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CLEAN WATER INFRASTRUCTURE

Design Issues and Funding Options for a Clean Water Trust Fund

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Highlights

Highlights of GAO-09-893T, a testimony before the Subcommittee on Water Resources and Environment, Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

Many of the wastewater systems that Americans rely on to protect public health and the environment are reaching the end of their useful lives. The Environmental Protection Agency (EPA) has estimated that a potential gap between future needs and current spending for wastewater infrastructure of $150 billion to $400 billion could occur over the next decade. Various approaches have been proposed to bridge this potential gap. One is to establish a clean water trust fund.

This testimony summarizes findings of a May 2009 report (GAO-09-657), where GAO was asked to examine (1) stakeholders' views on the issues that would need to be addressed in designing and establishing a clean water trust fund and (2) potential options that could generate about $10 billion annually in revenue to support a clean water trust fund. GAO administered a questionnaire to 28 national organizations representing stakeholders from the wastewater and drinking water industries, state and local governments, engineers, and environmental groups and received 22 responses; reviewed proposals and industry papers; and used the most current data to estimate revenue on a range of products and activities.

While the May report identified a number of funding options for policymakers to consider, GAO did not endorse any option and does not have a position on whether or not a trust fund should be established. GAO did not make any recommendations in its report.

View GAO-09-893T or key components.

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What GAO Found

Stakeholders identified three main issues that would need to be addressed in designing and establishing a clean water trust fund: how a trust fund should be administered and used; what type of financial assistance should be provided; and what activities should be eligible to receive funding from a trust fund. While a majority of stakeholders said that a trust fund should be administered through an EPA partnership with the states, they differed in their views on how a trust fund should be used. About one-third of stakeholders responded that a trust fund should be used only to fund the existing Clean Water State Revolving Fund (CWSRF), which is currently funded primarily through federal appropriations, while a few said it should support only a new and separate wastewater program. A few stakeholders supported using a trust fund to support both the CWSRF and a separate program, while others did not support the establishment of a trust fund. In addition, more than one-half of the stakeholders responded that financial assistance should be distributed using a combination of loans and grants to address the needs of different localities. Finally, although a variety of activities could be funded, most stakeholders identified capital projects as the primary activity that should receive funding from a clean water trust fund.

GAO identified a number of options that could generate revenue for a clean water trust fund, but several obstacles will have to be overcome in implementing these options, and it may be difficult to generate $10 billion from any one option alone. Funding options include a variety of excise taxes as shown in the table below.

Estimated Revenue from Excise Taxes on Products That May Contribute to the Wastewater Stream (2009 dollars in millions)

Product group	Tax base	1% tax	5% tax	10% tax	Tax rate to generate $10 billion
Beverages	$95,551	$956	$4,778	$9,555	10.5%
Fertilizers and pesticides	26,088	261	1,304	2,609	38.3
Flushable products, including soaps, detergents, cooking oils, and toiletries	63,241	632	3,162	6,324	15.8
Pharmaceuticals	156,069	1,561	7,803	15,607	6.4
Water appliances and plumbing fixtures	25,517	255	1,276	2,552	39.2

Source: GAO analysis of Census data from the 2006 Annual Survey of Manufactures and Foreign Trade Division.

In addition, Congress could levy a tax on corporate income. An additional 0.1 percent corporate income tax could raise about $1.4 billion annually. Congress also could levy a water use tax. A tax of 0.01 cent per gallon could raise about $1.3 billion annually. Regardless of the options selected, certain implementation obstacles will have to be overcome. These obstacles include defining the products or activities to be taxed, establishing a collection and enforcement framework, and obtaining stakeholder support for a particular option or mix of options. Obtaining stakeholder support may be particularly challenging where the link between a funding option and the wastewater stream is not apparent.

Madam Chairwoman and Members of the Subcommittee:

We are pleased to be here today to discuss our recently issued report on a clean water trust fund.[1] More than 220 million people in the United States are served by wastewater systems. These systems are composed of a network of pipes, pumps, and treatment facilities that collect and treat wastewater from homes, businesses, and industries before it is discharged to surface waters. However, many of these systems were constructed more than 50 years ago and are reaching the end of their useful lives. Although federal, state, and local governments invest billions of dollars annually in wastewater infrastructure—about $40 billion in fiscal year 2006—the Environmental Protection Agency (EPA) and others have estimated that current spending levels may not be adequate to cover the costs of maintaining and replacing pipes, treatment plants, and other parts of this infrastructure. According to EPA's estimates, a potential gap of about $150 billion to $400 billion between projected future infrastructure needs and current levels of spending could occur over the next decade.[2] Without additional investment in the nation's wastewater infrastructure, EPA and other groups have asserted that the environmental and public health gains made under the Clean Water Act[3] during the last three decades could be at risk.

