportation system. Ninety-five percent of our overseas trade tonnage moves by water, and the cargo moving through the U.S. marine transportation system contributes hundreds of billions of dollars to the U.S. gross domestic product. The marine transportation system includes coastal ports and shipping channels; 25,000 miles of navigable inland and coastal channels and waterways like the Mississippi, St. Lawrence, and Columbia Snake rivers; and ports on the Great Lakes and elsewhere. According to a congressionally mandated report (1999 marine transportation system [MTS] report)[1] that assessed the capabilities and challenges of the system, critical issues include modernizing aging locks and dams on inland waterways, dredging waterways to new depths to accommodate larger ships, and upgrading navigation systems for maximum safety and efficiency. Additionally, new and far-reaching security challenges have emerged for the system since the September 11 terrorist attacks.

As it does with the nation's highway and aviation systems, the federal government participates with hundreds of public and private entities in maintaining and improving the marine transportation system. Federal funding has been directed primarily at "waterside" projects such as maintaining channels, aiding navigation, and monitoring the entry of ships into the nation's ports. "Landside" projects, such as terminals, berths, piers, and systems for transferring goods from ships to trains and trucks, have been funded mainly by state and local entities. Federal funding for

[1] U.S. Department of Transportation, *An Assessment of the U.S. Marine Transportation System: A Report to Congress* (Washington, D.C.: September 1999).

the system is derived from either general revenues or a variety of user charges.

You asked us to analyze federal funding for the commercial marine transportation system and compare it with federal funding for the aviation and highway systems. As agreed with your office, this report provides information on the amount of federal funds expended to support the commercial marine transportation system and the amount of revenue collected from federal assessments on the users of the system for fiscal years 1999, 2000, and 2001. Similarly, this report provides information on the amount of federal funds expended to support the aviation and highway transportation systems and the amount of revenue collected from federal assessments on the users of the transportation systems for fiscal years 1999, 2000, and 2001. As you requested, we also are providing information on customs duties.[2] In addition, we agreed to use our work on this assignment, together with past work in transportation and other issues, to present a framework that the Congress could use to consider potential changes to the scope or nature of future federal investments in the marine transportation system.

We gathered information on expenditures and collections from 15 federal agencies involved in supporting the commercial marine, aviation, and highway transportation systems.[3] We asked each agency to identify the source of funding for expenditures and the accounts that were credited

[2] Unlike assessments on users of a transportation system, customs duties are not related to the use of the transportation system; rather, customs duties are taxes on imported goods without regard to their mode of transportation. Some customs duties are earmarked for specific purposes. Under Section 612 of Title 7 of the United States Code (U.S.C.), 30 percent of the gross receipts from customs duties are designated for agricultural and food programs. Pursuant to 16 U.S.C 3912, all duties on guns and ammunitions are credited to the Migratory Bird Conservation Fund and pursuant to 26 U.S.C. 9504, duties on fishing tackle and yachts and pleasure craft are credited to the Sports Fish Restoration Account of the Aquatic Resources Trust Fund. In addition, tariffs from wood and certain wood products are credited to the Reforestation Trust Fund up to a total of $30 million (16 U.S.C. 1606a).

[3] For the purposes of this report, collections represent revenues obtained from the users of each system. The collections may include revenues credited to federal funds, offsetting collections, or offsetting revenue. Expenditures are outlays, which represent spending made to pay federal obligations. The expenditures may include outlays for obligations incurred in the current fiscal year or in previous fiscal years.

with the collections based on categories we identified for this purpose.[4] We separated their expenditures into the following categories: administrative services; physical services, such as inspections and certifications; construction and maintenance; or miscellaneous services. In addition, we obtained information on customs duties collected on goods transported by each transportation system. Although we had each agency validate the data provided, we did not independently verify agency expenditures and collections. To provide a framework for the Congress when considering a revised federal investment role in the marine transportation system, we relied extensively on the perspectives gained from our past work in transportation and infrastructure systems and federal investment strategy.[5] Appendix I contains a more detailed description of the scope and methodology of our work. We conducted our work from January 2002 to September 2002 in accordance with generally accepted government auditing standards.

Results in Brief

During fiscal years 1999, 2000, and 2001, federal expenditures for the commercial marine transportation system averaged $3.9 billion per year. Funding for about 80 percent of these expenditures came from the U.S. Treasury's general fund.[6] During this same period, federal agencies collected about $1 billion each year from marine transportation system users. Most of these collections were credited to trust fund accounts[7] that,

[4] Assessments on users of transportation systems can be used for the general support of federal activities or may be earmarked by law for specific purposes and credited to trust funds. Also, some collections are credited directly to agency accounts for services provided. Expenditures can be made from general fund accounts, trust fund accounts, and agency accounts.

[5] U.S. General Accounting Office, *Intercity Passenger Rail: Congress Faces Critical Decisions in Developing a National Policy*, GAO-02-522T (Washington, D.C.: Apr. 11, 2002); U.S. General Accounting Office, *U.S. Infrastructure: Funding Trends and Opportunities to Improve Investment Decisions*, GAO/RCED/AIMD-00-35 (Washington, D.C.: Feb. 7, 2000); U.S. General Accounting Office, *Executive Guide: Leading Practices in Capital Decision-Making*, GAO/AIMD-99-32 (Washington, D.C.: December 1998); U.S. General Accounting Office, *Federal Budget: Choosing Public Investment Programs*, GAO/AIMD-93-25 (Washington, D.C.: July 23, 1993); and U.S. General Accounting Office, *Commercial Aviation: A Framework for Considering Federal Financing Assistance*, GAO-01-1163T (Washington, D.C.: Sept. 20, 2001).

[6] The general fund means the accounts for receipts not earmarked by law for a specific purpose, such as taxes, customs duties, miscellaneous receipts, the proceeds of general borrowing, and the expenditures of these monies.

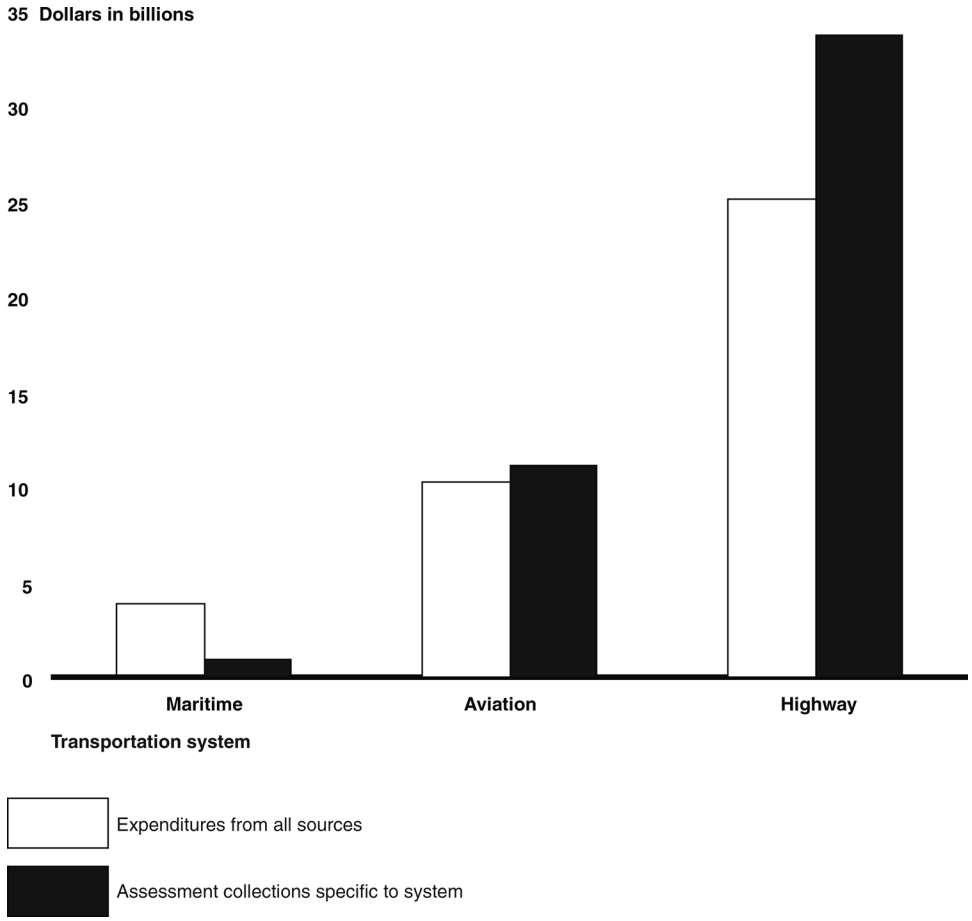
[7] A federal trust fund is an accounting mechanisms used to link earmarked receipts with the expenditures of those receipts. It is designated in law as a "trust" fund.

by law, are dedicated to maritime-related activities such as improving inland waterways or supporting harbor maintenance. In addition, customs duties levied on commodities imported through the marine transportation system averaged about $15.2 billion each year, most of which were deposited in the U.S. Treasury's general fund.

