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PHYSICAL INFRASTRUCTURE

Challenges and Investment Options for the Nation's Infrastructure

Statement of Patricia A. Dalton, Managing Director
Physical Infrastructure Issues

May 8, 2008

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Highlights

Highlights of GAO-08-763T, a testimony before the Committee on the Budget and the Committee on Transportation and Infrastructure, U.S. House of Representatives

Why GAO Did This Study

Physical infrastructure is critical to the nation's economy and affects the daily life of virtually all Americans—from facilitating the movement of goods and people within and beyond U.S. borders to providing clean drinking water. However, this infrastructure—including aviation, highway, transit, rail, water, and dam infrastructure—is under strain. Estimates to repair, replace, or upgrade aging infrastructure as well as expand capacity to meet increased demand top hundreds of billions of dollars. Calls for increased investment in infrastructure come at a time when traditional funding for infrastructure projects is increasingly strained, and the federal government's fiscal outlook is worse than many may understand.

This testimony discusses (1) challenges associated with the nation's surface transportation, aviation, water, and dam infrastructure, and the principles GAO has identified to help guide efforts to address these challenges and (2) existing and proposed options to fund investments in the nation's infrastructure. This statement is primarily based on a body of work GAO has completed for the Congress over the last several years. To supplement this existing work, GAO also interviewed Department of Transportation officials to obtain up-to-date information on the status of the Highway Trust Fund and various funding and financing options and reviewed published literature to obtain information on dam infrastructure issues.

To view the full product, including the scope and methodology, click on GAO-08-763T. For more information, contact Patricia Dalton at (202) 512-2834 or daltonp@gao.gov.

What GAO Found

The nation faces a host of serious infrastructure challenges. Demand has outpaced the capacity of our nation's surface transportation and aviation systems, resulting in decreased performance and reliability. In addition, water utilities are facing pressure to upgrade the nation's aging and deteriorating water infrastructure to improve security, serve growing demands, and meet new regulatory requirements. Given these types of challenges and the federal government's fiscal outlook, it is clear that the federal government cannot continue with business as usual. Rather, a fundamental reexamination of government programs, policies, and activities is needed. Through prior analyses of existing programs, GAO identified a number of principles that could guide a reexamination of federal infrastructure programs. These principles include

- creating well-defined goals based on identified areas of national interest,
- establishing and clearly defining the federal role in achieving each goal,
- incorporating performance and accountability into funding decisions,
- employing the best tools and approaches to emphasize return on investment, and
- ensuring fiscal sustainability.

Various options are available to fund infrastructure investments. These options include altering existing or introducing new funding approaches and employing various financing mechanisms, such as bonds and loans. For example, a variety of taxes and user fees, such as tolling, can be used to help fund infrastructure projects. In addition, some have suggested including an infrastructure component in a future economic stimulus bill, which could provide a one-time infusion of funds for infrastructure projects. Each of these options has different merits and challenges, and choosing among them will likely involve trade-offs among different policy goals. Furthermore, the suitability of the various options depends on the level of federal involvement or control that policymakers desire. However, as GAO has reported, when infrastructure investment decisions are made based on sound evaluations, these options can lead to an appropriate blend of public and private funds to match public and private costs and benefits. To help policymakers make explicit decisions about how much overall federal spending should be devoted to investment, GAO has previously proposed establishing an investment component within the unified budget.

Source: Corbis. Source: U.S. Army Corps of Engineers.

Messrs. Chairmen and Members of the Committees:

We appreciate the opportunity to testify on infrastructure financing issues. As you know, the nation's physical infrastructure is critical to the nation's economy and affects the daily life of most Americans—from facilitating the movement of goods and people within and beyond U.S. borders to providing clean drinking water. However, as illustrated by the 2007 bridge collapse in Minnesota and numerous water main breaks across the country, the nation's physical infrastructure is under strain. Estimates of the costs to repair, replace, or upgrade aging infrastructure so that it can safely, efficiently, and reliably meet current demands, as well as expand capacity to meet increasing demands, top hundreds of billions of dollars.

Addressing these challenges is complicated by the breadth of the nation's physical infrastructure—including aviation, highway, transit, rail, water, and dam infrastructure—which is owned, funded, and operated by all levels of the government and the private sector. Moreover, infrastructure policy decisions are inextricably linked with economic, environmental, and energy policy concerns. Calls for increased investment in infrastructure coincide with increasing strains on traditional funding for infrastructure projects. For example, without significant changes in funding or planned spending, the Highway Trust Fund is projected to incur significant deficits in the years ahead.[1] Furthermore, the federal government's financial condition and fiscal outlook are worse than many may understand.[2] Specifically, the federal budget is on an unsustainable path—raising questions about whether people should assume federal funds will be available to help solve the nation's current infrastructure challenges. We have also previously reported that state and local governments will likely face persistent fiscal challenges starting within the next few years.[3] Consequently, a range of investment options for the

[1]The Highway Trust Fund is the mechanism used to account for federal highway user taxes (e.g., federal excise taxes on fuel) that are dedicated for highway- and transit-related purposes. The Highway Trust Fund has two accounts: the Highway Account and the Mass Transit Account.

[2]GAO, *Long-Term Fiscal Outlook: Action Is Needed to Avoid the Possibility of a Serious Economic Disruption in the Future*, GAO-08-411T (Washington, D.C.: Jan. 29, 2008) and *Fiscal Stewardship: A Critical Challenge Facing Our Nation*, GAO-07-362SP (Washington, D.C.: January 2007).

[3]GAO, *State and Local Governments: Persistent Fiscal Challenges Will Likely Emerge within the Next Decade*, GAO-07-1080SP (Washington, D.C.: July 18, 2007).

nation's physical infrastructure is currently being explored and proposed by some policymakers and industry stakeholders.

Prudent use of taxpayer dollars is always important. The economic and social importance of the nation's infrastructure and the current fiscal environment make it even more important that federal, state, and local governments make prudent decisions on how to invest limited available resources. In making these decisions, governments will face an array of challenges that include repairing and maintaining aging infrastructure, making more efficient use of existing infrastructure, accounting for population growth, and incorporating new technologies in funding for infrastructure. In this environment, the infrastructure improvements that all levels of government want may not reflect what they need or what the nation can afford. Accordingly, decisions about the appropriate level of distribution and spending on infrastructure are both difficult and enormously important.