A variety of approaches have been proposed to help bridge a potential gap between projected future infrastructure needs and current levels of spending. For example, one approach would be to increase federal funding for the Clean Water State Revolving Fund (CWSRF) program, which is the largest source of federal assistance for wastewater infrastructure.[4] Under the CWSRF program, EPA provides capitalization grants to the states, which in turn use these funds to make loans to local communities or

[1]GAO, *Clean Water Infrastructure: A Variety of Issues Need to Be Considered When Designing a Clean Water Trust Fund*, GAO-09-657 (*Washington*, D.C.: May 29, 2009).

[2]EPA, *The Clean Water and Drinking Water Infrastructure Gap Analysis* (Washington, D.C.: September 2002). In the report, EPA noted that this gap is not inevitable and could be addressed, in part, if wastewater utilities raised the rates they charge consumers. EPA estimates a potential gap for drinking water infrastructure as well.

[3]The Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, § 2, 86 Stat. 816 (commonly referred to as the Clean Water Act).

[4]About $689 million was appropriated in both fiscal years 2008 and 2009 for the CWSRF program, and an additional $4 billion was appropriated by the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, div. A, title VII, 123 Stat. 115, 169.

utilities for various water quality projects. Still another approach that has been considered is to establish a clean water trust fund. In general, federal trust funds collect revenue and distribute funds that have been set aside for specific purposes. A clean water trust fund would provide a dedicated source of funding for wastewater infrastructure that would be similar to some of the trust funds that Congress has established for other infrastructure and environmental programs, such as highway infrastructure construction and coastal wetlands restoration. Some of the revenue for federal trust funds is generated through federal excise taxes.[5]

My testimony today summarizes the issues that we were requested to examine for our May 2009 report: (1) stakeholders' views on the issues that would need to be addressed in designing and establishing a clean water trust fund and (2) potential options that Congress could consider that could generate revenues of about $10 billion annually to support a clean water trust fund. In conducting this work, we administered a questionnaire to 28 national organizations representing the wastewater and drinking water industries, state and local governments, engineers, and environmental groups and received 22 responses; reviewed proposals and industry papers; and interviewed federal, state, local, and industry officials. To estimate the revenue that could be raised by potential options, we used the most current data available to estimate the value of products or activities that could be subject to a federal tax and applied a range of tax rates—based on current or past taxation policies—to these values. The estimates presented in our May report are not official revenue estimates as would be prepared by the Joint Committee on Taxation. Moreover, we do not endorse any option and do not have a position on whether or not a clean water trust fund should be established.

We conducted our work from June 2008 to May 2009 in accordance with all sections of GAO's quality assurance framework that are relevant to our objectives. The framework requires that we plan and perform the engagement to obtain sufficient and appropriate evidence to meet our stated objectives and to discuss any limitations in our work. We believe that the information and data obtained, and the analysis conducted, provide a reasonable basis for any findings and conclusions.

[5]An excise tax is a tax levied on the manufacture, sale, or consumption of various commodities.

Stakeholders Identified Three Key Issues That Would Need to Be Addressed in Designing and Establishing a Clean Water Trust Fund

According to stakeholders we contacted, three main issues would need to be addressed in designing and establishing a clean water trust fund: how a trust fund should be administered and used, what type of financial assistance should be provided, and what activities should be eligible to receive funding from a trust fund.

Administration and use of a trust fund: Stakeholders told us that designing a clean water trust fund would involve deciding what agency or entity would administer the fund and whether the trust fund would be used to fund the CWSRF program or a separate program. A majority of stakeholders (15 of 20) responding to our questionnaire expressed the view that a trust fund should be administered through an EPA-state partnership like the current CWSRF program.[6] However, the stakeholders differed in their views on how a trust fund should be used. About one-third of stakeholders (7 of 20) responded that a trust fund should be used only to fund the existing CWSRF, which is currently funded primarily through federal appropriations, while 3 stakeholders said it should support only a new and separate wastewater program. In addition, 5 of 20 stakeholders supported using a trust fund to support both the CWSRF program and a separate program. These stakeholders said that the CWSRF needed a dedicated source of funding but that the flexibility of a new program could help to address some of the CWSRF's limitations. Finally, 3 of 20 stakeholders were opposed to the creation of a clean water trust fund.[7]

Type of financial assistance: Another design issue that stakeholders identified was specifying the type of assistance—grants or loans—that a clean water trust fund would provide. Over one-half of the stakeholders responding to our questionnaire (13 of 21) favored distributing funding to wastewater infrastructure projects using a combination of loans and grants. The remaining stakeholders favored using either loans or grants or another form of distribution.