During the same three-year period, federal expenditures for aviation and highway transportation systems averaged $10 billion and $25 billion, respectively, each year. Unlike the funding approach for the marine transportation system, which relies extensively on general tax revenue, the federal funding approach for aviation and highway relies almost exclusively on assessments on users of the transportation systems. During this period, federal agencies collected an average of $11 billion each year from users of the aviation transportation system and an average of $34 billion each year from users of the highway transportation system.[8] As with the marine transportation system, most of these collections were credited to trust fund accounts. Figure 1 summarizes the expenditure and assessment comparisons across the three transportation systems. In addition, customs duties for commodities imported through the aviation and highway systems averaged $3.7 billion and $928 million, respectively, per year.

[8] For fiscal years 1999 through 2001, collections for the aviation and highway transportation systems generally exceeded expenditures each year. Expenditures are made to liquidate current or prior years' obligations. Surplus funds were retained in the trust fund to be appropriated in future years.

Figure 1: Comparison of Federal Expenditures and Assessments on Users Specific to Each Transportation System (Average for Fiscal Years 1999–2001)



Source: GAO analysis of data provided by the agencies that expended and/or collected funds.

With so many stakeholders involved in the marine transportation system and so many potential demands for funding to maintain and enhance the system, federal decision makers would clearly benefit by having a systematic framework for making investment choices and for ensuring that limited federal resources are used prudently. In examining federal investment approaches across a broad stratum of national activities, we have found that key components of a framework for evaluating federal investments include (1) setting clear and measurable national goals for the marine transportation system, including its relationship to other transportation modes; (2) defining what the federal role should be relative to other stakeholders; (3) determining which funding approaches and related tools will maximize the federal return; and (4) ensuring that a

process is in place for evaluating performance periodically so that goals, roles, and approaches can be reexamined and modified as necessary.

Background

The marine transportation system is a vital component of our nation's economic growth and plays an important role in national defense. According to the 1999 MTS Report, there is a growing gap between the services that the current infrastructure can provide and the increasing levels of demand being placed upon it. Furthermore, security issues have emerged as a result of the September 11 terrorist attacks.[9] Given these changes, port stakeholders have growing concerns about the level of effort needed to keep the system functioning efficiently and are asking the federal government to increase funding for the system.

Nation's Extensive Marine Transportation System Fills Many Roles

The United States is the world's largest maritime trading nation, accounting for 1 billion metric tons, or nearly 20 percent of the world's oceanborne trade. Over 95 percent of the U.S. overseas trade tonnage is shipped by sea. The marine transportation system, a system of navigable waterways that connects oceans to rivers, lakes, and canals, serves waterborne commerce through more than 300 public and private ports. These ports serve as freight connectors between the waterborne system and the nation's other transportation systems. In addition to the ports and navigable waterways, the marine transportation system also encompasses vessels, marine terminals, intermodal connections, shipyards, locks, dams, and information systems.

The marine transportation system plays an essential role in the nation's economy and defense. For example, it moves import and export cargo worth hundreds of billions of dollars, generating jobs, both directly and indirectly, for Americans and our trading partners. The system's inland waterways also support the movement of grain, petroleum products, coal, paper products, and industrial chemicals. In addition to its economic role, the marine transportation system plays an important role in national defense by facilitating the movement of military equipment and supplying troops deployed overseas. The nation's marine transportation system also serves as an alternative transportation mode to roads and provides recreational value through boating, fishing, and cruises.

[9] U.S. General Accounting Office, *Port Security: Nation Faces Formidable Challenges in Making New Initiatives Successful*, GAO-02-993T (Washington, D.C.: Aug. 5, 2002).

Federal, state, and local governments and private sector organizations all participate in financing the marine transportation system. In general, expenditures for the development and operation of the waterside portion of the system (e.g., dredging channels, installing navigational aids, monitoring vessel traffic, or operating locks and dams) have been largely a public function, with participation at the federal, state, and local government levels. Ports—usually state, county, or local entities—and private commercial interests spend billions of dollars in the landside portion of the system by updating and modernizing their facilities. The source of the expenditures for intermodal connections (rail, pipeline, or highway) can vary. For example, rail and pipeline development are generally funded by the private sector; funding for public roadways, on the other hand, comes from the public sector.

One source of federal funding common to all three major transportation systems—marine, aviation, and highway—is collections from assessments on users of the system. These collections can include user fees and excise taxes.[10] Collections are deposited into the U.S. Treasury's general fund and can be used for the general support of federal activities or may be earmarked by law for specific purposes and credited to a trust fund. Also, some collections are credited directly to agency accounts for services provided by that agency such as inspections or certifications. Trust funds that support the marine transportation system include the Harbor Maintenance Trust Fund and the Inland Waterways Trust Fund. Trust funds that support the aviation and highway transportation systems include the Airport and Airway Trust Fund and the Highway Trust Fund. (See app. II for detailed information concerning these trust funds.) The portion of collections from users of these systems that are deposited into the U.S. Treasury's general fund are not earmarked for a specified purpose and are used for the general support of federal activities.

[10] User fees are charged to users for goods or services provided by, or activities regulated by the federal government. User fees generally apply to activities that provide benefits to identifiable recipients, and are normally related to the cost of the goods or services provided. They may be paid into the general fund or, under specific statutory authority, may be made available to an agency carrying out the activity. An example is a fee for entering a national park. User fees may also be collected through a tax such as an excise tax. Since these collections result from the government's sovereign powers, the proceeds are generally recorded as budget receipts, not as offsetting collections. Excise taxes can also be dedicated to specific programs and agencies. An example is the federal gasoline tax.

In addition to assessing fees and taxes to specifically support the transportation systems, the federal government also assesses customs duties on goods imported into the United States. All three transportation systems ship goods that generate customs duties. Customs duties are taxes on imported goods without regard to their mode of transportation. The majority of customs duties are deposited into the U.S. Treasury's general fund to be used for the general support of federal activities.

Concerns Have Been Raised about the Adequacy of the System's Infrastructure

Given the role of the marine transportation system within the nation's entire transportation system, some system stakeholders have raised concerns about the system's ability to keep pace with the growing levels of demands being placed upon it. This issue was discussed in depth in the 1999 MTS Report that assessed the capabilities and challenges of the nation's marine transportation system.[11] The report cited a growing gap between transportation demands and shifting user requirements on one side and available transportation infrastructure on the other side. According to the report, the projected doubling of maritime trade by the year 2020 and the need for the system to be responsive to users means that the infrastructure would face challenges on several levels. The projected increase in maritime trade will likely result in an increase in the overall demand for the kinds of infrastructure improvements in which the federal government has typically participated. For example, there are calls to modernize aging structures such as key locks and dams in river transportation systems. Changes in the shipping industry also have increased the pressure to make capacity improvements, such as deeper navigation channels to accommodate larger ships.

Since the issuance of the 1999 MTS Report, new and far reaching security issues have emerged as a result of the September 11 terrorist attacks. Many of the security improvements now planned or under way at our nation's ports will require costly outlays for infrastructure, technology, and personnel. Even before September 11, the Interagency Commission on Crime and Security in U.S. Seaports[12] estimated that the cost of upgrading

[11] U.S. Department of Transportation, *An Assessment of the U.S. Marine Transportation System: A Report to Congress* (Washington, D.C.: September 1999). GAO did not verify the accuracy of the information contained in this report.

[12] On April 27, 1999, the President established the Interagency Commission on Crime and Security in U.S. Seaports. The Commission issued its report on August 28, 2000. GAO did not validate the estimates contained in this report.

security infrastructure at U.S. ports ranged from $10 million to $50 million per port. These estimates could increase dramatically due to new post-September 11 security requirements. For example, when the Congress recently made $92.3 million in federal funding available for port security as part of a supplemental appropriations bill,[13] the Transportation Security Administration received grant applications totaling almost $700 million.[14]

In today's environment, with growing system demands and border security concerns, some stakeholders have suggested a larger federal role in funding the marine transportation system. Two examples illustrate the mounting pressure for increased federal funding in this area. First, for the last several years, the U.S. public port authorities have advocated increased federal funding for dredging. Currently, funding for such maintenance—which has totaled more than $700 million annually since fiscal year 2000—is derived from a fee on passengers and imported and domestic cargo loaded and unloaded in U.S. ports. Ports and shippers would like to see funding for maintenance dredging come from the general fund instead, and there was legislation introduced in 1999 to do so.[15] Second, besides the growing pressures on areas of traditional federal investment, ports are seeking substantial federal assistance to enhance security in the aftermath of the events of September 11. In other work we have conducted on port security,[16] port and private-sector officials have said that they believe combating terrorism is the federal government's responsibility, and that if additional security is needed, the federal government should provide or pay for it.

[13] Although $93.3 million was made available in the supplemental appropriations bill, $1 million was authorized for administrative expenses. As of June 17, 2002, 77 grants for 144 port security projects were awarded.