My remarks today focus on (1) challenges associated with the nation's surface transportation, aviation, water, and dam infrastructure, and the principles we have identified to help guide efforts to address these challenges and (2) existing and proposed options to fund investments in the nation's infrastructure. My comments are based primarily on a body of work that we have completed over the past several years for the Congress.[4] To supplement our existing work, we also interviewed Department of Transportation (DOT) officials and reviewed published literature to obtain up-to-date information on the status of the Highway Trust Fund, various funding and financing options, and dam infrastructure issues. We conducted this work between March and May 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Summary

The nation faces a host of serious infrastructure challenges. For example, demand has outpaced the capacity of our nation's surface transportation

[4]See Related GAO Products at the end of this testimony statement. We conducted these performance audits in accordance with generally accepted government auditing standards.

and aviation systems, resulting in decreased performance and reliability. Furthermore, as we recently reported, federal surface transportation programs are not effectively addressing key challenges, such as congestion, because the federal goals and roles are unclear, many programs lack links to performance or needs, and the programs often do not employ the best tools and approaches. In addition, water utilities are facing pressure to upgrade the nation's aging and deteriorating water infrastructure to improve security, serve growing demands, and meet new regulatory requirements. Given these types of challenges and the federal government's fiscal outlook, it is clear that the federal government cannot continue with business as usual. Rather, a fundamental reexamination of government programs, policies, and activities is needed. Through our prior analyses of existing programs, we identified a number of principles that could help guide a reexamination of the federal surface transportation program. While these principles are designed specifically to reexamine the surface transportation program, most, if not all of them, could be applicable to other federal infrastructure programs. These principles are

- creating well-defined goals based on identified areas of national interest,
- establishing and clearly defining the federal role in achieving each goal,
- incorporating performance and accountability into funding decisions,
- employing the best tools and approaches to emphasize return on investment, and
- ensuring fiscal sustainability.

A wide variety of options are available to fund infrastructure investments. These options include altering existing or introducing new funding approaches and employing various financing mechanisms, such as bonds and loans. For example, a variety of taxes and user fees, such as tolling, can be used to help fund infrastructure projects. In addition, some have suggested including an infrastructure component in a future economic stimulus bill, which could provide a one-time infusion of funds for infrastructure projects. Each of these options has different merits and challenges, and choosing among them will likely involve policy trade-offs. Furthermore, the suitability of any of these options depends on the level of federal involvement or control that policymakers desire in a given policy area. However, as we have reported, when infrastructure investment decisions are based on sound evaluations, these options can lead to an appropriate blend of public and private funds to match public and private

costs and benefits. To help policymakers make explicit decisions about how much overall federal spending should be devoted to investment, we have previously proposed establishing an investment component within the unified budget.

Background

The economic well-being of the United States is dependent on the reliability, safety, and security of its physical infrastructure. The nation's infrastructure is vast and affects the daily lives of virtually all Americans. In total, there are about 4 million miles of roads, 117,000 miles of rail, 600,000 bridges, 79,000 dams, 26,000 miles of commercially navigable waterways, 11,000 miles of transit lines, 500 train stations, 300 ports, 19,000 airports,[5] 55,000 community drinking water systems, and 30,000 wastewater treatment and collection facilities. Collectively, this infrastructure connects communities, facilitates trade, provides clean drinking water, and protects public health, among other things.

The nation's infrastructure is primarily owned and operated by state and local governments and the private sector. For example, state and local governments own about 98 percent of the nation's bridges and the private sector owns almost all freight railroad infrastructure. The federal government owns a limited amount of infrastructure—for instance, the federal government owns and operates the nation's air traffic control infrastructure. In addition, through its oversight role, the federal government plays an important role in ensuring the safety, security, and reliability of the nation's infrastructure. Table 1 provides information on infrastructure ownership.

[5]About 3,400 of these airports are in the national airport system.

Table 1: Physical Infrastructure Ownership

Surface transportation	• Ninety-seven percent of the nation's roads and highways are owned by state and local governments, with local governments owning approximately 77 percent of the miles of roadway. • About 98 percent of the nation's bridges are owned by state and local governments. • Most transit systems are owned and operated by public agencies that are created by state and local governments. • Most freight railroad infrastructure is owned by private freight railroads. The federal government owns about 650 miles of Amtrak's 22,000-mile rail network. • The maritime transportation infrastructure, including ports, is generally owned and operated by state and local agencies and private companies. Many ports are publicly owned and privately operated.
Aviation	• Most commercial service airports are owned by local or state governments, either directly or through an authority, a quasi-governmental body established to operate the airport. • Air traffic control facilities are owned by the federal government.
Water	• About half of the nation's drinking water systems and an estimated 20 percent of the wastewater systems are privately owned. Private owners range from homeowners' associations, mobile home parks, and other entities whose primary business is unrelated to water supply or wastewater treatment, to larger, investor-owned companies. Publicly owned drinking water systems and wastewater utilities are owned by municipalities, townships, counties, water or sewer districts, and water or sewer authorities.
Dams (including levees)	• The majority of dams in the United States are privately owned. The federal government owns and operates about 5 percent of the nation's dams. • Levees are typically constructed by the federal government, and local governments are responsible for their operation and maintenance.

Source: GAO summary of information from the Airport Cooperative Research Program, Department of Transportation, Environmental Protection Agency, Federal Emergency Management Agency, National Academy of Public Administration, and the National Railroad Passenger Corporation.

Funding for the nation's infrastructure comes from a variety of federal, state, local, and private sources. For example, the private and local public owners of water infrastructure as well as multiple federal agencies fund drinking water and wastewater capital improvements. As owners of the infrastructure, state and local governments and the private sector generally account for a larger share of funding for infrastructure than the

federal government. However, the federal government has played and continues to play an important role in funding infrastructure. For example:

- From 1954 through 2001, the federal government invested over $370 billion (in 2001 dollars) in the Interstate Highway System.
- Federal Airport Improvement Program grants provided an average of $3.6 billion annually (in 2006 dollars) for airport capital improvements between 2001 and 2005.
- From fiscal year 1991 through fiscal year 2000, nine federal agencies provided about $44 billion (in 2000 dollars) for drinking water and wastewater capital improvements.
- Through the New Starts program, the federal government provided over $10 billion in capital funds for new fixed-guideway transit (e.g., commuter rail and subway) projects between fiscal year 1998 and fiscal year 2007.

To increase the nation's long-term productivity and growth, the federal government invests in various activities and sectors, including infrastructure.[6] While providing long-term benefits to the nation as a whole, much of this spending does not result in federal ownership of the infrastructure assets. For the most part, the federal government supports infrastructure investments through federal subsidies to other levels of government or the private sector. To address concerns about the state of the nation's infrastructure, Members of Congress have introduced several bills that are intended to increase investment in the nation's infrastructure by, for example, issuing bonds and providing tax credits for infrastructure investments. (See table 2.)