Eligible activities: Finally, stakeholders said that designing and implementing a clean water trust fund would involve determining the type of wastewater infrastructure activities that the fund would support. Most

[6]Twenty-two stakeholders responded to our questionnaire; however, because not all stakeholders responded to each question, the total number of responses varied for each question.

[7]Two stakeholders responded to the questionnaire but did not provide a specific position regarding how a trust fund should be used.

stakeholders who responded to our questionnaire supported using a trust fund for planning and designing wastewater projects (18 of 21) and for capital costs (19 of 21).

Various Options for Funding a Clean Water Trust Fund Could Generate a Range of Revenues, but Each Option Poses Certain Obstacles

Various funding options—including excise taxes on products that may contribute to the wastewater stream, an additional tax on corporate income, a water use tax, and an industrial discharge tax—could generate a range of revenues for a clean water trust fund. However, it may be difficult to raise $10 billion annually for a clean water trust fund from any one of these options because of the small size of the tax bases of many of these options. In addition, each funding option poses various implementation challenges, including defining the products or activities to be taxed, establishing a collection and enforcement framework, and obtaining stakeholder support.

A Variety of Options Are Available That Could Generate a Range of Revenue to Support a Trust Fund

Excise taxes on products that may contribute to the wastewater stream could be used to generate revenue for a clean water trust fund. These products include beverages, fertilizers and pesticides, flushable products, pharmaceuticals, and water appliances and plumbing fixtures. While past proposals for funding a clean water trust fund have identified these products as contributing to the wastewater stream, limited research has been done on their specific impact on wastewater infrastructure, according to EPA.[8] Raising $10 billion from a tax on any individual product group would require tax rates ranging from a low of 6.4 percent for pharmaceuticals to a high of 39.2 percent for water appliances and plumbing fixtures.[9] Alternatively, a lower tax rate could be levied on a number of these product groups that would collectively generate about

[8]A 1996 study by EPA provided information on using some of these products to provide funding for wastewater infrastructure. The study noted the following: "Currently, little empirical data exist by which to document the volume and toxicity of most potential fee targets. This limitation, which research might address over time, results in a significant selection bias when products are selected for their link to water pollution." EPA, *Alternative Funding Study: Water Quality Fees and Debt Financing Issues* (June 1996).

[9]If any of the products in these product groups were excluded or exempted from an excise tax, the tax base would decline and higher tax rates would be needed to raise similar amounts of money. For example, if the excise tax on beverages did not include alcoholic beverages, the tax base for this product group would decline by over 50 percent to about $44 billion, and the tax rate required to raise $10 billion would increase to about 25 percent.

$10 billion. Table 1 shows the tax bases for the product groups, along with the revenue that could be generated from a range of tax rates.

Table 1: Estimated Revenue from a Range of Excise Tax Rates on Products That May Contribute to the Wastewater Stream

2009 dollars in millions

Product groups	Tax base[a]	1% tax	3% tax	5% tax	10% tax	Tax rate to generate $10 billion
Beverages	$95,551	$956	$2,867	$4,778	$9,555	10.5%
Fertilizers and pesticides	26,088	261	783	1,304	2,609	38.3
Flushable products	63,241	632	1,897	3,162	6,324	15.8
Pharmaceuticals	156,069	1,561	4,682	7,803	15,607	6.4
Water appliances and plumbing fixtures	25,517	255	766	1,276	2,552	39.2

Source: GAO analysis of Census data from the 2006 Annual Survey of Manufactures and Foreign Trade Division.

[a]The tax base includes the value of products manufactured domestically as well as those imported, but excludes exports.

Alternatively, a per unit excise tax could be levied on these products. For example, according to the Container Recycling Institute, about 215 billion bottled and canned beverages were sold in 2006.[10] Levying a 1-cent tax on these bottles and cans could yield about $2.2 billion, and raising $10 billion would require a tax of about 5 cents.

Other options that could generate revenue for a clean water trust fund include the following:

Tax on Corporate Income: Another option that could be used to fund a clean water trust fund is to levy an additional tax on the incomes of corporations. This tax would be similar to the Corporate Environmental Income Tax that was used to fund the Superfund program until 1995. An additional 0.1 percent corporate income tax on the $1.4 trillion in corporate taxable income could raise about $1.4 billion annually. Higher tax rates would be needed to generate a larger amount of revenue. For example, a 0.5 percent tax could raise $6.9 billion and to raise $10 billion from this option, an additional tax of about 0.7 percent would need to be levied.