[14] The Transportation Security Administration, the Coast Guard, and the Maritime Administration reviewed applications under the Port Security Grants Program, which is based on the seaport security provisions contained in the Department of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act of 2002 (Pub. L. No. 107-117, H.R. Conference Report 107-350).

[15] H.R. 1260 was introduced in the 106th Congress to repeal the Harbor Maintenance Tax and return to funding the costs of operating and maintaining federal navigation channels from general revenues.

[16] U.S. General Accounting Office, *Port Security: Nation Faces Formidable Challenges in Making New Initiatives Successful*, GAO-02-993T (Washington, D.C.: Aug. 5, 2002).

Deciding on an appropriate federal role to address these concerns requires, in part, a better understanding of the magnitude and nature of federal revenues generated by and expenditures for the maritime transportation system and how these revenues and expenditures compare to other transportation modes. Also key is the establishment of a sound investment framework to make certain that limited federal dollars are applied in ways that, from a national perspective, provide the greatest public benefit.

Federal Funding for the Commercial Marine Transportation System

During fiscal years 1999, 2000, and 2001, federal expenditures for the commercial marine transportation system averaged about $3.9 billion each year, most of which was provided from general revenues. About 45 percent of this money was spent on construction and maintenance of federally authorized projects. During this same period, almost $1 billion in revenue was collected each year by federal agencies from users of the marine transportation system, and most of this money was credited to trust fund accounts dedicated to financing the system. In addition, customs duties on imported goods shipped through the system during the same period averaged $15.2 billion each year. The majority of the customs duties are deposited into the U.S. Treasury's general fund.

General Revenues Account for More than Three-Fourths of the Federal Expenditures for the Commercial Marine Transportation System

Thirteen federal agencies[17] spent an average of $3.9 billion[18] annually for 3 years on the commercial marine transportation system. (See app. III.) As shown in table 1, the majority of federal funding spent by these agencies for the system came from general revenues. On average, general revenues accounted for $3 billion, or 80 percent, of the total amount expended for the system.

Table 1: Total Expenditures for the Commercial Marine Transportation System by Source of Funds (Fiscal Years 1999-2001)

Dollars in millions				
Source of funds	**1999**	**2000**	**2001**	**Average**
Reimbursable agency accounts	$41	$49	$51	$47
Trust fund accounts	426	853	825	701
General revenues	3,250	2,994	3,117	3,120
Total marine transportation system	**$3,717**	**$3,896**	**$3,993**	**$3,868**

Note: Figures are nominal and have not been adjusted for inflation.

Source: GAO analysis of data provided by agencies that expended funds.

To provide a perspective on the uses for which federal expenditures were applied, we analyzed the type of service or activity for which each expenditure was directed. We used four categories: administrative processing and associated services (e.g., processing documents or issuing

[17] The 13 federal agencies are as follows: the Animal, Plant, and Health Inspection Service, Department of Agriculture; U.S. Army Corps of Engineers, Department of Defense; Centers for Disease Control and Prevention, Department of Health and Human Services; Coast Guard, Department of Transportation; Customs Service, Department of Treasury; Federal Communication Commission; Federal Maritime Commission; Grain Inspection, Packers, and Stockyards Administration, Department of Agriculture; Immigration and Naturalization Service, Department of Justice; Internal Revenue Service, Department of Treasury; Maritime Administration, Department of Transportation; National Oceanic and Atmospheric Administration, Department of Commerce; and Saint Lawrence Seaway Development Corporation, Department of Transportation.

[18] This amount does not include the U.S. Maritime Administration's Title XI program, which has been established pursuant to Title XI of the Merchant Marine Act of 1936, as amended. Under the Title XI program, the U.S. Maritime Administration provides credit guarantees by the U.S. Government of debt obligations for the financing of vessels constructed, reconstructed, or reconditioned in U.S. shipyards. Under this same program, credit guarantees are provided to U.S. shipyards for the purpose of financing advanced shipbuilding technology and modern shipbuilding technology. Since this program is a guarantee program, funds for the guaranteed debt obligations are obtained in the private sector. During fiscal years 1999, 2000, and 2001, the federal government guaranteed loans amounting to $1.8 billion, $886 million, and $730 million, respectively.

permits), physical services (e.g., inspections or certifications), construction and maintenance projects (e.g., dredging, constructing or maintaining locks and dams, or operating and maintaining aids to navigation), and miscellaneous services. As shown in table 2, the average amount expended for construction and maintenance projects represented $1.7 billion, or 45 percent, of the total amount expended annually for the system, with physical services accounting for about $1.5 billion, or 38 percent.

Table 2: Amounts and Type of Federal Expenditures for the Marine Transportation System (Fiscal Years 1999-2001)

Dollars in millions				
Type of service or activity	**1999**	**2000**	**2001**	**Average**
Administrative	$497	$564	$605	$555
Physical services	1,429	1,486	1,496	1,471
Construction and maintenance	1,696	1,747	1,794	1,746
Miscellaneous	95	99	98	97
Total marine transportation system	**$3,717**	**$3,896**	**$3,993**	**$3,869**

Note: Figures are nominal and have not been adjusted for inflation.

Source: GAO analysis of data provided by agencies that expended funds.

Most of the Revenue Collected from System Users was Credited to Trust Fund Accounts

Eleven different federal agencies collected an average of nearly $1 billion each year from users of the commercial marine transportation system to help finance federal expenditures to support the system.[19] (See app. IV.) As shown in table 3, an average of $830 million, or 85 percent, of the assessment amounts collected from users was credited to trust funds to be appropriated to agencies for designated services, with the remaining amount credited to agency accounts as reimbursement for the services provided or deposited in the general fund for the general support of federal activities.

[19] The 11 federal agencies include the Animal, Plant, and Health Inspection Service, Department of Agriculture; Centers for Disease Control and Prevention, Department of Health and Human Services; Coast Guard, Department of Transportation; Customs Service, Department of Treasury; Federal Communications Commission; Federal Maritime Commission; Grain Inspection, Packers, and Stockyards Administration, Department of Agriculture; Immigration and Naturalization Service, Department of Justice; Internal Revenue Service, Department of Treasury; Maritime Administration, Department of Transportation; and National Oceanic and Atmospheric Administration, Department of Commerce.

Table 3: Distribution of Amounts Collected from Marine Transportation System Users (Fiscal Years 1999-2001)

Dollars in millions				
Fund type	**1999**	**2000**	**2001**	**Average**
Reimbursable agency accounts	$41	$51	$54	$49
Trust fund accounts	741	857	891	830
General fund	93	97	99	96
Total marine transportation system	**$875**	**$1,005**	**$1,044**	**$975**

Note: Figures are nominal and have not been adjusted for inflation.

Source: GAO analysis of data provided by agencies that collected the assessments.

The collections shown in table 3 do not include amounts from customs duties levied on the goods carried through the marine transportation system. The Customs Service estimates that duties on commodities entering the United States by the system for fiscal years 1999, 2000, and 2001 were about $14.3 billion, $15.6 billion, and $15.6 billion, respectively. (See app. V.) Most of the customs duties are deposited into the general fund for the general support of federal activities, with the largest exception being that approximately 30 percent of the gross receipts from customs duties were designated for agricultural and food programs.

Federal Funding for the Aviation and Highway Transportation Systems

During fiscal years 1999, 2000, and 2001, federal expenditures averaged $10 billion each year for the aviation system and $25 billion each year for the highway system. Unlike the funding approach used for the commercial marine transportation system, which relies heavily on general tax revenue, the aviation and highway transportation systems were primarily funded by collections from users of the systems that are accounted for in trust funds. During this same period, most of the revenue collected by federal agencies for the aviation and highway transportation systems were credited to trust fund accounts. Customs duties on imported goods carried by these systems averaged $3.7 billion each year for the aviation transportation system and $928 million for the highway transportation system. Most of these customs duties were deposited into the U.S. Treasury's general fund.

Assessments on Users Are the Primary Source of Funding for the Aviation and Highway Transportation Systems

Six federal agencies[20] were involved in spending the $10 billion annually on the aviation transportation system and five federal agencies[21] were involved in expending the $25 billion annually on the highway transportation system. (See app. III.) Whereas the primary source of funding for the marine transportation system is general tax revenues, the vast majority of federal funding invested in both the aviation and highway systems came from assessments on users of the systems that are accounted for in trust fund accounts, as shown in table 4. During the three-year period, assessments on system users were the funding source for about 88 percent of the amount spent on the aviation system and over 99 percent of the amount spent on the highway system.

Table 4: Total Expenditures for the Aviation and Highway Transportation Systems by Source of Funds (Fiscal Years 1999-2001)

Dollars in millions				
Source of funds	**1999**	**2000**	**2001**	**Average**
Aviation transportation system				
Reimbursable agency accounts	$238	$258	$267	$254
Trust fund accounts	8,172	9,180	9,696	9,016
General revenues	969	1,007	1,070	1,015
Total aviation system	**$9,379**	**$10,445**	**$11,033**	**$10,285**
Highway transportation system				
Reimbursable agency accounts	$24	$24	$22	$23
Trust fund accounts	22,706	25,007	27,209	24,974
General revenues	90	68	116	91
Total highway system	**$22,820**	**$25,099**	**$27,347**	**$25,088**

Note: Figures are nominal and have not been adjusted for inflation.