Table 2: Examples of Proposed Legislation Related to Infrastructure Investment

Proposed title	Description
National Infrastructure Bank Act (S. 1926 / H.R. 3401)	Would establish an independent National Infrastructure Bank to: (1) designate qualified transit, public housing, water, highway, bridge, or road infrastructure projects for loans, loan guarantees, and other financial assistance; and (2) issue general purpose and project-based infrastructure bonds exempt from state and local taxation.

[6]In addition to federal spending designed to increase economic activity, some federal spending on infrastructure is motivated by noneconomic policy goals, such as improved safety.

Proposed title	Description
Build America Bonds Act (S. 2021)	Would provide $50 billion in new transportation infrastructure funding through bonding to empower states and local governments to complete significant infrastructure projects across all modes of transportation, including roads, bridges, rail and transit systems, ports, and inland waterways, and for other purposes.
American Infrastructure Investment and Improvement Act (S. 2345)	Would provide $3.4 billion to the Highway Trust Fund and establish a rail infrastructure tax credit, among other things.
Our Nation's Trade, Infrastructure, Mobility, and Efficiency Act (H.R. 5102)	Would direct the Secretary of Transportation to establish and collect a fee based on the fair market value of articles imported into the United States and articles exported from the United States in commerce and to use amounts collected from the fee to make grants to carry out certain transportation projects in the transportation trade corridors for which the fee is collected, and for other purposes.
Dam Rehabilitation and Repair Act of 2007 (H.R. 3224)	Would provide $200 million over five years to repair state and locally owned dams. The grants would be part of the National Dam Safety Program, a federal-state partnership aimed at reducing the risk to life and property from dam failure. The federal government's share of repair costs would be limited to 65 percent. Dams that do not meet state safety standards or that pose a risk to the public would be eligible for funding under the program.
Freight Rail Infrastructure Capacity Expansion Act (H.R. 2116 / S. 1125)	Would provide incentives to encourage investment in the expansion of freight rail infrastructure capacity and to enhance modal tax equity. Specifically, the bill amends the Internal Revenue Code to allow: (1) a tax credit for 25 percent of the cost of new qualified freight rail infrastructure property and qualified locomotive property; and (2) a taxpayer election to expense the cost of qualified freight rail infrastructure property (i.e., deduct all costs in the current taxable year).

Source: GAO analysis of legislation introduced in the 110th Congress.

Congress previously established two commissions to study the condition and future needs of the surface transportation system, including financing options. It created the National Surface Transportation Policy and Revenue Study Commission (Policy Commission) to examine the condition and future needs of the nation's surface transportation system and short- and long-term alternatives to replace or supplement the fuel tax as the principal revenue source supporting the Highway Trust Fund. In January 2008, the Policy Commission released its final report. Congress also created the National Surface Transportation Infrastructure Financing Commission and charged it with analyzing future highway and transit needs and the finances of the Highway Trust Fund and with recommending alternative approaches to financing transportation

infrastructure. This commission issued its interim report in February 2008, and its final report is expected in November 2008.

The Nation Faces Significant Challenges Associated with Its Infrastructure

We have previously reported that the nation's surface transportation, aviation, water, and dam systems face numerous challenges related to their infrastructure. Increasing congestion has strained the capacity of our nation's surface transportation and aviation systems, decreasing their overall performance in meeting the nation's mobility needs. Furthermore, significant investments are needed in our nation's drinking and wastewater systems to address deteriorating infrastructure and deferred maintenance. In light of these and other challenges, we have called for a fundamental reexamination of government programs and developed a set of principles that could help guide such a reexamination.

Growing Congestion Challenges the Nation's Surface Transportation System, While Federal Programs Face Funding Uncertainties

Despite increases in transportation spending at all levels of government and improvements to the physical condition of highways and transit facilities over the past 10 years, congestion has worsened and safety gains have leveled off. For example, according to DOT, highway spending by all levels of government has increased 100 percent in real dollar terms since 1980, but the hours of delay during peak travel periods have increased almost 200 percent during the same period. In addition, demand has outpaced the capacity of the system, and projected population growth, technological changes, and increased globalization are expected to further strain the system. We have previously reported that federal surface transportation programs are not effectively addressing these key challenges because federal goals and roles are unclear, many programs lack links to needs or performance, and the programs may not employ the best tools and approaches.[7] In addition, federal transportation funding is generally not linked to specific performance-related goals or outcomes, resulting in limited assurance that federal funding is being channeled to the nation's most critical mobility needs. Federal funding is also often tied to a single transportation mode, which may limit the use of federal funds to finance the greatest improvements in mobility.

[7]GAO, *Surface Transportation: Restructured Federal Approach Needed for More Focused, Performance-Based, and Sustainable Programs,* GAO-08-400 (Washington, D.C.: Mar. 6, 2008).

To address these surface transportation challenges, various stakeholders have called for increasing significantly the level of investment by all levels of government in surface transportation. For example, in its January 2008 report, the Policy Commission recommended that all levels of government and the private sector collectively invest at least $225 billion each year to maintain and improve the surface transportation system, which would be about $140 billion more than is currently invested. However, without significant changes in funding, planned spending, or both, the balance of the Highway Account of the Highway Trust Fund—the major source of federal highway funds—is projected to be exhausted at some point during fiscal year 2009. To address this gap between revenues and spending, in its fiscal year 2009 budget request, the administration proposed granting the Secretary of the Treasury, in consultation with the Secretary of Transportation, the flexibility to transfer funds between the Highway and Transit Accounts of the Highway Trust Fund. However, this solution, if enacted, would provide only a short-term reprieve—both the administration and the Congressional Budget Office project that the balances of the Highway and Transit Accounts would be exhausted by the end of fiscal year 2010.

