Case Study: Using Environmental Clean-Up Funds to Replace the Tappan Zee Bridge
By Steven Cohen and Hayley Martinez
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The Issue

The New York State Environmental Facilities Corporation (EFC), a public benefit corporation that provides low-cost capital and technical assistance for environmental projects around the state, approved a $511 million loan to the state Thruway Authority for bridge-related projects, specifically the replacement of the Tappan Zee Bridge across the Hudson River. The Corporation approved the loan – half with no interest, and half with an interest rate of less than 4 percent – in late June 2014. The loan decision then went to the Public Authorities Control Board, which approved half of that amount – $256 million – in July 2014.

However, a number of environmental organizations opposed the decision because funds were coming primarily from the Clean Water State Revolving Fund, a federally backed fund typically utilized to finance local sewer projects. Critics warned that the decision to use funds intended for water quality for another purpose could set a bad precedent, potentially nationally if copied by lawmakers in other states. Then in September 2014, the Environmental Protection Agency (EPA) rejected most of the state’s request for this loan. This case study examines the challenges of funding infrastructure projects, and looks at the controversy surrounding the funding of the New NY Bridge – the single largest infrastructure contract in the history of New York State, and a project that New York State Governor Andrew Cuomo cites as a major accomplishment of his administration.

Figure 1: Proposed Replacement Bridge

Background: Environmental Facilities Corporation & the Clean Water State Revolving Fund

The New York State Environmental Facilities Corporation (EFC) is a public benefit corporation that administers and finances environmental projects in New York State. The group provides low-cost capital and technical assistance for these projects for municipalities, non-profits, and small businesses, and helps these entities comply with federal and state environmental protection requirements and promote innovative technologies. Since 1990, the Corporation has provided over $17 billion in financing and grants for over 2,000 water and sewer infrastructure projects across New York State.

The Environmental Facilities Corporation runs eight different programs to administer funds, including the Clean Water State Revolving Fund (CWSRF), which was established under the Federal Water Quality Act Amendments of 1987. The CWSRF is the nation’s largest water quality financing source; and in New York State it is administered jointly by the Environmental Facilities Corporation and the New York State Department of Environmental Conservation. The CWSRF program runs like an environmental infrastructure bank; funds are loaned to communities and repayments are recycled back into the program to fund additional water quality projects. According to the EPA, “states have the flexibility to target resources to their particular environmental needs, including contaminated runoff from urban and agricultural areas, wetlands restoration, groundwater protection, brownfields remediation, estuary management, and wastewater treatment.” The EPA also acknowledges that certain “nontraditional” water quality projects may be financed, if the state sets an “integrated planning and priority setting system,” although does not specify the essential components of such a plan.

Background: The Tappan Zee Bridge

The existing Tappan Zee Bridge opened to traffic in 1955, connects Rockland and Westchester counties over the Hudson River (via the New York Thruway) and is owned by the New York State Thruway Authority, a state agency that governs the 570-mile superhighway crossing New York State. The bridge cost $80.8 million to build (equivalent to about $550 million today), and was built to only last about 50 years. Between 1990 and 2010, traffic volumes on the bridge grew by 30 percent, and the bridge serves as a major freight route. However, a report by the Federal Highway Administration noted that the bridge does not meet current standards for design, engineering or traffic operations, and lacks the structural and operational redundancy to sustain extreme events such as hurricanes, earthquakes, fires, or vessel collisions. The bridge also does not meet state requirements for essential characteristics such as lane and shoulder widths.

The bridge has undergone a number of upgrades over the years. In the late 1980s, the bridge toll plaza and several lanes underwent reconstruction at a cost of $26 million, sponsored by the State Transportation Authority. In the 1990s, a movable barrier system was also implemented to allow availability of an extra lane in the heavier traveled direction. Major projects began in 2007 to replace

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about 96% of the original concrete roadway deck, at a cost of about $147 million.\(^6\) In total, from its original construction until 2011, the Thruway spent approximately $660 million for various capital construction projects on the bridge.\(^7\) Funding for repairs of the Tappan Zee has come from a number of sources over the years, including transportation bonds issued in the 1980s.\(^8\)

Prior to the decision to replace the bridge, it was estimated that $1.3 billion would be needed over the next decade to keep the bridge in a condition of good repair.\(^9\) Selling the bridge to private companies was suggested as an alternative, but would require a number of legislative changes that were rejected in 2005.\(^10\) Other alternatives were considered, but a review by the Federal Highway Administration found that a replacement bridge would be the most effective option.

