

TWO SIDES OF THE **SAME COIN**:

INCREASED
INVESTMENT

& REGULATORY
PRIORITIZATION



MoneyMatters[™]

Smarter Investment to Advance Clean Water

In the 1972 Clean Water Act, America committed to a national goal of fishable and swimmable waters. To back this objective, the U.S. Congress established an intergovernmental partnership to pay for needed clean water infrastructure. For twenty years, federal and local governments invested heavily in treatment and conveyance works and the quality of our waters improved dramatically. Over the last 20 years, however, this trend has reversed. The federal government has largely withdrawn from directly funding clean water infrastructure and pollution from nonpoint sources, like urban and agricultural runoff, has escalated degradation of water quality in America's lakes, rivers, estuaries, and coastal waters. ***We can restore the national priority for clean water, but it will take smart investments, flexible approaches, and a renewed intergovernmental partnership to get there.***

The quality of America's waters improved significantly when the federal government played a strong role in funding investments in clean water.

The Reversal of the Trend Toward Cleaner Water. . . Why Now?

Compared to conditions in the 1970s, water quality today is uniformly better. In many places, improvements have been dramatic — fish have returned to once toxic rivers, diverse aquatic life now thrives in many of the nation's bays and estuaries, and thousands of miles of beach are enjoyed each summer free of harmful bacteria. In addition to these ecological benefits, America has enjoyed a wide range of economic benefits from cleaner water. Every day, Americans rely on clean water for drinking, recreation, commercial fishing, and a wide range of industrial activity. These economic activities generate billions of dollars in income every year, none of which would be possible without the clean water resource on which they rely.

As impressive as these achievements may seem, a closer examination of trends tells a very different story. Dramatic improvements in water quality in the 1970s and 1980s began to reverse in the 1990s and continued to decline through 2008, the most recent data available. Why is water quality on the decline? There are three key reasons.

First, costs in the initial 20 years of the Clean Water Act were significantly lower than costs in the second 20 years. In essence, between 1972 and the early 1990s, we harvested the relatively low hanging fruit — installing secondary treatment in place of no treatment or just primary treatment. Removing the next increment of pollutants, the target of the 1990s and 2000s, by increasing treatment levels to advanced secondary or tertiary treatment was orders of magnitude more expensive. The cost of removing target pollutants like nutrients and reducing wet weather flows in general over the next 20 years will be more expensive still.

Second, the funding for clean water programs has shifted dramatically over this period, from an intergovernmental approach in the 1970s and 1980s to a largely local, user-financed approach.

Third, there is strong scientific evidence that continued focus on point sources to achieve water quality gains was ineffective as of the late 1990s. According to biennial surveys conducted by the states, municipal wastewater and urban stormwater have declined steadily as sources of impairment over the last two decades. Runoff from agriculture and airborne deposition of pollutants are the main causes of remaining water quality impairment in rivers, streams, lakes, and ponds.

Can We Achieve National Clean Water Goals? The Role of Regulatory Prioritization & New Approaches to Clean Water Act Implementation

What we know is this: the quality of America's waters improved significantly when the federal government played a strong role in funding investments in clean water. We also know that America's wastewater utilities have removed the vast majority of conventional pollutants from municipal wastewater and face significantly higher costs to remove the next increment plus control pollutants from urban runoff. Further, it is clear that states, local communities, and individual households face intense pressure to make ends meet. Finally, the reality is that despite hundreds of billions of dollars already invested in municipal wastewater infrastructure, future investments will be even greater.

Consider this historical trend: both the U.S. Environmental Protection Agency's (EPA) estimate of future wastewater infrastructure needs to meet Clean Water Act goals and investments to meet these needs over the same period have grown steadily since 1973. We are spending too little, we are too narrowly focused on point sources, and the rate of new regulations is expanding needs faster than our ability to meet them.

Clean water is no less a national priority than are national defense, an adequate system of interstate highways, or a safe and efficient aviation system.

So What Are the Options?

Clearly over the long-run, we must find ways to do more with less. This means some combination of:

Maximizing water quality returns for every dollar invested by making science-based water quality investment decisions on a watershed basis in order of greatest water quality gains per dollar invested.

Reducing unit costs through rapid introduction of new technology and innovative management practices.

Allowing flexibility in local decisions including regulatory processes and timelines to enable wastewater utilities to explore the first two options.

Taken together, these three options would help reverse water quality declines and ease costs for local communities over the next decade or more. But this alone will be insufficient to meet Clean Water Act goals. The backlog of needs is simply too high, funds are too limited, and a large proportion of households are already at their financial tipping point.