Increasing Demand Strains the Aviation System and Traditional Funding Approaches

The Federal Aviation Administration (FAA) faces significant challenges in keeping the nation's current airspace system running as efficiently as possible as the demand for air travel increases and the air traffic control system ages. System congestion, and the resulting flight delays and cancellations, are serious problems that have worsened in recent years. For example, according to DOT, 2007 was the second-worst year for delays since 1995. To accommodate current and expected demand for air travel, FAA and aviation stakeholders are developing the Next Generation Air Transportation System (NextGen) to modernize the nation's air traffic control infrastructure and increase capacity. This effort is complex and costly. Although there is considerable uncertainty about how much NextGen will cost, FAA estimates that NextGen infrastructure will cost the federal government between $15 billion and $22 billion through 2025. Other key challenges for FAA include managing a timely acquisition and implementation of NextGen and dealing effectively with the environmental concerns of communities that are adjacent to airports or under the flight paths of arriving and departing aircraft. For example, as we have previously testified, if not adequately addressed, these concerns, particularly about the noise that affects local communities and the

emissions that contribute to global warming, may constrain efforts to build or expand the runways and airports needed to handle the added capacity envisioned for NextGen.[8] In addition, airports face similar funding challenges in attempting to expand their capacity. For example, planned airport development costs total at least $14 billion annually (in 2006 dollars) through 2011—exceeding historical funding levels by about $1 billion per year.

We have previously testified that FAA's current funding mechanisms—the Airport and Airway Trust Fund (Trust Fund) and the U.S. Treasury's general fund—can potentially provide sufficient resources to support FAA activities, including NextGen.[9] However, there are a number of uncertainties—including the future cost of NextGen investment, the volume of air traffic, the future costs of operating the National Airspace System, and the levels of future appropriations for the Airport Improvement Program—that may influence the funding necessary to support FAA's activities. In addition, uncertainties surrounding the status of FAA's reauthorization could have adverse effects on FAA's ability to carry out its mission unless other revenue sources and spending authority are provided. Without legislative action, both the excise taxes that fund the Trust Fund and FAA's authority to spend from the Trust Fund will expire on June 30, 2008. Failing to meet these infrastructure challenges in aviation may have significant economic consequences, since aviation is an integral part of the economy.

Aging and Deteriorating Water Infrastructure Presents Challenges

Water utilities nationwide are under increasing pressure to make significant investments to upgrade aging and deteriorating infrastructures, improve security, serve a growing population, and meet new regulatory requirements.[10] Water infrastructure needs across the country are estimated to range from $485 billion to nearly $1.2 trillion over the next 20 years. According to the Environmental Protection Agency's (EPA) June 2005 Drinking Water Infrastructure Needs Survey, the largest category of

[8]GAO, *Federal Aviation Administration: Challenges Facing the Agency in Fiscal Year 2009 and Beyond*, GAO-08-460T (Washington, D.C.: Feb. 7, 2008).

[9]GAO-08-460T.

[10]In October 2007, EPA made several changes to the monitoring and public notice provisions in the Lead and Copper Rule under the Safe Drinking Water Act, the principal federal regulation protecting public water system consumers from exposure to lead and copper in drinking water.

need is the installation and maintenance of transmission and distribution systems—accounting for $183.6 billion, or about 66 percent of the needs projected through 2022. For wastewater systems, EPA's 2004 Clean Watersheds Needs Survey projected infrastructure-related needs for publicly owned wastewater systems of $202.5 billion through 2024.[11] Many drinking water and wastewater utilities have had difficulty raising funds to repair, replace, or upgrade aging capital assets; comply with regulatory requirements; and expand capacity to meet increased demand. For example, based on a nationwide survey of several thousand drinking water and wastewater utilities, we reported in 2002 that about one-third of the utilities (1) deferred maintenance because of insufficient funds, (2) had 20 percent or more of their pipelines nearing the end of their useful life, and (3) lacked basic plans for managing their capital assets.[12] Other GAO work suggests that the nation's water utilities could more effectively manage their infrastructure at a time when significant investments are needed.[13]

Several factors have contributed to the nation's deteriorating water infrastructure over the years. The adequacy of available funds, in particular, has been a key determinant of how well utility infrastructure has been maintained. However, according to our nationwide survey, a significant percentage of the utilities serving populations of 10,000 or more—29 percent of the drinking water utilities and 41 percent of the wastewater utilities—were not generating enough revenue from user charges and other local sources to cover their full costs of service. In addition, when asked about the frequency of rate increases during the period from 1992 to 2001, more than half the utilities reported raising their rates infrequently: once, twice, or not at all over the 10-year period. Citing communities' funding difficulties, many have looked to the federal government for financial assistance. However, if budgetary trends over the past few years serve as any indication, federal funding will not close the gap. For example, the trends and overall funding levels associated with the Clean Water and Drinking Water State Revolving Funds, the key federal programs supporting water infrastructure financing, suggest that they will

[11]U.S. Environmental Protection Agency, *Clean Watersheds Needs Survey 2004 Report to Congress*, (Washington, D.C.: January 2008).

[12]GAO, *Water Infrastructure: Information on Financing, Capital Planning, and Privatization*, GAO-02-764 (Washington, D.C.: Aug. 16, 2002).

[13]GAO, *Water Infrastructure: Comprehensive Asset Management Has Potential to Help Utilities Better Identify Needs and Plan Future Investments*, GAO-04-461 (Washington, D.C.: Mar. 19, 2004).

have only a marginal impact in closing the long-term water infrastructure funding gap. We have previously reported that comprehensive asset management, a technique whereby water systems systematically identify their needs, set priorities, and better target their investments, can help utilities make better us of available funds. Additional funds, however, will ultimately be needed to narrow the funding gap.

Aging Dam Infrastructure Raises Safety and Funding Challenges

Our nation's dam infrastructure is an important component of the nation's water control infrastructure, supplying such benefits as water for drinking, irrigation, and industrial uses; flood control; hydroelectric power; recreation; and navigation.[14] However, as evidenced by the events of Hurricanes Katrina and Rita, the failure of dam infrastructure, which includes levees, also represents a risk to public safety, local and regional economies, and the environment. In particular, the aging of dam infrastructure in the United States continues to be a critical issue for dam safety because the age of dams is a leading indicator of potential dam failure.[15] According to the American Society of Civil Engineers, the number of unsafe dams has risen by more than 33 percent since 1998, to more than 3,500 in 2005.[16] In addition, the number of dams identified as unsafe is increasing faster than the number of dams that are being repaired.

To address the challenges facing our nation's dams, the Federal Emergency Management Agency and the National Dam Safety Review Board identified both short- and long-term goals and priorities for the National Dam Safety Program[17] over the next 5 to 10 years. They include identifying and remedying deficient dams, increasing dam inspections, increasing the number of and updating of Emergency Action Plans, achieving the participation of all states in the National Dam Safety Program, increasing research products disseminated to the dam safety community, and achieving cost efficiencies. However, according to the

[14]The term "dam" includes conventional dams, navigation locks, levees, canals (excluding channels), or other similar types of water retention structures.

[15]A number of factors, including age, construction deficiencies, inadequate maintenance, and seismic or weather events contribute to the likelihood of dam failure.