Source: GAO analysis of data provided by agencies that expended funds.

As we did for maritime funds, we analyzed the type of service or activity for which each expenditure was directed, using the same four categories

[20] The six federal agencies involved in expenditures for the aviation system are the Animal, Plant, and Health Inspection Service, Department of Agriculture; Customs Service, Department of Treasury; Federal Aviation Administration, Department of Transportation; Federal Communications Commission; Immigration and Naturalization Service, Department of Justice; and Internal Revenue Service, Department of Treasury.

[21] The five federal agencies involved in expenditures for the highway transportation system are the Animal, Plant, and Health Inspection Service, Department of Agriculture; Customs Service, Department of Treasury; Federal Highway Administration, Department of Transportation; Immigration and Naturalization Service, Department of Justice; and Internal Revenue Service, Department of Treasury.

of administrative processing and associated services, physical services, construction and maintenance projects, and miscellaneous services. As shown in table 5, the average amount expended for construction and maintenance projects represented about $7.2 billion, or 70 percent, of the total amount expended for the aviation system and about $25 billion, or nearly 100 percent, of the total amount expended for the highway system. The Federal Aviation Administration and the Federal Highway Administration distributed most of the funds expended for construction and maintenance projects for these systems.

Table 5: Amounts and Type of Federal Expenditures for the Aviation and Highway Transportation Systems (Fiscal Years 1999-2001)

Dollars in millions				
Type of service or activity	**1999**	**2000**	**2001**	**Average**
Aviation transportation system				
Administrative	$423	$437	$472	$444
Physical services	2,466	2,543	3,059	2,689
Construction and maintenance	6,490	7,465	7,502	7,152
Miscellaneous	0	0	0	0
Total aviation system	**$9,379**	**$10,445**	**$11,033**	**$10,285**
Highway transportation system				
Administrative	$41	$34	$37	$37
Physical services	79	65	110	84
Construction and maintenance	22,700	25,000	27,200	24,967
Miscellaneous	0	0	0	0
Total highway system	**$22,820**	**$25,099**	**$27,347**	**$25,088**

Note: Figures are nominal and have not been adjusted for inflation.

Source: GAO analysis of data provided by agencies that expended funds.

Most Revenue Collected from System Users Was Credited to Trust Fund Accounts

Five federal agencies collected an average $11 billion from the aviation transportation system[22] while four federal agencies collected an average $34 billion on the highway transportation system.[23] (See app. IV.) As with the marine transportation system, the vast majority of the assessment amounts collected on the aviation and highway transportation systems was credited to trust funds to be appropriated to agencies for designated services, as shown in table 6. The remaining amounts were credited to agency accounts as reimbursement for the services they provided or deposited into the U.S. Treasury's general fund for the general support of federal activities. On average, about 94 percent of the $11.1 billion collected annually for the aviation system and nearly 100 percent of the $33.7 billion collected annually for the highway system were credited to trust fund accounts.

Table 6: Distribution of Amounts Collected from Aviation and Highway System Users (Fiscal Years 1999-2001)

Dollars in millions				
Fund type	**1999**	**2000**	**2001**	**Average**
Aviation transportation system				
Reimbursable agency accounts	$236	$255	$265	$252
Trust fund accounts	11,663	9,860	9,581	10,368
General fund	421	437	466	441
Total aviation system	**$12,320**	**$10,552**	**$10,312**	**$11,061**
Highway transportation system				
Reimbursable agency accounts	$24	$24	$22	$23
Trust fund accounts	32,255	35,134	33,683	33,691
General fund	1	2	2	2
Total highway system	**$32,280**	**$35,160**	**$33,707**	**$33,716**

Note: Figures are nominal and have not been adjusted for inflation.

Source: GAO analysis of data provided by agencies that collected the assessments.

[22] The five federal agencies that levy assessments on users of the aviation transportation system are the Animal, Plant, and Health Inspection Service, Department of Agriculture; Customs Service, Department of Treasury; Federal Communications Commission; Immigration and Naturalization Service, Department of Justice; and Internal Revenue Service, Department of Treasury.

[23] The four federal agencies that levy assessments on users of the highway transportation system are the Animal, Plant, and Health Inspection Service, Department of Agriculture; Customs Service, Department of Treasury; Immigration and Naturalization Service, Department of Justice; and Internal Revenue Service, Department of Treasury.

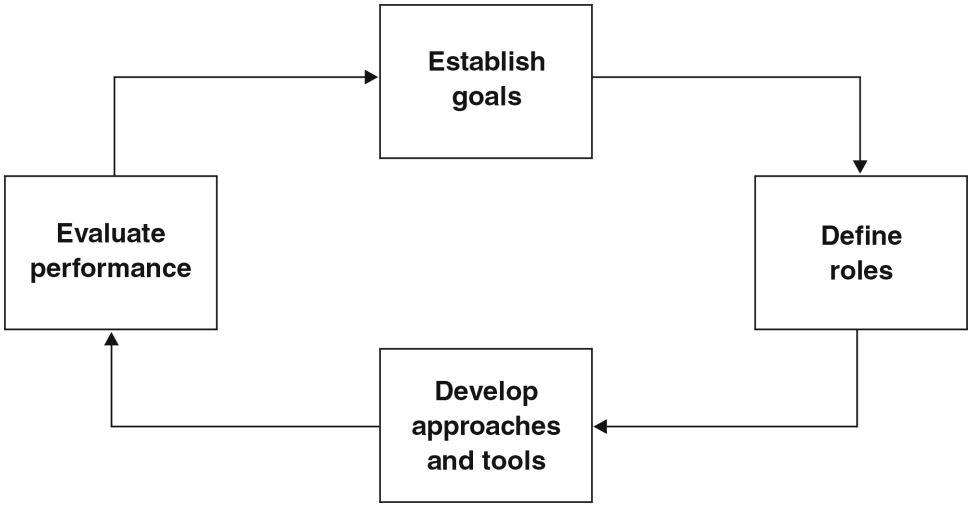
The Customs Service reported that duties on commodities entering the United States by the aviation transportation system for fiscal years 1999, 2000, and 2001 were about $3.6 billion, $4.1 billion, and $3.4 billion, respectively. For the same period, customs duty collections for the highway system were about $1.2 billion, $880 million, and $735 million. (See app. V.) Most of these customs duties were credited to the general fund for the general support of federal activities.

Systematic Framework Would Help Guide Decisions on Federal Investment in the Marine Transportation System

A systematic framework with several key components would be helpful in considering potential changes in the scope or nature of federal funding for the marine transportation system. Substantial new investments in the maritime infrastructure by federal, state, and local governments and by the private sector may be required because of an aging infrastructure, changes in the shipping industry, and increased concerns about security. Pressure on the federal government to bear a significant portion of these new investment costs is evident. These growing and varied demands for increased federal investments in the marine transportation system heighten the need for a clear understanding about the federal government's purpose and role in providing funding for the system and for a sound investment approach to guide federal participation. In examining federal investment approaches across many national activities, we have found that issues such as these are best addressed through a systematic framework. As shown in figure 2, this framework has the following four components that potentially could be applied to all transportation systems:

- Set national goals for the system. These goals, which would establish what federal participation in the system is designed to accomplish, should be specific and measurable.
- Define clearly what the federal role should be relative to other stakeholders. This step is important to help ensure that federal participation supplements and enhances participation by others, rather than simply replacing their participation.
- Determine which funding tools and other approaches, such as alternatives to investment in new infrastructure, will maximize the impact of any federal investment. This step can help expand the capacity to leverage funding resources and promote shared responsibilities.
- Ensure that a process is in place for evaluating performance periodically so that defined goals, roles, and approaches can be reexamined and modified, as necessary.

Figure 2: Framework for Developing an Effective Federal Investment Strategy



Source: GAO.

Establishing National Goals to Guide Federal Participation

The first component of a framework for evaluating federal investments is establishing a set of clearly defined national goals that can serve as a basis for guiding federal participation. Such goals can help chart a clear direction, establish priorities among competing issues, specify the desired results, and lay the foundation for such other decisions as determining how assistance will be provided.

At the federal level, measuring results for federal programs has been a longstanding objective of the Congress. The Government Performance and Results Act of 1993[24] has become the primary legislative framework through which agencies are required to set strategic and annual goals that are based on national goals, measure performance, and report on the degree to which goals are met and on what actions are needed to achieve or modify goals that have not been met. These goals need to be measurable in order to identify and provide accountability for the amount of public benefits to be attained. Stating goals in measurable terms makes it easier to assess the success or failure of government support and ultimately, to hold system stakeholders accountable for the outcomes. Establishing clear goals and performance measures for the marine

[24] Pub. L. No. 103-62.

transportation system is critical to ensuring both a successful and a fiscally responsible effort.