We simply need to invest more now.

Restoring Our Successful Intergovernmental Partnership

Today, households and businesses in local communities pay for virtually 100% of the cost of wastewater management with local governments raising 97% of the capital to do so. This approach, however, has been inadequate to meet national clean water priorities. Moreover, the efficiency, equity, and practical aspects of sustainable financing of wastewater infrastructure suggests that we must seek solutions beyond paying for these critical national infrastructure systems strictly with local dollars.

Americans have not been asked to apply this local funding strategy to other critical infrastructure networks. Paying for America's highways through strictly local fees, for example, would create tolls only for residents, while travelers passed through freely. Drivers would pay gasoline taxes only at their local pumps, but would enjoy tax-free prices for gas purchased outside their communities. Paying for airports this way would mean only passengers who were local residents would pay landing fees when they touched down in their city, while international travelers got a discount on their airfares. These basic infrastructure systems underpin the broader U.S. economy. Their benefits accrue widely to users without geographic limitations imposed by local political boundaries – just like the benefits delivered by America's network of rivers, lakes, streams, and shorelines.

Put simply, on the basis of water quality outcomes, returns on public capital, and environmental equity, the case for federal investment is compelling. Needs are large and growing. In many communities, local sources cannot be expected to meet this challenge alone. Clean water is no less a national priority than are national defense, an adequate system of interstate highways, or a safe and efficient aviation system. These latter infrastructure programs enjoy sustainable, long-term federal grant programs funded through dedicated national revenues. Under current policy, wastewater infrastructure does not.

How Much Must Be Spent to Meet the Clean Water Act's Goals and Who Should Pay?

Federal clean water appropriations have fallen from about \$6 billion a year at the outset of the State Revolving Fund (SRF) program in 1988 to about \$1 billion a year today. Simply restoring federal funding to its average of about \$3 billion a year since inception would be a first step to restore the intergovernmental partnership that has characterized America's clean water program for nearly 40 years. But it would not reverse declining water quality broadly. Moreover, with needs approaching \$300 billion, meeting local customer-driven service levels and making tangible progress toward the nation's Clean Water Act goals will require significantly greater levels of investment.

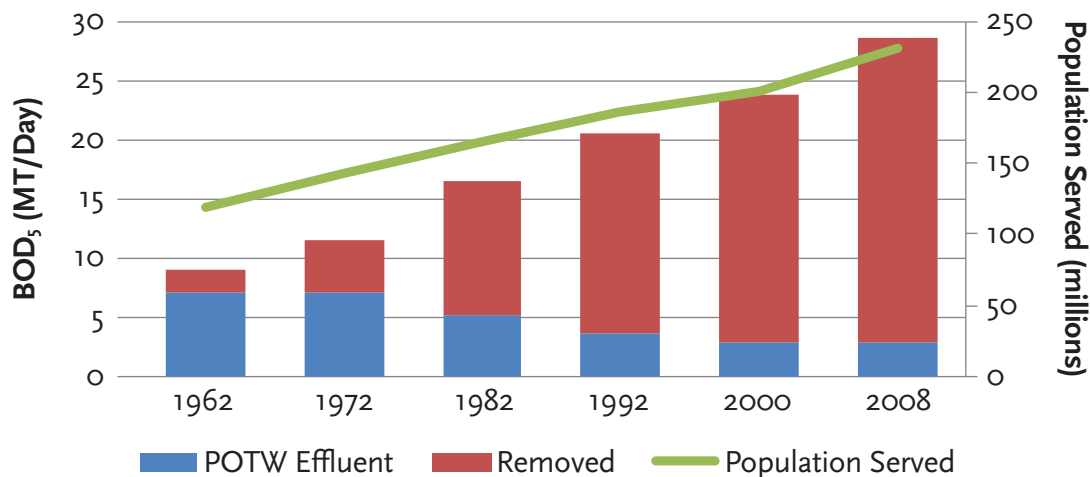
A 50% increase in investment in clean water infrastructure would deliver some 200,000 new jobs, more than a comparable investment in schools, transport infrastructure, energy infrastructure, or broad tax cuts. Moreover, these jobs would be located in many communities with the highest unemployment and fewest prospects for reducing it. Even with a 50% increase, local governments would still be responsible for raising two-thirds of all capital invested and local sewer rates would still increase at about 3% annually above inflation on average nationwide. Realistic water quality standards, innovative technologies and approaches such as green infrastructure, and holistic watershed planning are also essential.