### Funding the New NY Bridge

Planning for the replacement bridge – the New NY Bridge – began as early as 1999, but didn’t move into construction phase until 2011, when new design-build legislation was passed.\(^11\) Total cost of the New NY Bridge Project, a twin span bridge adjacent to where Tappan Zee stands currently, is projected to be $3.9 billion, with the first portion to open in 2016 and the whole project to be completed by 2018. The new bridge will be constructed to last 100 years without major structural maintenance. It is what is known as cable-stayed; the cables that hold up the steel deck are anchored to the tops of the central span towers rather than to the shore. The current Tappan Zee Bridge doesn’t use cables. The bridge stands at one of the widest points of the Hudson, and would, like the Tappan Zee, be controlled completely by New York. (Both bridges are just outside the Port Authority zone, which is governed by both New York and New Jersey.)

In December 2013 a $1.6 billion loan was approved for the bridge, through the federal government’s Transportation Infrastructure Finance and Innovation Act program, with a low 3.89 percent interest rate. A speedier federal permitting process allowed the review to be completed in one and a half years instead of the usual three to five.\(^12\) The majority of the project will be funded by bonds that will be paid for by tolls, but there is no final financial plan for funding the bridge. Tolls have been kept low on the Tappan Zee at $5, but some analysts estimate that debt service on the new bridge could add more than $6 to the current toll.\(^13\) Furthermore, the $3.9 billion for the total project doesn’t include the interest on the bonds, nor does it include the costs of putting together the proposed bus system for the bridge. In questioning the finances of the project, State Senator John DeFrancisco (R-Syracuse), chairman of the Senate Finance Committee, asked New York State Thruway Authority’s executive director: “Let’s suppose that whenever they start they come up with some numbers that say there’s no way the tolls

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\(^7\) Pollack, 2011.


\(^9\) Federal Highway Administration, 2011.


are going to cover the debt service. Do you stop building the bridge?” The response was: “tolls will be sufficient.”

In June 2014, the Environmental Facilities Corporation approved a zero-interest and low-interest loan to the New York State Thruway Authority totaling $511.45 million, financed through the Clean Water State Revolving Fund, for “environmental protection and Hudson River restoration projects related to the New NY Bridge project to replace the Tappan Zee.” The proposed loan generated significant opposition from environmental groups, and questioning from the U.S. EPA. The EPA and these environmental groups questioned the legality of using the environmental loan fund for transportation infrastructure. They also raised concerns about the unusually rapid approval process. The loan then went to the vote of the state Public Authorities Control Board, which approved half of the amount that was approved by the Environmental Facilities Corporation. The Public Authorities Control Board authorized a $255.7 million, five year, no-interest loan (specifically for projects that were already undertaken or that plan to be undertaken before the end of the federal fiscal year).

Justification from the State

In responding to criticism of the loan approval, New York State released a statement saying that this loan would help fund costs associated with environmental measures put in place during bridge construction, such as wildlife and estuary protection and environmental impact mitigation measures. The state said the funds would be used for projects aimed at cleaning up the Hudson, such as tearing down the existing bridge, dredging the river’s bottom and reducing underwater noise during construction. Some of these projects include:

- Restoration of Piermont Marsh
- River bottom armoring
- Stormwater treatment at landings
- Dredging and mound removal
- Dredge material disposal
- Shared use path for pedestrians and bicycles
- Endangered Peregrine Falcon nest box relocation
- Gay’s Point channel restoration

The state claimed that this loan would have no impact on funding for other water projects elsewhere in the state and that these types of projects are authorized under state and federal law, including the Clean Water Act. The laws governing the Clean Water State Revolving Fund authorize assistance for:

- Point Source Projects (Clean Water Act Section 212);
- Projects which assist in the implementation of the state’s Non-Point Source Management Plan (Clean Water Act Section 319);

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17 Berger, 2014.
18 New NY Bridge, 2014.
• Projects which assist in the development and implementation of a U.S. EPA Approved National Estuary Comprehensive Conservation and Management Plan (CCMP) (Clean Water Act Section 320).  

The vehicular roadway for the bridge as well as the foundation and structures supporting the road are not eligible and according to the state are therefore not being financed by this particular fund. According to the New York State government, the loan would help save money compared to using traditional Thruway bonds, and ultimately keep tolls as low as possible. This is the largest series of estuary protection and enhancement projects in the nation ever financed by the Clean Water State Revolving Fund. According to the New NY Bridge website, “Never in the 25-year history of the CWSRF have projects of this magnitude been undertaken to benefit a federally designated Estuary of National Significance.” The funds would be provided to the Thruway Authority in the form of low-interest loans. By using loans instead of bonds, the state expected to save $17 million of final project costs.

