

Testimony of:

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To:

Committee on Transportation and Infrastructure
Subcommittee on Water Resources and Environment
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On Behalf of:

The National Association of Clean Water Agencies
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Mr. Chairman and Members of the Subcommittee, thank you for the opportunity to be here today to discuss the merits of a new Federal Clean Water Trust Fund. My name is Kenneth I. Rubin and I am here today at the request of the National Association of Clean Water Agencies (NACWA) for whom I have consulted over the past several years on this subject.

In my testimony, I would like to address three issues:

1. Why should the federal government take a stronger position helping finance America's wastewater treatment facilities?
2. What form of assistance is appropriate?
3. How can a new Federal Clean Water Trust Fund result in efficient investments in clean water?

Before addressing these issues, however, let me provide the relevant background.

Background

In April 2000, the Water Infrastructure Network (WIN) released its first report, *Clean & Safe Water for the 21st Century*. That report documented significant improvements in water quality and public health associated with America's investments in water and wastewater infrastructure. But, it also documented an unprecedented financial problem: over the next 20 years, America's wastewater systems will have to invest \$12 billion a year more than current investments to meet the national environmental and public health priorities in the Clean Water Act and to replace aging and failing infrastructure. Independent analyses completed in September 2002 and November 2002 by the US Environmental Protection Agency (*The Clean Water and Drinking Water Infrastructure Gap Analysis*) and the US Congressional Budget Office (*Future Investments in Water and Wastewater Infrastructure*), respectively, corroborate WIN's figures.

In the words of the WIN coalition, which represents a broad spectrum of professional, technical, academic, environmental, labor, and government organizations involved in water infrastructure:

“New solutions are needed to what amounts to nearly a trillion dollars in critical water and wastewater investments over the next two decades. Not meeting the investment needs of the next 20 years risks reversing the public health, environmental, and economic gains of the last three decades.”

In a subsequent report released in early 2001, WIN recommended a series of public and private actions to meet the challenges for funding wastewater infrastructure over the coming decades. As part of this fiscal partnership, WIN recommended increasing the federal role where needs are great, public health or the environment is at risk, or local financing capability is inadequate. WIN suggested:

“This enhanced federal role should provide for distribution of funds in fiscally responsible and flexible ways, including grants, loans, loan subsidies, and credit assistance.”

Why Should the Federal Government Take a Stronger Position Helping Finance America's Wastewater Treatment Facilities?

There is little disagreement that investments in wastewater systems pay substantial dividends to the environment, public health, and the economy. It is well documented that municipal wastewater treatment plants prevent billions of tons of pollutants each year from reaching America's rivers, lakes, and coastlines. In so doing, they preserve our natural treasures such as the Chesapeake Bay, the Great Lakes, or the Columbia River. Clean water supports a \$50 billion a year water-based recreation industry, at least \$300 billion a year in coastal tourism, a \$45 billion annual commercial fishing and shell fishing industry, and hundreds of billions of dollars a year in basic manufacturing that relies on clean water. Clean rivers, lakes, and coastlines attract investment in local communities and increase land values on or near the water, which in turn, create jobs, add incremental tax base, and increase income and property tax revenue to local, state, and the federal governments.

Most would agree that America's wastewater treatment plants provide benefits broadly to all Americans. But, why does this matter in the debate over how to finance wastewater infrastructure? First, it matters because America's waters are "public goods," and in protecting them, wastewater utilities create a "positive externality." That is, the cleansing of wastewater results in clean rivers and lakes for all to enjoy, and consequently, these benefits are available widely throughout society to those who pay for them (local ratepayers) as well as many others that pay nothing — those who live downstream, for example. When benefits of protecting a public good flow externally like this, utility managers setting sewer rates and citizens paying them receive weak or no market signals as to the right price to pay from society's point of view. In the US, federal and state regulations step in and establish minimum, and depending on local conditions sometimes much higher, levels of protection of public resources in place of market-derived prices. In the end, local wastewater utilities are asked to pay whatever it takes to meet these regulations and as regulations multiply, so do prices for ratepayers as do uncompensated clean water benefits to people and businesses downstream.