Why Money Matters

Money matters. It matters because the nation's clean water progress is at risk. It matters because local ratepayers are simply tapped out. It matters because the benefits of clean water can repay our investments handsomely through jobs, productivity, and competitiveness. It matters because clean water needs to be available to all Americans wherever they live, visit, vacation, or invest. Money matters if we hope to achieve America's clean water goals.

For a more detailed examination of this compelling issue, please visit www.nacwa.org/MoneyMatters.

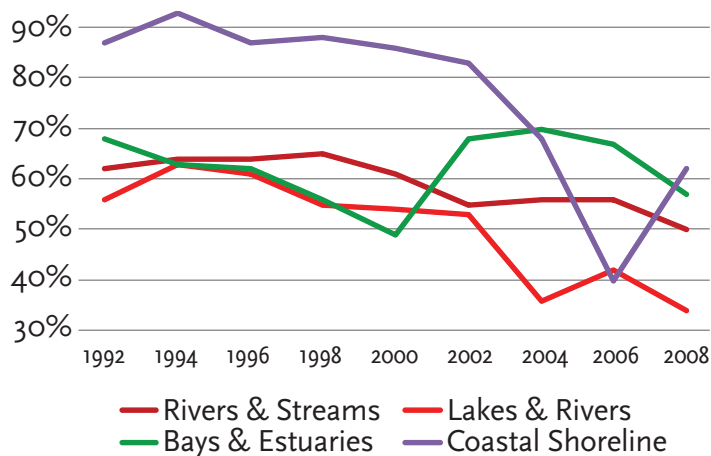
Metric Tons/Day of BOD₅ Loadings



America's clean water achievements have been remarkable since the 1972 Federal Clean Water Act set clear national objectives: achieve clean water across the nation and, as means to do so, provide federal financial assistance to construct publicly owned wastewater treatment works. Despite multiple major and minor amendments over nearly 40 years, these objectives still drive America's clean water program. Over the last four decades, the nation has invested some \$600 billion to build, repair, and replace wastewater infrastructure, preventing nearly 30,000 tons of organic pollutants a day from reaching America's waters, a figure that has steadily increased over the years along with significant growth in the number of people served by America's wastewater utilities.

Source: U.S. Environmental Protection Agency

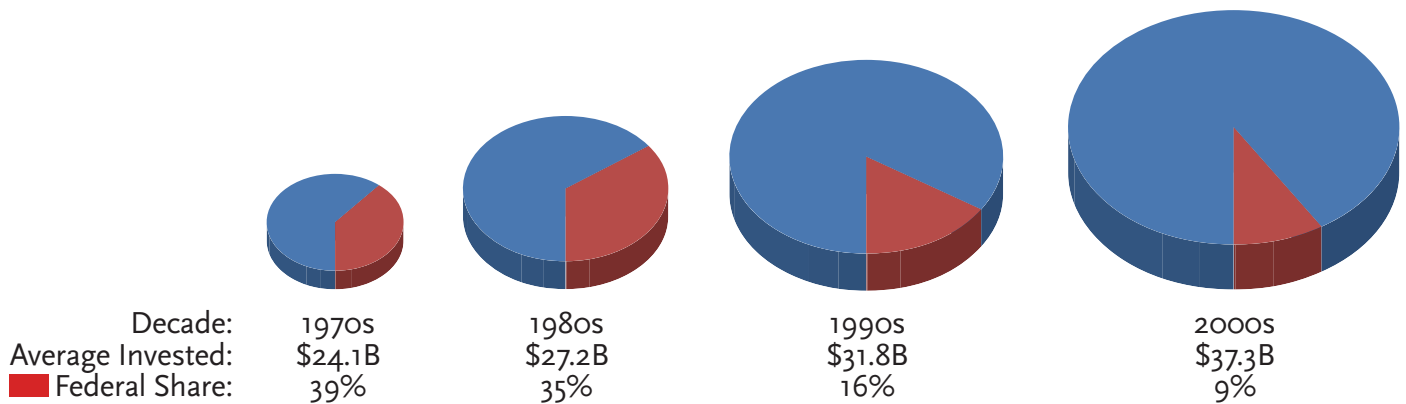
Percent of Waters Meeting Designated Uses



Dramatic improvements in water quality in the 1970s and 1980s began to reverse in the 1990s and have continued to decline through 2008, the most recent data available. Lake water quality has declined dramatically, for example, from 63% meeting designated uses such as recreation and drinking water in the early 1990s to just 34% meeting these same uses today. The percentage of our shoreline meeting fishable and swimmable standards has declined from more than 90% in the early 1990s to just 60% today. Estuarine water quality has fluctuated, but today, just 57% of these waters are clean enough to support aquatic life, compared to nearly 70% in the early 1990s. In the mid 1990s, 65% of America's rivers and streams were clean enough to meet their designated uses for drinking water, recreation, and fisheries. Today, that figure has fallen to just 50%.