Meaningful goal-setting for the marine transportation system requires an in-depth understanding of the relationship of the system to other transportation modes. Transportation experts highlight the need to view the system in the context of the entire transportation system in addressing congestion, mobility, and other challenges and ultimately investment decisions. For example, congestion challenges often occur where modes connect or should connect, such as ports where freight is transferred from one mode to another. The connections require coordination of more than one mode of transportation and cooperation among multiple transportation providers and planners. While decision makers recognize the importance of intermodal planning, the goals for the system need to reflect this broader perspective. A systemwide approach to transportation planning and funding, as opposed to focus on a single mode or type of travel, could improve focus on outcomes related to customer or community needs.

Meaningful goal-setting also requires a comprehensive understanding of the scope and extent of issues and priorities facing the marine transportation system. However, there are clear signs that certain key issues and priorities are not yet understood well enough to establish meaningful goals for the system. For example, a comprehensive analysis of the issues and problems facing the maritime transportation system has not yet been accomplished.[25] In setting goals for investment decisions, leading organizations usually perform comprehensive needs assessments to obtain a clear understanding of the extent and scope of their issues, problems, and needs and ultimately to identify resources needed. These assessments should be results-oriented in that they determine what is needed to obtain specific outcomes rather than what is needed to maintain or expand

[25] The 1999 MTS Report identified a number of issues and problems facing the maritime transportation system. These included increased dredging requirements to accommodate larger container ships, aging and limited capacity of lock and dam systems on inland waterways, and congestion due to ineffective intermodal connections. In January 2000, the Secretary of Transportation chartered the Marine Transportation System National Advisory Council to help implement the recommendations in the 1999 MTS Report. An interagency committee was also established to facilitate implementation of the recommendations in the report. Recognizing the need to thoroughly analyze the issues and problems facing the maritime transportation, the interagency committee is in the process of seeking contract support for a comprehensive analysis assessing the future needs and funding of the maritime system. (See app. VI.)

existing capital stock.[26] Developing such information is important for ensuring that goals are framed in an adequate context. The call by many ports for federal assistance in dredging channels or harbors to 50 feet is an example. Dredging to 50 feet allows a port to accommodate the largest of the container ships currently being constructed and placed in service. However, developing the capacity to serve such ships is no guarantee that companies with such ships will actually choose to use the port. Every port's desire to be competitive by having a 50-foot channel could thus lead to a situation in which the nation as a whole has an overcapacity for accommodating larger ships. The result, at least for the excess capacity, would signal an inefficient use of federal resources that might have been put to better use in other ways. Proper economic analysis for the justification of such a project, however, may minimize the likelihood of such excess capacity.

Defining the Federal Role Relative to Other Stakeholders

The second component of the framework involves defining the federal role relative to other stakeholders. The federal government is only one of many stakeholders in the marine transportation system.[27] While these various stakeholders may all be able to share a general vision of the system, they are likely to diverge in the priorities and emphasis they place on specific goals. For example, the federal government, with its national point of view, is in a much different position than a local port intensely involved in head-to-head competition with other ports for the business of shipping companies or other businesses. For a port, its own infrastructure is paramount, while the federal government's perspective is focused on the national and broader public interest.

Past patterns of participation are a tacit acknowledgement of these differences in roles. Traditionally, federal participation has been directed mainly at projects related to "waterside" issues, such as keeping navigation channels open by dredging or icebreaking; improving systems of locks and dams; maintaining navigational aids such as lighthouses or radio systems; and monitoring the movement of ships in and out of the nation's coastal waters. Federal participation has generally not extended to "landside" projects related to a port's capabilities, such as building

[26] U.S. General Accounting Office, *U.S. Infrastructure: Funding Trends and Federal Agencies' Investment Estimates*, GAO-01-986T (Washington, D.C.: July 23, 2001).

[27] At least 13 federal agencies are involved in supporting the marine transportation system.

terminals or piers and purchasing cranes or other equipment to unload cargoes.[28]

Since there are so many stakeholders involved with the marine transportation system, achieving national goals for the system hinge on the ability of the federal government to forge effective partnerships with nonfederal entities. Decision makers have to balance national goals with the unique needs and interests of all nonfederal stakeholders in order to leverage the resources and capabilities that reside within state and local governments and the private sector.

Future partnering among key maritime stakeholders may take on a different form as transportation planners begin focusing across transportation modes in making investment decisions instead of making investment decisions for each mode separately. Transportation experts with whom we talked said that current transportation planning institutions, such as state transportation departments and metropolitan planning organizations,[29] may not have sufficient expertise or authority to effectively identify and implement improvements across modes. They suggested that transportation planning by all entities should focus more closely on regional issues and highlighted the importance of cooperation and coordination among modal agencies at the federal, state, and local levels, between public and private transportation providers, and between transportation planning organizations and other government and community agencies to address transportation issues.

The Alameda Corridor Program in the Los Angeles area provides an example of how effective partnering allowed the capabilities of the various stakeholders to be more fully utilized. Called the Alameda Corridor because of the street it parallels, the program created a 20-mile, $2.4 billion railroad express line connecting the ports of Los Angeles and Long Beach to the transcontinental rail network east of downtown Los Angeles. The express line eliminates approximately 200 street-level railroad crossings, relieving congestion and improving freight mobility for cargo. This project made substantial use of local stakeholders' ability to raise

[28] One exception has been intermodal connections, such as rail or highway connections. The federal government has traditionally participated in funding such projects.

[29] Metropolitan Planning Organizations are organizations responsible for adopting transportation improvement programs in accordance with the Transportation Equity Act for the 21st Century (TEA-21).

funds. While the federal government participated in the cost, its share was about 20 percent of the total. In addition, about 80 percent of the federal assistance is in the form of a loan rather than a grant.

Making careful decisions about these roles is important in order to match capabilities and resources with appropriate goals. This is important for federal assistance because other stakeholders may want to emphasize other priorities and use federal funds in ways that may not match federal goals. This can happen in two main ways.

- Other stakeholders may seek to transfer a previously local function to the federal arena. For example, in the area of port security, there is a significant funding need at the local level for overtime pay for police and security guards. Given the degree of need, if more federal funding were made available, local interests might push to apply federal funding in this way, thereby transferring a previously local function to the federal arena. In moving toward federal coverage of basic public services, the Congress and federal officials would be substantially expanding the federal role.
- Other stakeholders may also seek to use federal funds to reduce their traditional levels of commitment. Federal decision makers need to guard against this tendency—where federal support reduces or supplants private, state, or local funding. One aim of providing federal assistance has been to promote or supplement expenditures that would not otherwise occur—or at a level deemed necessary—without federal funding. Otherwise, federal funding is largely substituting for funding that would otherwise have been provided by private or other public investors.[30]

Developing Funding Tools and Other Approaches That Maximize the Return on the Federal Investment

The third component of a framework for evaluating federal investments involves a careful choice of the approaches and funding tools that would best leverage federal funds in meeting identified goals. A well-designed funding approach can help encourage investment by other stakeholders and maximize the application of limited federal dollars. In addition, the federal government has other tools available besides those that relate specifically to making funding available such as demand management, technology improvements, and different operational approaches.

[30] U.S. General Accounting Office, *Federal Budget: Choosing Public Investment Programs*, GAO/AIMD-93-25 (Washington, D.C.: July 23, 1993).

An important step in selecting the appropriate approach is to effectively harness the financial capabilities of local, state, and private stakeholders. The Alameda Corridor Program is an apt example. In this program, state and local stakeholders had both a financial incentive to relieve congestion and the commitment and ability to bring financial resources to bear. Some other ports may not have the same level of financial incentives or capabilities to undertake projects largely on their own. For example, in studying the extent to which Florida ports were able to implement a set of security requirements imposed by the state, we found that some ports were able to draw on more financial resources than others, based on such factors as size, economic climate, and funding base.[31] While such information would be valuable in crafting federal assistance, it currently is largely unavailable. Relatively little is known about the extent of state, local, and private sector funding resources across the country.

The federal government has a variety of funding tools potentially available for use, ranging from outright grants to loan guarantees, as shown in table 7. Through cost sharing and other arrangements, the federal government can use these approaches to help ensure that federal funds supplement—and not supplant—funds from other stakeholders. For example, an effective use of funding tools, with appropriate nonfederal matches and incentives, can be valuable in implementing a national strategy to support federal port investments, without putting the government in the position of choosing winners or losers.

[31] U.S. General Accounting Office, *Port Security: Nation Faces Formidable Challenges in Making New Initiatives Successful*, GAO-02-993T (Washington, D.C.: Aug. 5, 2002).