Opposition to the Loan

A number of environmental groups questioned the legality of the NY Bridge loan. Despite the Cuomo administration citing evidence of legality and authority for this loan, “environmental advocates have threatened to sue if the plan is approved, saying funds set aside for drinking water, sewage and other water projects shouldn’t be used on a bridge project. They have also said the plan was rushed through without public input or scrutiny.” These allegations even led the state Authorities Budget Office, an independent body, to begin an investigation of the legality of the EFC’s decision.

The EPA called it an “unconventional” use of funds and pointed out that one of the dredging-related projects laid out in the plan would in fact harm a riverbed habitat. EPA Region 2 Administrator Judith Enck stated in July 2014 that the state should have had a more robust discussion with federal regulators before approving the loan. Critics point out that most of the expenses covered in the loan are for non-environmental initiatives. Under the plan, the loans would cover: “the removal of the existing bridge ($65 million); costs related to dredging ($140 million) and the bridge’s pedestrian and bicycle path ($67 million). The more purely environmental work is far less expensive, including ecosystem restoration ($2.4 million); stormwater treatment ($14.4 million); sturgeon noise protection ($48,000); sturgeon conservation studies ($2.8 million) and relocation of the falcon nest ($100,000).

Prior to approval from the Public Authorities Control Board, eleven environmental organizations including Citizens Campaign for the Environment, Food and Water Watch, Natural Resources Defense Council, and the New York Public Interest Research Group, requested that this loan be rejected. They stated in a letter to voting member and state budget director Robert Menga that the projects are not

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19 New NY Bridge, 2014.
20 New NY Bridge, 2014.
21 New NY Bridge, 2014.
appropriate for Clean Water State Revolving Fund support, that this loan was included on the 2014 CWSRF Intended Use Plan in a way that bypassed public notice, and that the Corporation failed to provide the appropriate application documents which is in violation of an operating agreement with the EPA.27

Paul Gallay, president of the environmental group, Hudson Riverkeeper, stated: “The fact that they're taking (from a) Clean Water Act fund that has never been used in this way and going through all these somersaults to try to justify it clearly shows that they are desperate for funding for the Tappan Zee Bridge.”28 Others from the New York State Assembly Committee on Corporations, Authorities and Commissions, the New York State Caucus of Environmental Legislators, and New York League of Conservations Voters have voiced similar concerns. They all question the legality of this decision considering how quickly this proposal has moved when there are still a number of unanswered questions and no detailed financial plan. Christopher Goekin of the NY League of Conservation Voters states: “This is federal money. I had spoken with some members of Congress about this and they are concerned about the precedent that this would set in other states. Maybe other states looking to build a causeway or a bridge intended for automobiles. They would love to get their hands on this big pot of money and spend it in ways not intended under current law.”29

Senator DeFrancisco, one of the Public Authorities Control Board members who approved this loan, cited the importance of the Tappan Zee Bridge for the state and his belief in the flexibility within the environmental law, despite his initial concerns regarding the lack of a complete financial plan. Unfortunately such an action may serve to punish municipalities that require real and much-needed sewage plant upgrades in the future. According to New York League of Conservation Voters President Marcia Bystryn: “It is simply not true to say that the $255 million loan is ‘environmental’ funding, when the vast majority of that sum is for bridge construction and related work... clean-water loans are meant for clean-water projects — not for a bridge — and today’s vote could set a dangerous precedent that will inspire states around the country to start diverting clean-water dollars.”30

Rejection and Lawsuit

In September 2014, the EPA rejected most of New York State’s request for this $511 million loan, saying that the state planned to use the money almost entirely for construction, rather than enhancing the environment.31 This decision made it clear to state governors around the U.S. that federal Clean Water Act money does not cover the cost of infrastructure projects. According to a letter from the EPA to the NYS Environmental Facilities Corporation, “construction activities arising from transportation projects do not advance water quality.”32 The letter clarified that only five of the twelve Tappan Zee Bridge-related projects are eligible for CWA Section 320 project funding through the CWSRF (totaling $29.1 million), while the remaining seven projects, totaling $481.8 million, are not eligible (see tables 1 and 2). They

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28 Campbell, Jon. 2014.
stated that Section 320, which sets forth the requirements for developing a conservation and management plan for a national estuary, is not for the mitigation of impacts directly caused by major construction projects within an estuary. It also stated that, “New York’s request presents a unique circumstance that is unprecedented in the context of the CWSRF; no other state has made a request of this type or magnitude.”