Consider the case of a large city on a river 50 miles upstream of a sensitive estuary and public beach. With no wastewater treatment, the city pays nothing, but pollution will destroy the ecosystem and drive people away from using beaches. Complete treatment is expensive, perhaps crowding out other priorities like police protection or roads, but will result in a healthy ecosystem downstream and clean beaches for all to enjoy. Should city residents pay nothing and all others pay through loss of environmental and recreational amenities? Or, should city residents pay whatever it takes to keep all downstream water clean for others to enjoy?

Second, it matters because of demographics. The process of producing clean wastewater effluent requires a significant investment in physical infrastructure — the pipes, pumps, meters, and motors needed to collect, treat, and move wastewater over long distances. These wastewater assets wear out and must be replaced, which for large and growing communities is usually not a financial burden. But for many urban core cities whose population has shifted to outlying suburbs, the cost of replacing wastewater infrastructure can be unmanageable for those who still live there. Not replacing these assets can result in failures in the wastewater function, reductions in local economic productivity, and pollution of local waters. In many cities, doubling, tripling, even quadrupling sewer fees would not be enough to meet replacement needs

because too few people remain within political boundaries to pay for the fixed assets needed to serve all within them. In many locations, those who still populate urban centers tend to have lower incomes than those who have moved to outlying areas, and consequently, serious questions of equity arise when local sewer fees have to increase dramatically to serve these populations.

Finally, it matters because sole reliance on local sewer fees creates broad issues of equity across income and ethnic groups and from one community to the next depending on their location upstream or downstream of clean or impaired waters. Not all communities can afford the same level of fees, raising serious issues about fairness in providing comparable levels of clean water to all citizens. Moreover, having a common standard or level of service makes it easier for businesses and labor to move from place to place without fear of cutting production because of local capacity shortfalls. It also provides cultural benefits by helping to bind together people from across the nation that know their waterways anywhere are clean and safe. The value of these common water quality conditions — and the recognition that a central source of funds is best to finance the network needed to ensure them — have long been recognized in federal infrastructure policy. Equitable treatment of all citizens and the attainment of network effects of infrastructure through pooled federal revenue collection and trust fund disbursements have driven the financing structures of our national programs to build and maintain highways, transit systems, airports, and inland waterways.

What Form of Assistance is Appropriate?

Many suggest that local solutions, like increased wastewater rates or operating efficiencies are all that will be needed to meet the future wastewater financing challenge. But, while local solutions are important, they can address only a portion of this problem. Financing the full \$12 billion a year gap with utility rate increases would result in a doubling or tripling of rates across the nation. If this were to happen, at least a third of the population of the U.S. would have to pay more than 2 percent of their household income for sewer services, the conventional criterion for affordability. Small, rural, and low-income communities would be hit the hardest, since costs are high in small, dispersed systems and low-income households have little disposable income with which to pay higher rates. Some 60 percent of the U.S. population has experienced no increase, or a loss, in real household income over the last 20 years, so for the majority of U.S. families, sharp increases in wastewater rates can be expected to have significant economic impacts.

There is ample precedent for, and clear economic principal supporting, an appropriately structured federal trust fund for wastewater infrastructure. The importance of wastewater infrastructure was well understood in the 1960s as the nation watched the quality of its waters decline precipitously and chose in the 1972 Clean Water Act, to spend federal tax dollars to reverse this trend. Despite increasing federal mandates for cleaner water, despite shifts in population that strand wastewater assets in urban core cities with few ways to pay for needed improvements, and despite the nearly universal need to replace hundreds of billions of dollars in aging and failing wastewater collection systems, the federal contribution to wastewater investment has declined from 30 percent in 1980 to less than five percent today.

Interestingly, this is not the case in other basic infrastructure systems such as highways, airports, or transit systems. To finance these equally critical transportation systems, Congress has established federal trust funds that assure continuous funding to meet changing needs. The rationale is simple: these basic infrastructure systems underpin the U.S. economy broadly and their benefits accrue widely to users without geographic limitations imposed by local political boundaries. Moreover, these infrastructure systems have network benefits that are felt only after all, or substantial portions, of the network is complete and functional, affording Americans anywhere in the country access to minimum levels of services.

Wastewater systems share these same characteristics. Accordingly, a new Clean Water Trust Fund can make good economic sense, if it is structured appropriately.