Table 7: Examples of Potential Federal Funding Tools

Approach	Description
Grants	Grants are usually cash payments made by the federal government to a beneficiary organization, government, or individual. It is a tool with the primary objective to stimulate or support spending by the recipient for a nationally important activity for which they otherwise would have spent less. There are different types of grants (e.g., categorical and block) and specific design elements, such as matching requirements and reporting requirements, that affect the targeting of grant funds, the supplanting of own-source funds, and the balance between accountability and flexibility. Grants may also be contingent on various matching requirements.
Direct loans	Loans occur when the federal government lends money directly to borrowers. After making the loans, the government then services the loan (i.e., collects scheduled repayments from the borrowers) and forecloses or otherwise attempts to collect on the loan if a borrower cannot make scheduled payments. Loans may also be contingent on various matching requirements. An example is the U.S. Department of Education's Direct Student Loan program.
Loan guarantees	Loan guarantees occur when the federal government guarantees a loan that a private lender, such as a commercial bank or mortgage lender, makes to a borrower. The government enters into a contractual agreement to make full or partial payment to the lender in case the borrower defaults on the guaranteed loan. The private lender originates the loan, secures the government guarantee, and services the loan according to government regulations. Loan guarantees may also be contingent on various matching requirements. An example is the U.S. Maritime Administration's Title XI program.
Tax expenditures	Tax expenditures are the result of specific provisions in the federal tax law that allow corporations or individuals to defer, reduce, or eliminate a portion of their tax obligation. This tool allows the federal government to pursue its objectives, not by spending tax dollars it collects, but rather by allowing corporations or individuals to keep and spend dollars they would otherwise owe the government. An example is the home mortgage interest deduction.
User fees	User fees are charges to users for goods or services provided by, or activities regulated by, the federal government. User fees generally apply to activities that provide benefits to identifiable recipients and are normally related to the cost of the goods or services provided. They may be paid into the general fund or, under specific statutory authority, may be made available to an agency carrying out the activity. An example is a fee for entering a national park. User fees may also be collected through a tax such as an excise tax. Since these collections result from the government's sovereign powers, the proceeds are generally recorded as budget receipts, not as offsetting collections. An example is the federal gasoline tax.

Source: *The Tools of Government: A Guide to the New Governance*, Lester M. Salamon, ed., Oxford University Press, (London: 2002).

Federal approaches can take other forms besides those that relate specifically to making funding available. These tools allow increased output without making major capital investments. Examples include the following:

- **Demand management**. Demand management is designed to reduce travel at the most congested times and on the most congested routes. One demand management strategy involves requiring users to pay more to use congested parts of the system during such periods, with the idea that the charge will provide an incentive for some users to shift their use to a less congested time or to less congested routes or transportation modes. On inland waterways, for example, congestion pricing for locks—that is,

charging a toll during congested periods to reflect the additional cost of delay that a vessel imposes on other vessels—might be a way to space out demand on the system. Economists generally believe that such surcharges or tolls enhance economic efficiency by making operators take into account the external costs they impose on others in deciding when, where, and how to travel.

- **Technology improvements**. Instead of making extensive modifications to infrastructure such as locks and dams, it may be possible to apply federal investments to technology that makes the existing system more efficient. For example, technological improvements may be able to help barges on the inland waterways navigate locks in inclement weather, thereby reducing delays on the inland waterway system.
- **Different operational approaches**. Enhancing capacity of existing infrastructure through increased maintenance and rehabilitation is an important supplement to, and sometimes a substitute for, building new infrastructure. Similarly, different operating arrangements may also be able to produce efficiencies. For example, the U.S. Army Corps of Engineers is investigating the possibility of automating the operation of locks and dams on the inland waterways to reduce congestion at bottlenecks.

Examining Outcomes to Determine the Effectiveness of Investments

The final component of a framework for developing a federal investment strategy is evaluating results and incorporating lessons learned into the decision-making process. Evaluating the effectiveness of existing or proposed federal investment programs could provide decision makers with valuable information for determining whether intended benefits have been achieved and whether goals, responsibilities, and approaches should be modified. Such evaluations are also useful for better ensuring accountability and providing incentives for achieving results.

Leading organizations that we have studied have stressed the importance of developing performance measures and linking investment decisions and their expected outcomes to overall strategic goals and objectives.[32] Hypothetically, for example, one goal for the marine transportation system might be to increase throughput (that is, the volume of cargo) that can be transported through a particular lock and dam system on the nation's inland waterways. A performance measure to gauge the results of an

[32] U.S. General Accounting Office, *Executive Guide: Leading Practices in Capital Decision-Making*, GAO/AIMD-99-32 (Washington, D.C.: December 1998).

investment for this goal might be the increased capacity (such as number of barges per hour) that results from this investment and the economic benefits associated with that increase. Assessing progress in achieving this goal is, therefore, dependent on carrying out analyses of accurate and complete outcome data.

Concluding Observations

There are substantial differences in the federal approach for supporting the commercial marine transportation system and the approaches for supporting air and highway transportation. Compared to these two other transportation modes, the federal approach for marine transportation funding relies more extensively on general revenues and less extensively on users of the system. These differences notwithstanding, there is growing awareness of, and agreement about, the need to view various transportation modes from an integrated standpoint, particularly for the purposes of developing and implementing a federal investment strategy and alternative funding approaches. Also, an intermodal perspective appears especially important as the nation reacts to the increased security needs for transportation networks and as it plans for better, more efficient transportation for the future. In such an effort, the framework of goals, roles, tools, and evaluation can be particularly helpful— not only for marine transportation funding, but for other modes as well.

Agency Comments

We validated the data in our report on assessment collections and expenditures with officials from the 15 federal agencies currently levying assessments on users of the systems and expending funds to support the systems. In addition, we provided a draft of this report to the U.S. Army Corps of Engineers and the Department of Transportation for review and comment. The officials generally agreed with the facts presented in this report. We made technical changes to the report, as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 10 days from the report date. At that time, we will send copies of the report to the Honorable Norman Y. Mineta, Secretary of Transportation; Admiral Thomas H. Collins, Commandant of the Coast Guard; Captain William G. Schubert, Administrator, Maritime Administration; the Honorable Albert S. Jacquez, Administrator, Saint Lawrence Seaway Development Corporation; the Honorable Michael K. Powell, Chairman, Federal Communications Commission; the Honorable Donald H. Rumsfeld, Secretary of Defense; the Honorable John Ashcroft, Attorney General; the

Honorable Thomas E. White, Secretary of the Army; Lieutenant General Robert B. Flowers, Commander and Chief of Engineers, U.S. Army Corps of Engineers; the Honorable Harold J. Creel, Jr., Chairman, Federal Maritime Commission; the Honorable Donald L. Evans, Secretary of Commerce; the Honorable Paul H. O'Neill, Secretary of the Treasury; the Honorable Robert C. Bonner, Commissioner of Customs; the Honorable Charles O. Rossotti, Commissioner of Internal Revenue; the Honorable Monte R. Belger, Acting Administrator, Federal Aviation Administration; the Honorable Mary E. Peters, Administrator, Federal Highway Administration; the Honorable Ann M. Veneman, Secretary of Agriculture; the Honorable Tommy G. Thompson, Secretary of Health and Human Services; the Honorable Julie Louise Gerberding, Director, Centers for Disease Control; the Honorable Mitchell E. Daniels, Director, Office of Management and Budget; and Vice Admiral Conrad C. Lautenbacher, Jr., Administrator, National Oceanic and Atmospheric Administration. We also will make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you have any questions about this report, please contact me at heckerj@gao.gov at (202)512-2834 or Randall Williamson at williamsonr@gao.gov at (206)287-4860. GAO contacts and acknowledgments are listed in appendix VII.

Sincerely yours,

JayEtta Z. Hecker
Director, Physical Infrastructure

Appendix I: Objectives, Scope, and Methodology

To determine the amount of federal expenditures to support the commercial marine,[33] aviation, and highway transportation systems and the amount of collections from federal assessments on the users of these systems for fiscal years 1999, 2000, and 2001, we reviewed prior GAO reports and other relevant documents, and interviewed officials from the Office of Management and Budget and various industry representatives. On the basis of this determination, we contacted 15 federal agencies and asked them to provide information on the expenditures and collections specific to the transportation systems. We relied on each agency to identify expenditures and collections related to activities that support the transportation systems.

For the purposes of this report, expenditures are outlays to pay federal obligations identified by the agency for each fiscal year to support these systems, but may include payments for obligations incurred in previous fiscal years. Assessment collections are fees and taxes paid by users of a system that were identified by the agencies and may include revenues credited to federal funds, offsetting collections, and offsetting revenue.