[16]American Society of Civil Engineers, *2005 Report Card for America's Infrastructure*, March 2005.

[17]The National Dam Safety Program, which is administered by FEMA, is a partnership of the states, federal agencies, and other stakeholders to encourage individual and community responsibility for dam safety.

Congressional Research Service, most federal agencies do not have funding available to immediately undertake all nonurgent repairs, and at some agencies, dam rehabilitation projects must compete for funding with other construction projects.[18] The Association of State Dam Safety Officials reported similar funding constraints on dam investment at the state level.

GAO Principles Could Guide Efforts to Reexamine Federal Programs in Light of Challenges

Given the nation's infrastructure challenges and the federal government's fiscal outlook, we have called for a fundamental reexamination of government programs. Addressing these challenges requires strategic approaches, effective tools and programs, and coordinated solutions involving all levels of government and the private sector.[19] Yet in many cases, the government is still trying to do business in ways that are based on conditions, priorities, and approaches that were established decades ago and are not well suited to addressing 21st century challenges. A reexamination offers an opportunity to address emerging concerns by eliminating outdated or ineffective programs, more sharply defining the federal role in relation to state and local roles, and modernizing those programs and policies that remain relevant. Through our prior analyses of existing programs, we identified a number of principles that could help drive an assessment for restructuring and financing the federal surface transportation program. While these principles are designed specifically to reexamine the surface transportation programs, most, if not all of these principles could be informative as policymakers consider how to address challenges facing other federal infrastructure programs. These principles include

- creating well-defined goals based on identified areas of national interest, which involves examining the relevance and relative priority of existing programs in light of 21st century challenges and identifying emerging areas of national importance;
- establishing and clearly defining the federal role in achieving each goal in relation to the roles of state and local governments, regional entities, and the private sector;

[18]Congressional Research Service, CRS Report for Congress, *Aging Infrastructure: Dam Safety*, updated March 25, 2008.

[19]GAO, *21st Century Challenges: Reexamining the Base of the Federal Government,* GAO-05-325SP (Washington, D.C.: Feb. 2005).

- incorporating performance and accountability into funding decisions to ensure resources are targeted to programs that best achieve intended outcomes and national priorities;
- employing the best tools, such as benefit-cost analysis, and approaches to emphasize return on investment at a time of constrained federal resources; and
- ensuring fiscal sustainability through targeted investments of federal, state, local, and private resources.

Various Options Are Available or Have Been Proposed to Fund Investments in the Nation's Infrastructure

Various options exist or have been proposed to fund investments in the nation's infrastructure. These options include altering existing or introducing new funding approaches and employing various financing mechanisms. In addition, some have suggested including an infrastructure component in a future economic stimulus bill, which could provide a one-time infusion of funds for infrastructure. Each of these options has different merits and challenges, and the selection of any of them will likely involve trade-offs among different policy goals. Furthermore, the suitability of any of these options depends on the level of federal involvement or control that policymakers desire for a given area of policy. However, as we have reported, when infrastructure investment decisions are made based on sound evaluations, these options can lead to an appropriate blend of public and private funds to match public and private costs and benefits.[20] To help policymakers make explicit decisions about how much overall federal spending should be devoted to infrastructure investment, we have previously proposed establishing an investment component within the unified budget.

Funding Approaches Can Be Altered or Developed to Help Fund Infrastructure Investments

Various existing funding approaches could be altered or new funding approaches could be developed to help fund investments in the nation's infrastructure. These various approaches can be grouped into two categories: taxes and user fees.

[20]GAO, *Freight Transportation: Strategies Needed to Address Planning and Financing Limitations*, GAO-04-165 (Washington D.C.: Dec. 19, 2003).

A variety of taxes have been and could be used to fund the nation's infrastructure, including excise, sales, property, and income taxes. For example, federal excise taxes on motor fuels are the primary source of funding for the federal surface transportation program. Fuel taxes are attractive because they have provided a relatively stable stream of revenues and their collection and enforcement costs are relatively low. However, fuel taxes do not currently convey to drivers the full costs of their use of the road—such as the costs of wear and tear, congestion, and pollution. Moreover, federal motor fuel taxes have not been increased since 1993—and thus the purchasing power of fuel taxes revenues has eroded with inflation. As Congressional Budget Office (CBO) has previously reported, the existing fuel taxes could be altered in a variety of ways to address this erosion, including increasing the per-gallon tax rate and indexing the rates to inflation.[21] Some transportation stakeholders have suggested exploring the potential of using a carbon tax, or other carbon pricing strategies, to help fund infrastructure.[22] In a system of carbon taxes, fossil fuel emissions would be taxed, with the tax proportional to the amount of carbon dioxide released in the fuel's combustion. Because a carbon tax could have a broad effect on consumer decisions, we have previously reported that it could be used to complement Corporate Average Fuel Economy standards, which require manufacturers meet fuel economy standards for passenger cars and light trucks to reduce oil consumption.[23] A carbon tax would create incentives that could affect a broader range of consumer choices as well as provide revenue for infrastructure.

Another funding source for infrastructure is user fees. The concept underlying user fees—that is, users pay directly for the infrastructure they use—is a long-standing aspect of many infrastructure programs. Examples of user fees that could be altered or introduced include airport passenger facility charges; fees for use of air traffic control services; fees based on

[21]CBO, *Status of the Highway Trust Fund: 2007*, March 27, 2007.

[22]Another carbon pricing strategy is a cap-and-trade program, which combines a regulatory limit or cap on the amount of carbon that can be emitted into the atmosphere with market elements such as the opportunity to buy additional allowances to emit additional carbon. Auctioning the allowances of a cap-and-trade program would generate revenue for the government, which could be used for a variety of purposes, including infrastructure investments.

[23]GAO, *Vehicle Fuel Economy: Reforming Fuel Economy Standards Could Help Reduce Oil Consumption by Cars and Light Trucks, and Other Options Could Complement These Standards*, GAO-07-921 (Washington, D.C.: Aug. 2, 2007).

vehicle miles traveled (VMT) on roadways; freight fees, such as a per-container charge; highway tolls; and congestion pricing of roads and aviation infrastructure.

