



A Cost Effective Approach to Increasing Investment in Water Infrastructure:

The Water Infrastructure Finance and Innovation Authority (WIFIA)

Background. High-quality drinking water and wastewater systems are essential to public health, business, and quality of life in the United States. The American Water Works Association (AWWA) and others have documented that our water and wastewater infrastructure is aging and that many communities must significantly increase their levels of investment in its repair and rehabilitation to protect public health and safety and to maintain environmental standards. EPA estimates that given current levels of investment, the shortfall between actual and necessary levels of investment in water infrastructure will exceed \$530 billion over the coming twenty years. Other estimates vary, but they all point to a very large “infrastructure gap.” This gap has profound implications for public health, welfare, the economy, and our quality of life.

The organizations above believe that Americans are best served by water and waste water systems that are self-sustaining through rates and other local charges. Indeed, in 2005 Americans invested \$84 billion to build, operate, and maintain water and wastewater infrastructure, with more than 95 percent of those funds representing state and local monies without federal assistance or subsidies, according to the U.S. Conference of Mayors.

However, the federal government can play an important role in facilitating increased local spending on infrastructure by lowering the cost of capital for water and wastewater projects. Almost 70 percent of American communities use bonds to finance local infrastructure. They pay billions of dollars in interest costs each year. Lowering the cost of borrowing for water and wastewater projects represents an important way to leverage local funding and help America rebuild its aging water infrastructure, since lowering the cost of capital can offer significant cost savings to the utility and its customers. For example, lowering the cost of borrowing by three percent on a thirty year loan can reduce total project cost by over twenty percent. In this way, low interest financing has the same effect as making a grant to cover part of the project’s costs – *except that the financing will be repaid to the federal government and will not add to the long-term deficit*. The savings for local borrowers can significantly accelerate water infrastructure investment by making it more affordable for utilities and their customers.

Investment in Water Infrastructure Benefits the Nation. Lowering the cost of infrastructure investment pays dividends in many ways. It makes it possible to “do more (infrastructure) with less (money).” The US Department of Commerce Bureau of Economic Analysis estimates that for every dollar spent on water infrastructure, about \$2.62 is generated in the private economy. And for every job added in the water workforce, about 3.68 jobs are added to the national economy, according to the Bureau. Moreover, these national benefits come on top of improved public health, a cleaner environment, better fire protection, and a better quality of life in the community.

A New Approach: The Water Infrastructure Finance and Innovation Authority. To lower the cost of infrastructure investments and increase the availability of lower-cost capital, we urge

Congress to create a “Water Infrastructure Finance and Innovation Authority” (WIFIA), modeled after the successful Transportation Infrastructure Finance and Innovation Act (commonly called TIFIA). Such a mechanism could lower the cost of capital for water utilities while having little or no long term effect on the federal budget. WIFIA would access funds from the U.S. Treasury at long-term Treasury rates and use those funds to provide loans or other credit support for water projects. Funds would flow from the Treasury, through WIFIA, to larger water projects or to State Revolving Funds wishing to borrow to enlarge their pool of capital. Loan repayments – with interest – would flow back to WIFIA and thence into the Treasury – again, with interest. See the attached table for a simplified illustration of the flow of funds.

This funding mechanism would allow the Water Infrastructure Finance and Innovation Authority to:

- Offer loans, loan guarantees, and other credit support for large water infrastructure projects. These large projects often find it difficult or impossible to access SRF loans, and in many states large projects are expressly excluded from SRF eligibility because they would leave little room to finance other projects.
- Reduce the cost of leveraging for State Revolving Fund (SRF) programs by lending to them directly. The Water Infrastructure Finance and Innovation Authority could lend to those State Revolving Funds wishing to leverage their state or federal capitalization grants at the lowest possible interest rates. This would allow SRFs to make more loans and would increase their ability to offer special assistance to hardship communities if they chose to do so. Currently, 27 states leverage their SRF programs on the bond markets. WIFIA loans to an SRF would offer an alternative mechanism to accomplish the same goal and make such a practice more attractive to additional states.
- Ensure a streamlined approach to financing. WIFIA should be directed to develop a streamlined review and application process and make decisions with no more burden to the applicant than required by traditional credit markets.

Low Cost to the Federal Treasury. The Authority would operate much like the TIFIA program in providing credit assistance. Under the Federal Credit Reform Act, a federal entity can provide credit assistance only to the extent that Congress annually appropriates budget authority to cover the “subsidy cost” of the loan, i.e. the net long term cost of the loan to the Federal Government based on the risk of default. In this way, Congress directly controls the amount of lending – but the budgetary impact is also minimal because it reflects the net long-term cost of the loan, and most loans are repaid in full. In the case of TIFIA, the leverage ratio is approximately ten-to-one, where \$1 in subsidy appropriation supports \$10 in credit assistance. This ten-to-one ratio may be even higher for water infrastructure due to the very low historical default rates on water projects. Fitch Ratings, a top credit rating agency, calculates that the historical default rate on water bonds is 0.04 percent. Indeed, water service providers are among the most fiscally responsible borrowers in the United States. Moreover, those states that leverage their SRF programs have no history of defaults, placing them among the strongest credits in the country. Consequently, WIFIA – because it involves loans that are repaid with interest – involves minimal risks and minimal long-term costs to the federal government.

The following examples show in simplified form how WIFIA would work and the benefits that could accrue to project sponsors.

Example: Water or Waste Water Utility. Assume a water or wastewater utility wished to fund a \$100 million project at the lowest possible cost. If the utility is an A-rated municipal utility, in the market conditions existing in May 2011 the utility could finance the project on the municipal debt market by selling 30-year bonds at an interest rate of 5.4%, plus a 1.5% underwriting fee on loan principal amortized over the life of the issuance.