Source: U.S. Environmental Protection Agency 305(b) Reports to Congress

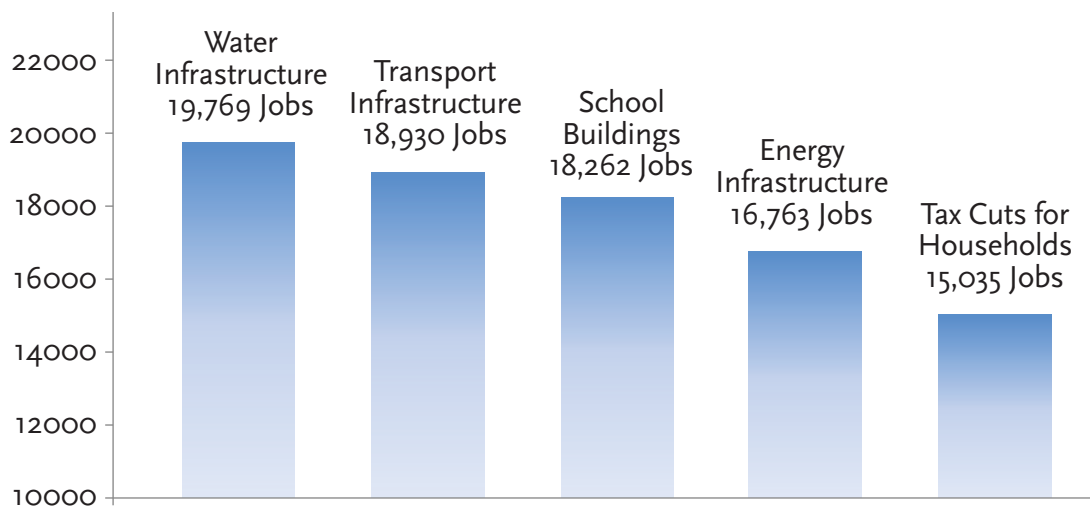
Average Annual Capital Investment in Water and Wastewater Infrastructure by Decade and Source (2010 dollars)



The funding for clean water programs has shifted dramatically, from an intergovernmental approach in the 1970s and 1980s to a largely local, user-financed approach thereafter. According to the U.S. Congressional Budget Office, the federal share of total public capital investment in water and wastewater infrastructure peaked in the 1970s at an average that decade of 39% (63% in 1977) and has declined since, falling to just 9% on average in the decade of the 2000s (6% in 2010). The federal share of total investment, including capital, operations, and maintenance fell to less than 3% by 2010.

Source: U.S. Congressional Budget Office, *Public Spending on Transportation and Water Infrastructure*, November 2010.

Jobs Created per Billion Invested



Source: James Heintz, Robert Pollin, and Heidi Garrett-Peltier, Political Economy Research Institute of the University of Massachusetts, *How Infrastructure Investments Support the US Economy: Employment, Productivity and Growth*, prepared for the Alliance for American Manufacturing, January 2009.

A 50% increase in investment in clean water infrastructure would deliver some 200,000 new jobs, more than a comparable investment in schools, transport infrastructure, energy infrastructure, or broad tax cuts. Moreover, these jobs would be located in many communities with the highest unemployment and fewest prospects for reducing it. As water bodies are restored, both direct and indirect benefits will add value to local economies and national economies through more productive fisheries; higher rates of water-based recreation; significantly increased land values adjacent to and near clean bodies of water; and greater output of agriculture, tourism, and basic industries that rely on process water.



The National Association of Clean Water Agencies (NACWA) is the leading advocate for responsible national policies that advance clean water and create a healthy balance between investment and environmental benefit. NACWA members are America's clean water utilities – dedicated public servants and true environmental champions. For over 40 years, NACWA has been the clean water community's voice in Congress, at the U.S. Environmental Protection Agency, in the media and in the courts.



MoneyMatters™

Smarter Investment to Advance Clean Water

Money Matters™ is about providing clean water to our communities at the best value. It's about investing available resources to maintain existing infrastructure and solve priority water quality problems first. Municipalities throughout the country face a regulatory landscape under the Clean Water Act where everything is a priority, and cost and economics are an afterthought. NACWA's Money Matters — Smarter Investment to Advance Clean Water™ initiative aims to make sure that this paradigm changes now, and for good.