- **Aviation user fees.** Many commercial airports currently impose a user fee on passengers—referred to as a passenger facility charge—to fund airport capital projects.[24] Over $2 billion in passenger facility charge revenues are collected by airports each year, representing an important source of funding for airport capital projects. In contrast, FAA's activities, including the transition to NextGen, are largely funded by excise taxes through the Airport and Airway Trust Fund. To better connect FAA's revenues with the cost of air traffic control services that FAA provides, the administration has proposed, in its FAA reauthorization bill, to replace this excise tax funding system with a cost-based user fee system. This new system would aim to recover the costs of providing air traffic control services through user fees for commercial operators and aviation fuel taxes for general aviation. According to the administration, cost-based user charges would link revenues more closely to costs and could create incentives for more efficient use of the system by aircraft operators. We have previously testified that a better alignment of FAA's revenues and costs can address concerns about long-term revenue adequacy, equity, and efficiency as intended, but the ability of the proposed funding structure to link revenues and costs depends critically on the soundness of FAA's cost allocation system in allocating costs to users. We found that the support for some of FAA's cost allocation methodology's underlying assumptions and methods is insufficient, leaving FAA unable to conclusively demonstrate the reasonableness of the resulting cost assignments.[25]

- **VMT fees.** To more directly reflect the amount a vehicle uses particular roads, users could be charged a fee based on the number of vehicle miles traveled. In 2006, the Oregon Department of Transportation conducted a pilot program designed to test the technological and administrative feasibility of a VMT fee. The pilot program evaluated whether a VMT fee could be implemented to replace motor fuel taxes as the principal source of transportation revenue by utilizing a Global Positioning System (GPS) to track miles driven and collecting the VMT fee ($0.012 per mile traveled) at fuel pumps that can read information from the GPS.[26] As we have

[24]The majority of commercial airports charge a passenger facility charge of between $1 and $4.50 per enplaned passenger.

[25]GAO-08-460T.

[26]Oregon's Mileage Fee Concept and Road User Fee Pilot Program: Final Report.

previously reported, using a GPS could also be used to track mileage in high-congestion zones, and the fee could be adjusted upward for miles driven in these areas or during more congested times of day such as rush hour—a strategy that might reduce congestion and save fuel.[27] In addition, the system could be designed to apply different fees to vehicles, depending on their fuel economy. On the federal level, a VMT fee could be based on odometer readings, which would likely be a simpler and less costly way to implement such a program. A VMT fee—unless it is adjusted based on the fuel economy of the vehicle—does not provide incentives for customers to buy vehicles with higher fuel economy ratings because the fee depends only on mileage. Also, because the fee would likely be collected from individual drivers, a VMT fee could be expensive for the government to implement, potentially making it a less cost-effective approach than a motor fuel or carbon tax. The Oregon study also identified other challenges including concerns about privacy and technical difficulties in retrofitting vehicles with the necessary technology.

- **Freight fees.** Given the importance of freight movement to the economy, the Policy Commission recently recommended a new federal freight fee to support the development of a national program aimed at strategically expanding capacity for freight transportation.[28] While the volume of domestic and international freight moving through the country has increased dramatically and is expected to continue growing, the capacity of the nation's freight transportation infrastructure has not increased at the same rate as demand.[29] To support the development of a national program for freight transportation, the Policy Commission recently recommended the introduction of a federal freight fee. The Policy Commission notes that a freight fee, such as a per-container charge, could help fund projects that remedy chokepoints and increase throughput. The Policy Commission also recommended that a portion of the customs duties, which are assessed on imported goods, be used to fund capacity improvements for freight transportation. The majority of customs duties currently collected, however, are deposited in the U.S. Treasury's general fund for the general support of federal activities.[30] Therefore, designating a

[27] GAO-07-921.

[28] *Transportation for Tomorrow: Report of the National Surface Transportation Policy and Revenue Study Commission,* January 2008.

[29] GAO, *Freight Transportation: National Policy and Strategies Can Help Improve Freight Mobility*, GAO-08-287 (Washington, D.C.: Jan. 7, 2008).

[30] GAO, *Marine Transportation: Federal Financing and a Framework for Infrastructure Investments*, GAO-02-1033 (Washington, D.C.: Sept. 9, 2002).

portion of customs duties for surface transportation financing would not create a new source of revenue, but rather transfer funds from the general fund.

- **Tolling.** We have previously reported that roadway tolling has the potential to provide new revenues, promote more effective and rational investment strategies, and better target spending for new and expanded capacity for surface transportation infrastructure.[31] For example, the construction of toll projects is typically financed by bonds; therefore, projects must pass the test of market viability and meet goals demanded by investors, although even with this test, there is no guarantee that projects will always be viable. Tolling potentially can also leverage existing revenue sources by increasing private-sector participation and investment through such arrangements as public-private partnerships. However, securing public and political support for tolling can prove difficult when the public and political leaders perceive tolling (1) as a form of double taxation, (2) unreasonable because tolls do not usually cover the full costs of projects, or (3) unfair to certain groups. Other challenges include obtaining sufficient statutory authority to toll, adequately addressing the traffic diversion that might result when motorists seek to avoid toll facilities, limitations on the types of roads that can be tolled, and coordinating with other states or jurisdictions on a tolling project.

- **Congestion pricing.** As we have previously reported, congestion pricing, or road pricing, attempts to influence driver behavior by charging fees during peak hours to encourage users to shift to off-peak periods, use less congested routes, or use alternative modes. Congestion pricing can also help guide capital investment decisions for new transportation infrastructure. In particular, as congestion increases, tolls also increase, and such increases (sometimes referred to as "congestion surcharges") signal increased demand for physical capacity, indicating where capital investments to increase capacity would be most valuable. Furthermore, these congestion surcharges can potentially enhance mobility by reducing congestion and the demand for roads when the surcharges vary according to congestion to maintain a predetermined level of service. The most common form of congestion pricing in the United States is high-occupancy-toll lanes, which are priced lanes that offer drivers of vehicles that do not meet the occupancy requirements the option of paying a toll to

[31]GAO, *Highway Finance: States' Expanding Use of Tolling Illustrates Diverse Challenges and Strategies*, GAO-06-554 (Washington, D.C.: June 28, 2006).

use lanes that are otherwise restricted for high-occupancy vehicles. In its FAA reauthorization proposal, the administration proposed extending congestion pricing to the aviation sector as a means of managing air traffic congestion. Specifically, the administration proposed that FAA establish a fee based on time of day or day of the week for aircraft using the nation's most congested airports to discourage peak-period traffic. Under such a fee, cargo carriers could pay lower fees by operating at night than they would pay by operating at peak periods of the day, creating an incentive for some cargo carriers to switch daytime operations to nighttime. Like tolling, congestion pricing proposals often arouse political and public opposition, raise equity concerns, and face statutory restrictions.