As an alternative the utility might apply for a WIFIA loan. WIFIA could support all or a part of the project, which might also involve municipal bonds, cash financing, an SRF loan, and/or private capital. A WIFIA loan reflects long term Treasury rates, plus a small mark-up (say, 1/8th of one percent) to cover WIFIA administrative costs, and would total 4.04% in May, 2011.

Further assume that in the project year, Congress has appropriated \$400 million for WIFIA to be used to cover the “subsidy cost” of its loan portfolio, i.e. the estimated cost of defaults. It is reasonable to expect (based on calculations following Office of Management and Budget and Congressional Budget Office guidelines) that \$400 million in appropriated budget authority could cover \$4 billion or more in WIFIA credit assistance. In making each loan, WIFIA would have to set-aside a corresponding amount of its appropriated budget authority to cover the default risk for that loan. Upon approving a \$100 million loan, WIFIA would disburse \$100 million in federal Treasury funds for the project and set aside \$10 million to cover the risk of default on the project.

In accordance with the repayment schedule, the project sponsor would repay the WIFIA loan in full and with interest. All funds borrowed from the Treasury would be returned to the Treasury, with interest. As for the amount appropriated, the subsidy appropriation would have been based on the assumption that, over the entire portfolio of WIFIA loans, 90% of the funds would be repaid in full. If the repayment rate is ultimately greater across the loan portfolio, and the funds set aside were therefore not needed to cover defaults, a corresponding portion of the subsidy appropriation would also be returned to the Treasury. In some existing federal credit programs, the repayment of loans with interest and fees results in a net profit for the government. In this way, it is possible that WIFIA would have zero long-term cost to the government, or even return to the Treasury more than was appropriated and borrowed.

While imposing minimal cost on the federal government, using WIFIA would offer significant savings to the utility. In this example the utility – and its rate paying customers – save over \$1 million dollars annually in debt service, and almost \$33 million over the life of the loan, compared to the municipal bond markets. Of course, the level of savings to be anticipated will change if the bond market changes. If the spread between municipal bonds and Treasury rates increases or decreases, this level of savings would also increase or decrease. The figure below demonstrates that lower-cost capital from WIFIA would be equivalent to an outright grant of about 16%, given market conditions in May 2011. Unlike a grant, however, the loan will be repaid.

Annual Debt Service on \$100 Million Loan	
30 Year Municipal Bond @ 5.4%	\$6,906,800
30 Year WIFIA Loan @ 4.04%	\$ 5,811,129
Annual Savings	\$ 1,095,671
30 year savings	\$32,870,130
Debt Service Savings	15.9%

Example: State Revolving Fund. Assume a State Finance Authority administers both the Drinking Water and Clean Water SRF programs in its state. Assume as well that numerous projects in the state have received SRF loans over the years, and several larger projects in the state have received WIFIA loans, but the state has more applications than it can approve in the current year, given available funds.

The state could decide to enlarge its capital base by either 1) borrowing money from WIFIA or 2) selling SRF bonds. Assume that in discussion with rating agencies, the state has learned that its SRF bonds will be rated A. Based on market conditions in May 2011, an A-rated 30-year issue would carry an interest rate of approximately 5.4 % plus a 1.5% underwriting fee on loan principal amortized over the life of the loan. As in the example above, a 30-year WIFIA loan would carry an interest rate of 4.04% (including the small mark-up to cover the WIFIA’s administrative costs).

Instead of issuing bonds, the state might decide to seek WIFIA financing, and apply for a \$30 million WIFIA loan to enlarge its capital base. If the application is approved, these funds could be used alone or in combination with state funds, SRF funds, and other sources of capital to support projects that achieve compliance with current regulatory requirements, replace aged infrastructure, eliminate sanitary sewer overflows, improve reliability of service, and install new technology to achieve greater operational efficiencies.

Once the loan is approved, WIFIA would borrow \$30 million from the Treasury and provide those funds to the state SRF. When it received the funding, the SRF could use the funds alone or in combination with other capital, in accordance with its normal process. Each community that received a loan from the SRF would have to repay the state to the same extent it normally would under the SRF program. The state would use the flow of loan repayments or other revenues to repay its obligation to WIFIA.

As can be seen below, using WIFIA would save the state – and its taxpayers – over \$300,000 annually and almost \$10 million over the life of the loan, compared to a state bond offering. As in the example above, this level of savings is equivalent to an outright grant of about 16%. Of course, these numbers will change with changing conditions in the bond market. If the spread between municipal bonds and Treasury rates increases or decreases, the savings will be more or less dramatic. Savings the state realizes by borrowing from WIFIA could be used to support additional SRF loans, reduce interest rates to SRF borrowers, or reduce the overall level of state spending.

Annual Debt Service on a \$30 Million Loan	
30 Year State Bond @ 5.4%	\$2,072,040
30 Year WIFIA Loan @ 4.04%	\$1,743,339
Annual Savings	\$328,701
30 year savings	\$9,861,030
Debt Service Savings	15.9%

Conclusion. Creating a Water Infrastructure Finance and Innovation Authority (WIFIA) modeled after the successful transportation program known as TIFIA offers a modern, effective way to help increase this nation's level of investment in water and waste water infrastructure, at the lowest possible cost to the federal government. WIFIA would access Treasury funds at long term Treasury rates and in turn offer assistance in the form of low interest loans, loan guarantees, and other credit support to larger water and waste water projects and to State Revolving Funds that wish to leverage their capital. Such loans would be repaid with interest. The benefits of such low-cost financing to large water projects – which often lack access to State Revolving Funds – would be significant. As noted above, the long term cost to the Federal Treasury is minimal, and could even be positive, given the extremely low historic default rate on water projects.

How WIFIA Works

Water Infrastructure Finance and Innovation Authority