[10]Container Recycling Institute, *Wasting and Recycling Trends: Conclusions from CRI's 2008 Beverage Market Data Analysis* (Glastonbury, Conn.: December 2008).

Water Use Tax: Another option to fund a clean water trust fund is a tax on water use. A tax of 0.01 cent per gallon on the 13.4 trillion gallons of water delivered to domestic, commercial, and industrial users from public supplies in 2000 could raise about $1.3 billion annually, while a tax of about 0.1 cent per gallon could raise about $13 billion annually. Alternatively, a flat charge could be added to household wastewater bills, similar to Maryland, which charges households $30 annually to help fund wastewater infrastructure in the state. At a national level, imposing a flat charge of $30 annually on the approximately 86 million households that receive wastewater service could raise about $2.6 billion annually. Raising $10 billion from a flat charge on households would require a charge of about $116 per year, per household.[11]

Industrial Discharge Tax: A final option we identified that could raise revenue is an industrial discharge tax. However, it is unclear what level of taxation could be levied to generate $10 billion from an industrial discharge tax because of data limitations.

Each Funding Option Poses Certain Implementation Challenges

Regardless of the options selected to provide revenue for a clean water trust fund, certain implementation obstacles will have to be overcome. These challenges include defining the products or activities to be taxed, establishing a collection and enforcement framework, and obtaining stakeholder support for a particular option or mix of options. For example, implementing excise taxes on products that may contribute to the wastewater stream would require the Internal Revenue Service (IRS) to develop clear and precise definitions of the products to be taxed, as authorized by Congress. In addition, any exemptions to the excise tax would also need to be defined. According to IRS officials, the administrative costs associated with designing and implementing any new excise taxes could be substantial, and this process could take more than 1 year to complete. In addition, once taxable product(s) have been defined, the IRS would also need to modify its excise tax collection and enforcement framework. Similar challenges would be faced in implementing a corporate income tax, a water use tax, or an industrial discharge tax.

[11]A flat charge could also be applied to industrial and commercial users, but data are not available on the number of these system users.

Furthermore, obtaining stakeholder and industry support for these funding options could pose additional challenges. While a majority of stakeholders supported three of the eight funding options—excise taxes on beverages, fertilizers and pesticides, and flushable products—some stakeholders have not yet taken a position on these options, making it difficult to gauge their level of support for these options. In addition, because many stakeholders do not perceive a strong connection between the products and activities that we identified as potential funding options and wastewater infrastructure use, it may be difficult to obtain widespread stakeholder support. Table 2 shows stakeholders' views on the extent of the connection between wastewater infrastructure use and the product groups or activities.

Table 2: Stakeholder Views on the Extent of the Connection between Wastewater Infrastructure Use and Product Groups or Activities

	Stakeholder responses					
Product group or activity	**Great extent or very great extent**	**Moderate extent**	**Little or no extent**	**Don't know/ no opinion**	**Included multiple responses**	**Total**
Beverages	8	4	3	2	1	**18**
Fertilizers and pesticides	12	2	1	2	1	**18**
Flushable products	12	3	0	2	1	**18**
Pharmaceuticals	6	7	2	3	0	**18**
Water appliances and plumbing fixtures	5	7	3	2	1	**18**
Additional tax on corporate income	4	0	11	3	0	**18**
Water use tax	5	6	1	2	1	**15**
Industrial discharge tax	11	2	3	2	0	**18**

Source: GAO analysis of stakeholder responses.

Note: Not all stakeholders responded to each question, so the total number of responses varied. In addition, one stakeholder provided multiple responses.

In addition, industry groups were consistently opposed to a tax on their specific product groups to support a clean water trust fund. In their view, their products did not contribute significantly to the deterioration of wastewater infrastructure and, therefore, should not be taxed.

In conclusion, Madam Chairwoman, while the funding gap for clean water infrastructure is significant, there is no easy solution to address this gap. Of the many options that we have identified, each poses its own set of implementation challenges, and, ultimately, overcoming the resistance of industry, taxpayers, and others to these funding options may be difficult.

This concludes my prepared statement. I would be happy to respond to any questions that you or members of the Subcommittee may have at this time.

GAO Contact and Staff Acknowledgments

For further information about this statement, please contact me at (202) 512-3841 or mittala@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Sherry McDonald, Assistant Director; Janice Ceperich; and Scott Heacock also made key contributions to this statement.

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