Various Financing Mechanisms Can Also Help Fund Infrastructure Projects

Financing strategies can provide flexibility for all levels of government when funding additional infrastructure projects, particularly when traditional pay-as-you-go funding approaches, such as taxes or fees, are not set at high enough levels to meet demands. The federal government currently offers several programs to provide state and local governments with incentives such as bonds, loans, and credit assistance to help finance infrastructure. Financing mechanisms can create potential savings by accelerating projects to offset rapidly increasing construction costs and offer incentives for investment from state and local governments and from the private sector. However, each financing strategy is, in the final analysis, a form of debt that ultimately must be repaid with interest. Furthermore, since the federal government's cost of capital is lower than that of the private sector, financing mechanisms, such as bonding, may be more expensive than timely, full, and up-front appropriations. Finally, if the federal government chooses to finance infrastructure projects, policy makers must decide how borrowed dollars will be repaid, either by users or by the general population either now or in the future through increases in general fund taxes or reductions in other government services.

A number of available mechanisms can be used to help finance infrastructure projects. Examples of these financing mechanisms follow:

Bonding. A number of bonding strategies—including tax-exempt bonds,[32] Grant Anticipation Revenue Vehicles (GARVEE) bonds, and Grant Anticipation Notes (GAN)—offer flexibility to bridge funding gaps when traditional revenue sources are scarce. For example, state-issued GARVEE bonds or GANs provide capital in advance of expected federal funds, allowing states to accelerate highway and transit project construction and thus potentially reduce construction costs. Through April 2008, 20 states and two territories issued approximately $8.2 billion of GARVEE-type debt financing and 20 other states are actively considering bonding or seeking legislative authority to issue GARVEEs. Further, SAFETEA-LU authorized the Secretary of Transportation to allocate $15 billion in private activity bonds for qualified highway and surface freight transfer facilities. To date, $5.3 billion has been allocated for six projects. In aviation, most commercial airports issue a variety of bonds for airport capital improvements, most notably general revenue bonds that are backed by general revenues from the airport—including aircraft landing fees, concessions, and parking fees—and passenger facility charges. Several bills introduced in this Congress would increase investment in the nation's infrastructure through bonding. For example, the Build America Bonds Act would provide $50 billion in new infrastructure funding through bonding. Although bonds can provide up-front capital for infrastructure projects, they can be more expensive for the federal government than traditional federal grants. This higher expense results, in part, because the government must compensate the investors for risks they assumed through an adequate return on their investment.

- **Loans, loan guarantees, and credit assistance.** The federal government currently has two programs designed to offer credit assistance to states for surface transportation projects. The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) authorized FHWA to provide credit assistance, in the form of direct loans, loan guarantees, and standby lines of credit for projects of national significance. A similar program, Railroad Rehabilitation and Improvement Financing (RRIF) offers loans to acquire, improve, develop, or rehabilitate intermodal or rail equipment or facilities. To date, 15 TIFIA projects have

[32]Tax-exempt bonds are government bonds that are used for purposes such as infrastructure, schools, libraries, general municipal expenditures or refunding of old debt. Tax-exempt means that the interest paid to bondholders is generally not included in their gross income for federal income tax purposes. Examples of tax-exempt bonds include municipal bonds, and private activity bonds that allow tax-exempt debt to be used by private entities to help finance qualified facilities.

been approved for a total of about $4.8 billion in credit assistance and the RRIF program has approved 21 loan agreements worth more than $747 million. These programs are designed to leverage federal funds by attracting substantial nonfederal investments in infrastructure projects. However, the federal government assumes a level of risk when it makes or guarantees loans for projects financed with private investment.[33]

- **Revolving funds.** Revolving funds can be used to dedicate capital to be loaned for qualified infrastructure projects. In general, loaned dollars are repaid, recycled back into the revolving fund, and subsequently reinvested in the infrastructure through additional loans. Such funds exist at both the federal and the state levels and are used to finance various infrastructure projects ranging from highways to water mains. For example, two federal funds support water infrastructure financing, the Clean Water State Revolving Fund (CWSRF) for wastewater facilities, and the Drinking Water State Revolving Fund (DWSRF) for drinking water facilities. Under each of these programs, the federal government provides seed money to states, which they supplement with their own funds. These funds are then loaned to local governments and other entities for water infrastructure construction and upgrades and various water quality projects. In addition, State Infrastructure Banks (SIB)—capitalized with federal and state matching funds—are state-run revolving funds, make loans and provide credit enhancements and other forms of nongrant assistance to infrastructure projects. Through June 2007, 33 SIBs have made approximately 596 loan agreements worth about $6.2 billion to leverage other available funds for transportation projects across the nation.[34] Furthermore, other funds—such as a dedicated national infrastructure bank—have been proposed to increase investment in infrastructure with a national or regional significance. A challenge for revolving funds in general is maintaining their capitalized value. Defaults on loans and inflation can reduce the capitalized value of the fund—necessitating an infusion of capital to continue the fund's operations.

[33]According to DOT, federal requirements necessitate that a credit risk premium be provided to insure the federal government against the risk of loans defaulting. As a result, these loans are closely examined for risk of loss and, to date, none of the TIFIA or RRIF loans have defaulted.

[34]Eight states—Arizona, Florida, Minnesota, Missouri, Ohio, South Carolina, Texas, and Wyoming—account for 95 percent of the total loan agreements reached through fiscal year 2006.

Designing an Economic Stimulus Package to Increase Infrastructure Investment Would Be Difficult

Another option proposed for temporarily increasing investment in the nation's infrastructure is including an investment component in a future economic stimulus bill. According to supporters, including funding for "ready to build" infrastructure projects in a stimulus bill would serve to both boost the economy and improve the nation's infrastructure through a one-time infusion of funds. For example, the American Association of State Highway and Transportation Officials estimates 42,000 jobs are created for every $1 billion dollars invested in transportation projects.

We have previously identified important design criteria for any economic stimulus package.[35] Specifically:

- **Economic stimulus package should be timely.** An economic stimulus should not be enacted prematurely, delayed too long, or consist of programs that would take too long to be implemented to lessen any economic downturn. For example, if fiscal stimulus is undertaken when it is not needed, it could result in higher inflation or if fiscal stimulus is enacted too slowly, it could take effect after the economy has already started to recover.

- **Economic stimulus package should be temporary.** An economic stimulus should be designed to raise output in the short run, but should not increase the budget deficit in the long-run. If a stimulus program is not temporary and continues after the economy recovers, it could lead to higher inflation.

- **Economic stimulus package should be targeted.** An economic stimulus should be targeted to areas that are most vulnerable in a weakening economy and should generate the largest possible increase in short-run gross domestic product.