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In response to the EPA’s decision, Jon Sorensen, a spokesman for the Environmental Facilities Corporation, said in a statement, “While this loan is not integral to the overall bridge construction, the projects identified here will clearly provide significant benefits for the Hudson River Estuary.” He added that the EPA was “simply wrong in its assessment.” However, environmental groups praised the EPA’s decision, reinforcing that this money needs to be put towards water infrastructure and restoration. In addition, Thomas Madison, the Thruway Authority’s executive director, said that the construction on the project would not be affected by the EPA’s decision.

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33 Berger, 2014.
In October 2014, environmental groups, headed by Riverkeeper and Environmental Advocates of New York, sued New York State over the use of these funds for the bridge. Even though the EPA rejected most of the loan, it still approved $29 million, and the lawsuit argued that none of the money should be approved for the bridge. It argued that the bridge isn't eligible for funds because the plan was endorsed by state officials without the legally required opportunity for public input. Peter Iwanowicz, executive director for Environmental Advocates of New York, stated: “We’ve said from the outset that this was wrong. It was wrong to raise these clean water funds for bridge construction and demolition projects, it continues to be wrong that the administration is trying to appeal the EPA’s decision back in September, it’s wrong that they’ve hired — at additional taxpayers’ expense — an outside law firm to pursue the appeal.”

Indeed the state (the Department of Environmental Conservation and the Environmental Facilities Corporation) began an appeal of the EPA’s decision in November 2014, stating that the EPA regional office overstepped its authority and improperly rejected seven projects that qualify under the Clean Water State Revolving Fund. However around the same time, the State Authorities Budget Office completed its independent investigation, and siding with the EPA and other environmental groups, found that the EFC did not exercise sufficient scrutiny of the loan. In May 2015, the state ceded and agreed not to pursue the appeal.

**Other Considerations**

The question still stands then, where will funding come from? The first span of the bridge is still scheduled to finish in December 2016, according to state authorities. At the time of this writing, the state has so far obtained $1.6 billion in federal transportation loans, but hasn’t detailed sources for the remainder of the funds needed to build the bridge. Throughout the process of planning and building the bridge, officials have forged ahead without saying how they will pay for the project, nor have they indicated what increases might be required both on the bridge itself and across the 570-mile, statewide system. Some worry that the funding will come from increases in tolls (currently $5, which hasn’t been raised since 2009), and rumors of increases to $9, $14, and even $20 have been mentioned. High tolls are indeed commonplace in the area – round trip auto tolls on the George Washington Bridge between New Jersey and Manhattan are $13, while the Verrazano-Narrows Bridge between Brooklyn and Staten Island toll is at $15.

The Thruway Authority has an overall $1.7 billion budget for 2015 with a deficit of about $25 million. (The gap is projected to grow to $300 million in 2018, budget documents show). Since the approval of that budget last December, the state Legislature appropriated it $1.285 billion from a one-time pot of $5.4 billion in bank settlement fees to support the bridge program and its other capital construction needs. Bob Megna, the authority’s acting director, insisted to legislators that the money would not be used to pay for operating expenses but would help the authority to prevent any toll increases this year.

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Of that money, the Thruway Authority voted to provide $750 million in a one-time cash windfall to keep construction of the Tappan Zee Bridge replacement going for another year, avoiding the need to issue bonds. (The remainder of that $1.285 billion will be available for use in the next fiscal year).

The issue surrounding this bridge replacement is not unique; nearly 67,000 bridges nationwide are considered structurally deficient, and there are two choices: repair or rebuild. Both options require capital funding. Federal highway aid has fallen considerably over the years, and bridges and roads across the country are in dire need of upgrade and repair. “A majority of the nation’s bridges are at least four decades old, with many built during the 1950s and 60s. Since then, most areas experienced rapid growth, and along with it came more traffic than bridges were originally designed to accommodate. At the same time, some states went for long stretches without making major investments in bridge maintenance or repairs.”

The Highway Trust Fund, which is funded by a gasoline tax and usually shoulders costs for things like fixing potholes and strengthening bridges, is nearing bankruptcy. Some argue that because bond issues are loans that simply defer costs, they are only temporary solutions, and that the state needs to find a better way to pay for new roads and repairs. Some propose increasing gasoline taxes that provide dedicated money for transportation improvements. Other funding options include everything from federal, state, and local city grants, to funds from increases in tolls or other types of taxes, such as mileage-based taxes. Funding sources for these projects can be found in a variety of places; for example, parts of the current round of construction on the Brooklyn Bridge came from the American Recovery and Reinvestment Act (“the stimulus”). However, bridge repair or replacement projects have never before been funded by the Clean Water State Revolving Fund.

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