How Can a Federal Clean Water Trust Fund Result in Efficient Investments in Clean Water?

Experience with a broad array of federal trust funds suggests an equally broad set of issues that presage an efficient federal funding structure. This subcommittee is well aware of the most important ones: rules for annual appropriations, budget scoring effects, linkage to non-federal recipients, allowable uses and terms of fund financing, distribution of fund disbursements, and the like. The combination of policies in these areas can lead to efficient investments.

But, perhaps the most important issue is the source or sources of revenue used to capitalize the fund. As demonstrated in the table below, Congress has chosen to establish and dedicate a wide variety of federal excise taxes to the many federal trusts over the years.

Trust Fund/Special Fund	Excise Tax On
Federal Aid to Wildlife Restoration Projects Fund	<ul style="list-style-type: none"> • Bows and arrows along with their parts and accessories • Pistols and revolvers • Other regular firearms and ammunition
Aquatic Resources Trust Fund	Gasoline and special motor fuels used in motorboats
Boating Safety Account	Gasoline used in small engines
Sport Fishing Restoration Account	<ul style="list-style-type: none"> • Sport fishing equipment • Electric outboard motors • Fish-locating sonar devices
Highway Trust Fund	<ul style="list-style-type: none"> • Motor fuels • Heavy trucks and trailers (on retail price) • Use tax on heavy highway vehicles • Heavy tires for highway vehicles
Land and Water Conservation Fund	Gasoline and special motor fuels used in motorboats
Airport and Airway Trust Fund	<ul style="list-style-type: none"> • Air passenger tickets • International departures • Domestic air cargo waybills • Fuels for general aviation
Abandoned Mine Reclamation Fund	Domestically mined coal
Black Lung Disability Trust fund	<ul style="list-style-type: none"> • Domestically mined coal • Penalties for misuse of a coal mine operator self-insurance trust
Inland Waterways Trust fund	Diesel and other liquid fuels used by vessels in commercial waterway transportation on specified inland and intracoastal

	waterways
Deep Seabed Revenue Sharing Trust	Imputed value of certain commercially recoverable hard minerals
Hazardous Substance Superfund	<ul style="list-style-type: none"> • Crude oil • Feedstock chemicals • Imported chemical derivatives
Leaking Underground Storage Tank trust Fund	Fuels, including gasoline, diesel fuel, special motor fuels, aviation fuels, and fuels used in commercial transportation on inland waterways
Oil Spill Liability Trust Fund	<ul style="list-style-type: none"> • Domestic crude oil • Imported petroleum products
Harbor Maintenance Trust Fund	Value of commercial cargo loaded or unloaded
Vaccine Injury Compensation Trust	Certain vaccines, including DPT, DT, MMR, Polio
National Recreation Trails Trust fund	Fuels used by non-highway recreational vehicles

Source: Congressional Research Service, *Excise Tax Financing of Federal Trust Funds*, January 5, 1993.

Underlying these choices of revenue sources are the applications of common principles regarding who should pay. In most cases, payers are either the recipients of benefits made available by trust fund investments or the sources of problems that the trust fund is designed to correct. In some cases, especially where benefits have “public goods” attributes, revenue sources are structured to capture as broad a base of payers as possible.

In the case of a Federal Clean Water Trust Fund, these principles would translate into three basic strategies:

- **Polluter Pays** — categories of polluters (industries, households, commercial establishments, transportation, resource extraction, agriculture, or land development/disturbance, for example) pay some sort of pollution tax in relation to their contribution to degradation of quality in the water column, degradation of sediments, or destruction of aquatic habitat;
- **Beneficiary Pays** — categories of clean water beneficiaries (public water supply, land development and improvement, tourism, recreation, fisheries, shellfisheries, and food producers, for example) pay some sort of benefits fee in relationship to their use or enjoyment of clean water; or
- **The Nation as a Whole Pays** — some broad-based fee or tax that spreads the cost of water quality improvement across as broad a base of Americans as possible under the theory that water quality is a public good, the benefits of which are broadly available to all people and the nation as a whole.

It is important to point out that these strategies are not necessarily mutually exclusive.