Designing and implementing an economic stimulus package with an infrastructure investment component that is timely, temporary, and targeted would be difficult. First, while an effective stimulus package should be timely, practically speaking, infrastructure projects require lengthy planning and design periods. According to CBO, even those projects that are "on the shelf" generally cannot be undertaken quickly enough to provide a timely stimulus to the economy.[36] Second, spending on

[35] GAO-08-411T.

[36] CBO, *Options for Responding to Short-Term Economic Weakness*, January 2008.

infrastructure is generally not temporary because of the extended time frames needed to complete projects. For example, initial outlays for major infrastructure projects supported by the federal government, such as highway construction, often total less than 25 percent of the total funding provided for the project. Furthermore, the initial rate of spending can be significantly lower than 25 percent for large projects.[37] Third, because of differences among states, it is challenging to target stimulus funding to areas with the greatest economic and infrastructure needs. For example, two possible indicators for targeting infrastructure aid to states, gross state product and lane miles per capita, are not correlated. Furthermore, as we have previously reported, states tend to substitute federal funds for funds they would have otherwise spent—making it difficult to target a stimulus package so that it results in a dollar-for-dollar increase in infrastructure investment.[38]

Investment Component within Unified Budget Could Guide Federal Investment in Infrastructure

We have previously reported that the budget process can favor consumption over investment because the initial cost of an infrastructure project looks high in comparison to consumption spending.[39] Thus, adopting a capital budget is suggested as a way to eliminate a perceived bias against investments requiring large up-front spending when they compete with other programs in a unified budget. However, proposals to adopt a capital budget at the federal level often start with certain concepts and models extended from state and local governments and the private sector, which are not appropriate because of fundamental differences in the role of the federal government. Specifically, when state and local governments and the private sector make investments, they typically own the resulting assets, while this is frequently not the case for the federal government. For example, although the federal government invests in surface transportation, aviation, water, and dam infrastructure, a significant portion of this infrastructure is owned by state and local governments. This makes it difficult to fully apply traditional capital

[37]CBO, *Options for Responding to Short-Term Economic Weakness*, January 2008.

[38]GAO, *Federal-Aid Highways: Trends, Effect on State Spending, and Options for Future Program Design*, GAO-04-802 (Washington, D.C.: Aug. 31, 2004).

[39]See GAO, *Budget Trends: Federal Investment Outlays, Fiscal Years 1981-2003*, GAO/AIMD-98-184 (Washington, D.C.: June 15, 1998); *Budget Structure: Providing an Investment Focus in the Federal Budget*, GAO/T-AIMD-95-178 (Washington, D.C.: June 29, 1995); and *Budget Issues: Incorporating an Investment Component in the Federal Budget*, GAO/AIMD-94-40 (Washington, D.C.: Nov. 9, 1993).

budgeting approaches, such as depreciation, which might be considered when assets are fully owned. Moreover, there are fundamental differences between the roles of the state and local governments and the federal government. In an inclusive, unified budget, it is important to disclose up front the full commitments of the government. Federal fiscal policy, as broadly conceived, plays a key role in managing the short-term economy as well as promoting the savings needed for long-term growth.

Rather than recommend adopting a capital budget, we have previously proposed establishing an investment component within the unified budget to address federal spending intended to promote the nation's long-term economic growth.[40] By recognizing the different effects of various types of federal spending, an investment focus within the budget would provide a valuable supplement to the unified budget's concentration on macroeconomic issues. Moreover, it would direct attention to the consequences of choices within the budget under existing budget limitations—a level which is now not determined explicitly by policymakers but is simply the result of numerous individual decisions. If an investment component within the unified budget was adopted, Congress could decide on an overall level of investment in a budget resolution or other macro framework, which would be tracked and enforced through the authorizing and appropriations process to ensure that individual appropriations actions supported the overall level. This approach has the advantage of focusing budget decision makers on the overall level of investment supported in the budget without losing sight of the unified budget's effect on the economy. It also has the advantage of building on the current congressional budget process. Finally, it does not raise the problems posed by capital budgeting proposals that use depreciation and deficit financing.[41]

[40]GAO, *Budget Trends: Federal Investment Outlays, Fiscal Years 1981-2002*, GAO/AIMD-97-88 (Washington, D.C.: May 1997), GAO/AIMD-95-178, and GAO/AIMD-94-40. Numerous definitions of investment are possible and can include more than physical capital. We have reported that an appropriate definition would include federal spending, either direct or through grants, directly intended to enhance the nation's long-term productivity. This definition includes spending on some intangible activities such as research and development; human capital designed to increase worker productivity, particularly education and training; and spending for physical capital to improve infrastructure, such as highways and bridges.

[41]Paul Posner, Trina Lewis, and Hannah Laufe, *Budgeting for Federal Capital* (Washington, D.C.: Public Budgeting and Finance, Fall 1998).

Although the investment component would be subject to budget controls, the existence of a separate component could create an incentive to categorize many proposals as investment. If an investment component within the budget is to be implemented in a meaningful fashion, it will be important to identify what to include. Any changes in the budgetary treatment of investment need to consider broader federal responsibilities. While well-chosen investments may contribute to long-term growth, financing such programs through deficits would undermine their own goal by reducing savings available to fund private investment.[42] Accordingly, reforms in the federal government's budget for investment should be considered within the overall constraints of fiscal policy based on unified budget principles.

Concluding Observations

The nation's physical infrastructure is under strain, raising a host of safety, security, and economic concerns. Given these concerns, various investment options have been, and likely will continue to be, identified to help repair, upgrade, and expand our nation's infrastructure. Ultimately, Congress and other federal policymakers will have to determine which option—or, more likely, which combination of funding and financing options—best meets the needs of the nation. There is no silver bullet. Moreover, although financing mechanisms allow state and local governments to advance projects when traditional pay-as-you-go funding approaches, such as taxes and fees, are insufficient, ultimately these borrowed dollars must be repaid by the users or the general population. Consequently, prudent decisions are needed to determine the appropriate level of infrastructure investment and to maximize each dollar invested. We will continue to assist the Congress as it works to evaluate various investment options and develop infrastructure policies for the 21st century.

Messrs. Chairmen, this concludes my prepared statement. I would be pleased to respond to any questions that you or other Members of the Committee might have.

[42]Because the deficit absorbs private savings otherwise available for domestic investment, it exerts the single most important federal influence on investment. The surest way to increase national savings and investment would be to reduce the unprecedented level of federal dissaving by reducing the deficit.

GAO Contact and Staff Acknowledgments

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