For each expenditure, we requested information on the nature of the expenditure (e.g., administrative processing, physical services, construction and maintenance projects, and miscellaneous services), source of funds for the expenditure (general revenues, trust fund, and reimbursement from agency account), and the amount expended for fiscal years 1999, 2000, and 2001. Expenditures for enhanced port security, derived from the Department of Defense Supplemental Budget Appropriations for fiscal year 2002, were not included in our review. For each assessment, we requested information on the nature of the assessment (fee or tax), a description of the assessment, the type of fund the receives the collection (general fund, trust fund, and reimbursement to agency account), and the amount collected for fiscal years 1999, 2000, and 2001. In addition to the assessment revenue collected that is specific to the transportation systems, we also received data from the U.S. Customs Service on the amount of duty collected on commodities imported by the transportation modes. The U.S. Customs Service provided estimates, developed by the U.S. Census Bureau, on the percent of collections that were attributable to water, sea, and land transportation modes. We applied

[33] The commercial marine transportation system excludes noncommercial activities such as search and rescue, and drug and migrant interdiction conducted by the Coast Guard, and recreational activities.

these percentages to the total customs duties collected for fiscal years 1999, 2000, and 2001 provided by the U.S. Customs Service to compute the amount of total customs duties collected by the marine, aviation, and highway transportation systems each year.

We performed limited reasonableness tests on the data (comparing the data to the actual trust fund outlays contained in the budget of the U.S. government for fiscal years 2001, 2002, and 2003) and found that the data were reliable enough for our uses in this report. Although we had each agency validate the data provided, we did not verify agency expenditures and collections.

To identify initial considerations that could help the Congress in addressing whether to change the scope or nature of federal investments in the marine transportation system, we conducted a review of prior GAO reports and other relevant studies to identify managerial best practices in establishing strategic plans and federal investment approaches. We also interviewed U.S. Army Corps of Engineers and Department of Transportation (DOT) officials to obtain information on the current state of the commercial marine transportation system, the ability of the system to keep pace with growing demand, and activities that are under way to assess the condition and capacity of the infrastructure. We conducted our work from January 2002 to September 2002 in accordance with generally accepted government auditing standards.

Appendix II: Description of Trust Funds Used to Support the Commercial Marine, Aviation, and Highway Transportation Systems

Transportation-related federal trust funds include the Highway Trust Fund, Airport and Airways Trust Fund, Harbor Maintenance Trust Fund, and Inland Waterways Trust Fund. The trust fund collections come from user charges (such as fuel taxes, vehicle taxes, registration and licensing fees, and air passenger ticket taxes), which are deposited in the U.S. Treasury's general fund for subsequent transfer to the trust fund accounts. Also, interest earned through fund balances is generally added back to these funds.

Highway Trust Fund

The Highway Trust Fund was established by the Highway Revenue Act of 1956 (Pub. L. No. 84-627). Highway Trust Fund revenues are derived from various excise taxes on highway users (e.g., motor fuel, motor vehicles, tires, and parts and accessories for trucks and buses) and interest earned on balances. The excise tax on gasoline is the most important source of the trust fund's revenues. The excise tax rate on gasoline has changed five times since 1985 and is currently 18.4 cents per gallon.

The money paid into the fund is earmarked primarily for the Federal-aid Highway program, which is apportioned to states for planning, construction, and improving the nation's highway system, roads, and bridges. Effective April 1983, the Highway Revenue Act of 1982 (Pub. L. No. 97-424) created the Mass Transit Account within the Highway Trust Fund. Currently, 2.86 cents per gallon of the federal excise tax on gasoline sales is set aside for the Mass Transit Account that will be used for transit capital projects.

A small portion (0.1 cents per gallon) of the federal excise tax on gasoline has been assigned to the Leaking Underground Storage Tank Trust Fund until April 1, 2005.

Airport and Airway Trust Fund

The Airport and Airway Revenue Act of 1970 (Pub. L. No. 91-258) created the Airport and Airway Trust Fund to provide a stable source of funding to finance investments in the airport and airway system and, to the extent funds were available, cover the operating costs of the airway system. The Act provided for the deposit (through the general fund) of aviation excise taxes into the trust fund. Since its establishment, various changes have been made to the rate structure supporting the trust fund. The most recent changes were centered in the Taxpayer Relief Act of 1997 (Pub. L. No. 105-

34), effective October 1, 1997, which, among other things, extended aviation taxes for 10 years (through September 30, 2007) and converted the 10 percent ad valorem tax on domestic passenger tickets to a combination ad valorem/flight segment tax over 3 years. The trust fund currently receives the vast majority of its funding from a 7.5 percent tax on domestic passenger tickets and a $3 flight segment tax. Additional funding is obtained from taxes on aviation fuels, cargo waybills, and international departures and arrivals.

The trust fund finances 100 percent of FAA's capital investment programs (Facilities and Equipment; Airport Improvement Program; and Research, Engineering, and Development). Within certain limits set by Congress, some of the remaining money is used to cover operation and maintenance expenses of the FAA. The portion of the FAA's operation and maintenance expenses not paid from the trust fund revenues are financed by general funds of the Treasury. While held by the Treasury, trust fund monies are invested and interest earned is deposited into the trust fund. Amounts are withdrawn from the trust fund as it is needed and transferred into each FAA appropriation to cover necessary outlays.

Harbor Maintenance Trust Fund

The Harbor Maintenance Trust Fund was established in accordance with the Harbor Maintenance Revenue Act of 1986 (Pub. L. No. 99-662), as amended. Revenues for this fund are derived from receipts from a 0.125 percent ad valorem user fee imposed on commercial users of specified U.S. ports, Saint Lawrence Seaway tolls, and investment interest. On March 31, 1998, as per the U.S. Supreme Court ruling, the tax on exports was terminated. The tax continues to be levied on passengers and imported and domestic cargo.

The Harbor Maintenance Trust Fund is used to finance up to 100 percent of the U.S. Army Corps of Engineers' harbor operation and maintenance cost, including the cost associated with Great Lakes navigation projects. In addition, the trust fund fully finances the operation and maintenance of the Saint Lawrence Seaway Development Corporation. Payments from the trust fund are also authorized for the federal share of construction costs for dredged material disposal facilities and the expenses incurred by agencies related to administration of the harbor maintenance tax.

Inland Waterways Trust Fund

The Inland Waterways Trust Fund was authorized by the Inland Waterways Revenue Act of 1978 (Pub. L. No. 95-502), as amended by the Water Resources Development Act of 1986 (Pub. L. No. 99-662). The trust fund has been in effect since fiscal year 1981. The sources for the fund are taxes imposed on fuel for vessels engaged in commercial waterway transportation and investment interest. From this tax of 24.3 cents per gallon, 4.3 cents goes for deficit reduction and a statutory maximum of 20 cents goes to the trust fund. The funds are earmarked for financing one half of the U.S. Army Corps of Engineers' construction and rehabilitation costs of specified inland waterway projects.

Appendix III: Amounts Expended by Federal Agencies on the Marine, Aviation, and Highway Transportation Systems

Thirteen different federal agencies spent federal funds on the commercial marine transportation system. On average, the agencies spent over $3.8 billion annually. During the same period, six federal agencies spent an average of over $10.3 billion annually on the aviation transportation system and five federal agencies spent an average of over $25 billion annually on the highway transportation system.

Table 8: Expenditures on the Marine, Aviation, and Highway Transportation Systems for Fiscal Years 1999 through 2001[a]

Dollars in millions			
Federal agency	**1999**	**2000**	**2001**
Marine transportation system			
Animal, Plant, and Health Inspection Service; USDA	$30.5	$35.7	$44.1
Army Corps of Engineers; DOD	1,788.6	1,845.3	1,888.8
Centers for Disease Control and Prevention; HHS	1.5	1.9	1.9
Coast Guard; DOT	1,193.6	1,245.4	1,239.4
Customs Service; Treasury	484.2	538.4	577.2
Federal Communications Commission	[b]	[b]	.1
Federal Maritime Commission	.2	.1	.1
Grain Inspection, Packers, and Stockyards Administration; USDA	1.3	1.3	1.2
Immigration and Naturalization Service; DOJ	1.2	1.5	1.6
Internal Revenue Service; Treasury	.1	.1	.1
Maritime Administration; DOT	95.0	98.5	98.4
National Oceanic and Atmospheric Administration; Commerce	109.4	115.7	126.7
Saint Lawrence Seaway Development Corporation; DOT	11.2	12.0	13.0
Total marine transportation system	**$3,716.8**	**$3,895.9**	**$3,992.6**
Aviation transportation system			
Animal, Plant, and Health Inspection Service; USDA	$123.1	$144.0	$178.2
Customs Service; Treasury	769.1	821.6	861.4
Federal Aviation Administration; DOT	8,055.0	9,043.0	9,525.0
Federal Communications Commission	b	b	b
Immigration and Naturalization Service; DOJ	431.1	435.8	467.5
Internal Revenue Service; Treasury	.6	.7	.7
Total aviation transportation system	**$9,378.9**	**$10,445.1**	**$11,032.8**
Highway transportation system			
Animal, Plant, and Health Inspection Service; USDA	$7.7	$8.9	$10.8
Customs Service; Treasury	106.6	84.4	130.1
Federal Highway Administration; DOT	22,700.0	25,000.0	27,200.0
Immigration and Naturalization Service; DOJ	1.1	.1	1.5
Internal Revenue Service; Treasury	4.6	4.6	4.5
Total highway transportation system	**$22,820.0**	**$25,098.0**	**$27,346.9**

Note: Figures are nominal and have not been adjusted for inflation.