Regardless of the source of revenue, any federal trust fund should be evaluated from multiple perspectives to ensure delivery of an appropriate level of service to the nation. In recent work completed for NACWA, the following criteria were identified:

Effectiveness — will this source or these sources of revenue raise funds sufficient to meet objectives?

Efficiency — do payers pay in rough proportion to (1) their contribution to the marginal costs of water quality degradation or reduction in wastewater service levels/quality or (2) their marginal enjoyment of the benefits of clean water or the benefits of enhanced wastewater services?

Equity — does this source or do these sources of revenues overly extract wealth from one group of payers relative to other groups of payers or relative to the problem being solved with the collected receipts, using several different scales including location, income, time, and others that may be relevant?

Administrative Simplicity — are the costs associated with implementing this source or these sources of revenues reasonable in relation to other alternatives and/or in relation to the funds collected (sometimes referred to as “collectability”)? Are existing administrative mechanisms adaptable?

Stakeholder Acceptability — recognizing that any proposal to collect new fees or taxes will be unpopular with at least some groups, could this source or these sources create unmanageable issues among the various affected constituencies?

Using these criteria, NACWA reviewed a wide variety of potential revenue sources — all federal excise taxes — to capitalize a new Federal Clean Water Trust Fund at a target level of \$7 billion a year:

Beverage taxes, which attempt to capture the benefits of cleaner process water (and reduced treatment costs at the point of manufacture) used to produce these beverages.

Taxes on water-based recreational products and services, similarly attempt to capture the benefits of cleaner water from those that enjoy it through recreational pursuits.

Taxes on industrial discharges attempt to transfer the cost of pollution to the companies that produce it, in rough proportion to their waste flows.

Taxes on “flushable products,” including consumer goods that are typically introduced directly into wastewater following use, contributing to the treatment burden faced at facilities downstream;

Clean water restoration taxes imposed on corporations with an alternative minimum tax greater than \$2 million, following a similar approach to the one successfully used in the past to fund the national Superfund program;

Taxes on agricultural chemicals that shift costs of non-point source pollution in rough proportion to those creating it and generate revenue to support non-point source control and prevention programs.

No single option was judged uniformly strong against all of the criteria. The ideal revenue option should seek the broadest base of economic activity related to clean water against which, the smallest possible unit tax rate can be applied equitably and in ways that minimize administrative costs. It should yield a predictable revenue stream well into the future, so that recipients of Trust Fund assistance can rely on support over long periods of time, consistent with their own capital planning and construction

schedules. Finally, the ideal revenue source should minimize social, economic, and trade disruptions.

Achieving all of these outcomes simultaneously appears challenging. Accordingly, combining the best of each option may prove the most appealing solution. The hybrid option has the effect of broadening the tax base substantially, reducing unit tax rates, and in turn, spreading payments across the widest group of economic activities that either rely on clean water or benefit from it in some way. Administrative activities increase under this option, but they may well be offset by an increased sense of equity. That is, water quality is essentially a public good, which is broadly available to the American public anywhere in the country. The cost of creating this good under the hybrid option would be spread equally widely across a range of beneficiaries and polluters.

Regardless of the revenue source, it may well be important to quantify or at least identify, the extent to which the Trust Fund generates benefits across society. Cleaner water, for example, has been shown to result in reduced health effects in the American public, increased access to water-based recreation, increased property values and development opportunities, stronger demand for water-based tourism and beach-going, and increased fisheries and shellfisheries. All of this new economic activity results in job creation, greater worker productivity, and increased tax bases at all levels of government. These benefits could be large and should not be overlooked.

Finally, and in conclusion, it will be important to remind ourselves that even with an enhanced federal financing role made possible through a new Trust Fund, local sewer rates will still pay for the majority of costs associated with providing wastewater management services to the American public. If, for example, a federal Clean Water Trust Fund was to meet the full \$7 billion annual funding target in say, 2010, the federal share would only amount to about 14 percent of total expenditure to build and operate wastewater infrastructure in that year.

Despite the relatively modest increase in federal share that a Clean Water Trust Fund would deliver, these will be important dollars to the neediest of America's communities. Moreover, a new Clean Water Trust Fund will help ensure the sustainability of the Clean Water State Revolving Fund as well as a meaningful, long-term federal-state-local fiscal partnership to continue our record of gains made under the 1972 Clean Water Act.