[a]The table does not include expenditures that could not be broken out by transportation system. These expenditures amounted to $7.3 million in fiscal year 1999, $6.3 million in fiscal year 2000, and $6.2 million in fiscal year 2001. The table also does not include expenditures from the Leaking Underground Storage Tank Trust Fund. Expenditures from this trust fund amounted to $72.5 million in fiscal year 1999, $70 million in fiscal year 2000, and $72.1 million in fiscal year 2001. Most of this funding is distributed to states to implement their leaking underground storage tank programs.

[b]Less than $50,000.

Source: GAO analysis of data provided by agencies that expended funds.

Appendix IV: Amounts Collected by Federal Agencies on Users of the Marine, Aviation, and Highway Systems

Eleven different federal agencies levy assessments on the users of the commercial marine transportation system. On average, the agencies collected nearly $1 billion annually. During the same period, five federal agencies collected an average of almost $11.1 billion annually from users of the aviation transportation system and four federal agencies collected an average of almost $33.7 billion annually from users of the highway transportation system.

Table 9: Amounts of Assessments Collected on Users of the Marine, Aviation, and Highway Transportation Systems for Fiscal Years 1999 through 2001[a]

Dollars in millions			
Federal agency	**1999**	**2000**	**2001**
Marine transportation system			
Animal, Plant, and Health Inspection Service; USDA	$34.2	$46.2	$50.3
Centers for Disease Control and Prevention; HHS	1.4	1.9	1.9
Coast Guard; DOT	19.3	21.4	23.5
Customs Service; Treasury[c]	642.5	773.7	812.1
Federal Communications Commission	.1	.1	.3
Federal Maritime Commission	.2	.1	.1
Grain Inspection, Packers, and Stockyards Administration; USDA	1.6	1.5	1.6
Immigration and Naturalization Service; DOJ	1.2	1.5	1.6
Internal Revenue Service; Treasury[b]	105.0	97.3	93.5
Maritime Administration; DOT	35.7	26.7	24.6
National Oceanic and Atmospheric Administration; Commerce	34.1	34.7	34.5
Total marine transportation system	**$875.3**	**$1,005.1**	**$1,044.0**
Aviation transportation system			
Animal, Plant, and Health Inspection Service; USDA	$138.2	$186.4	$203.5
Customs Service; Treasury[c]	231.9	251.6	260.1
Federal Communications Commission	.1	.1	.1
Immigration and Naturalization Service; DOJ	421.4	436.5	465.9
Internal Revenue Service; Treasury[b]	11,528.2	9,677.0	9,382.5
Total aviation transportation system	**$12,319.8**	**$10,551.6**	**$10,312.1**
Highway transportation system			
Animal, Plant, and Health Inspection Service; USDA	$8.5	$11.1	$12.2
Customs Service; Treasury[c]	21.9	22.1	20.4
Immigration and Naturalization Service; DOJ	1.1	1.6	2.4
Internal Revenue Service; Treasury[b]	32,248.3	35,125.1	33,672.7
Total highway transportation system	**$32,279.8**	**$35,159.9**	**$33,707.7**

Note: Figures are nominal and have not been adjusted for inflation.

[a]The table does not include assessments that could not be broken out by transportation system. These assessments amounted to $934.9 million in fiscal year 1999, $980.9 million in fiscal year 2000, and $959.1 million in fiscal year 2001.

[b]The IRS collections for the marine transportation system are designated for the Inland Waterways Trust Fund. Collections for the aviation transportation system are designated for Airport and Airways Trust Fund. Collections for the highway transportation system are designed for the Highway Account of the Highway Trust Fund.

[c]These amounts exclude customs duties. A portion of the collections for the marine transportation system is designated for the Harbor Maintenance Trust Fund.

Source: GAO analysis of data provided by agencies that collected the assessments.

Appendix V: Amount of Customs Duties Collected for Commodities Transported on the Transportation Systems

Unlike the fees and taxes on users that are earmarked to support the transportation systems, customs duties are not an assessment on the system; rather, duties are assessed on imported goods transported by the systems. The majority of customs duties collected are deposited in the U.S. Treasury's general fund for the general support of federal activities.[34] On average, the Customs Service reported $19.8 billion collected annually for commodities imported by the transportation modes, with nearly 80 percent collected from the marine transportation system.

Table 10: Amount of Customs Duties Collected for Commodities Transported on the Marine, Aviation, and Highway Transportation Systems, Fiscal Years 1999 through 2001

Dollars in millions

	1999		2000		2001		
Transportation system	**Amount**	**Percent**	**Amount**	**Percent**	**Amount**	**Percent**	**Average amount**
Marine	$14,310	75	$15,624	76	$15,637	79	$15,190
Aviation	3,577	19	4,053	20	3,371	17	3,667
Highway[a]	1,168	6	880	4	735	4	928
Total custom duties collected	**$19,055**		**$20,557**		**$19,743**		**$19,785**

Note: Figures are nominal and have not been adjusted for inflation.

[a]Includes amounts collected by rail.

Source: GAO computations based on data provided by the U.S. Customs Service.

[34] Under Section 612 of Title 7, about 30 percent of the gross receipts from customs duties are designated for agricultural and food programs. In addition, pursuant to 16 U.S.C. 3912, all duties on guns and ammunitions go to the Migratory Bird Conservation Fund and pursuant to 26 U.S.C. 9504, duties on fishing tackle and yachts and pleasure craft go to the Sports Fish Restoration account of the Aquatic Resources Trust Fund. Also, tariffs from wood and certain wood products are transferred to the Reforestation Trust Fund up to a total of $30 million (16 U.S.C. 1606(a)).

Appendix VI: The Interagency Committee on the Marine Transportation System and the National Advisory Council

In January 2000, the Secretary of Transportation chartered the establishment of the Marine Transportation System National Advisory Council (NAC), a nonfederal body, whose purpose is to advise the Secretary of Transportation on marine transportation system issues. An Interagency Committee on the Marine Transportation System (ICMTS) was established by a memorandum of understanding among the Departments of Transportation, Defense, Commerce, Interior, Agriculture, Treasury, and the Environmental Protection Agency. The charter of the ICMTS is to facilitate implementation of the recommendations in the 1999 MTS Report to the Congress and to identify, evaluate, develop, and promote implementation of federal policies and make recommendations concerning resource utilization to ensure effective public funding decisions, support services, and management of the marine transportation system.

In May 2001, the NAC recommended that the ICMTS conduct a thorough needs-based assessment of each federal and nonfederal component mode of the marine transportation system documenting (1) the prerequisites necessary to enable the system in its entirety to meet projected traffic demands in a manner consistent with the vision statement, (2) the impact on nonmarine transportation modes should future infrastructure disruption/failure occur at critical points in the marine transportation system, and (3) an appraisal of the funding required to ensure the transportation system meets the goals of the vision statement. ICMTS officials report that the Chamber of Commerce currently has an effort under way to compile existing studies on infrastructure needs of North American ports. In addition, the ICMTS is seeking contract support for a comprehensive analysis assessing the future needs and funding of the marine transportation system.

Appendix VII: GAO Contacts and Staff Acknowledgments

GAO Contacts

JayEtta Z. Hecker (202) 512-2834
Randall B. Williamson (206) 287-4860

Acknowledgments

In addition to those individuals named above, Christine E. Bonham, Jack J. Burriesci, Jay R. Cherlow, Thomas E. Collis, David K. Hooper, Elizabeth C. McNally, Sara Ann W. Moessbauer, Timmy R. Schindler, Albert E. Schmidt, and Stanley G. Stenerson made key contributions to this report.

GAO's Mission

The General Accounting Office, the investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through the Internet. GAO's Web site (www.gao.gov) contains abstracts and full-text files of current reports and testimony and an expanding archive of older products. The Web site features a search engine to help you locate documents using key words and phrases. You can print these documents in their entirety, including charts and other graphics.

Each day, GAO issues a list of newly released reports, testimony, and correspondence. GAO posts this list, known as "Today's Reports," on its Web site daily. The list contains links to the full-text document files. To have GAO e-mail this list to you every afternoon, go to www.gao.gov and select "Subscribe to daily E-mail alert for newly released products" under the GAO Reports heading.

Order by Mail or Phone

The first copy of each printed report is free. Additional copies are $2 each. A check or money order should be made out to the Superintendent of Documents. GAO also accepts VISA and Mastercard. Orders for 100 or more copies mailed to a single address are discounted 25 percent. Orders should be sent to:

U.S. General Accounting Office
441 G Street NW, Room LM
Washington, D.C. 20548

To order by Phone:	Voice:	(202) 512-6000
	TDD:	(202) 512-2537
	Fax:	(202) 512-6061

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm
E-mail: fraudnet@gao.gov
Automated answering system: (800) 424-5454 or (202) 512-7470

Public Affairs

Jeff Nelligan, managing director, NelliganJ@gao.gov (202) 512-4800
U.S. General Accounting Office, 441 G Street NW, Room 7149
Washington, D.C. 20548