



# A Review of New Jersey Water Bank Financing for Green Infrastructure Projects



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## INTRODUCTION

New Jersey municipalities face a stormwater crisis – aging, inadequate infrastructure, more frequent flooding and escalating regulatory demands. Many leading communities are turning to green stormwater infrastructure as a means of addressing a variety of priorities all at once, leveraging stormwater investments to improve quality of life, health outcomes and economic opportunities at the same time. Experience nationwide has shown that comprehensive stormwater programs that balance green and gray infrastructure cost less, provide more versatile and effective flood mitigation, and deliver ancillary benefits to their host communities.

The 21 New Jersey cities with combined sewer systems are especially motivated to pursue green infrastructure (GI) projects, both to address state permit requirements and to reduce sewage overflows and backups into waterways, homes, streets and parks. These municipalities and their regional wastewater utilities are in the middle of a five-year process to outline massive infrastructure plans to mitigate combined sewer overflows (CSOs). Once those plans are approved, sometime after July 2020, implementation will begin, a process expected to span decades and cost billions of dollars.

Unfortunately, many cities and utilities with CSOs can find it challenging to access the funding and expertise needed to realize green infrastructure projects, even for small demonstration sites. This funding gap must be solved if they are to build green infrastructure projects at the scale needed to contribute meaningfully to CSO mitigation.

An excellent source of green infrastructure funding is the New Jersey Water Bank, a partnership between the New Jersey Department of Environmental Protection (DEP) and the New Jersey Infrastructure Bank (I-Bank).<sup>1</sup> The Water Bank provides low-cost loans and other funding for a variety of environmental infrastructure projects that provide a water quality benefit. The DEP prioritizes the distribution of funding and performs environmental and engineering and contract review as well as construction oversight and payment disbursement for the program, while the I-Bank

performs financial, credit and legal and administrative functions.

The Water Bank provides preferential financing for green infrastructure related to CSO abatement projects, awarding over \$10 million for green infrastructure projects throughout the state in FY15 through FY17 alone. In particular, for several years in a row CSO communities in New Jersey have been eligible to receive principal forgiveness, a grant-like financing incentive, to fund a portion of green infrastructure stormwater management projects that reduce the overflow of untreated wastewater from CSOs.

New Jersey Future has been working over the past year to identify ways to assure CSO applicants have greater success at accessing the Water Bank's low-cost green infrastructure financing. Working very closely with Water Bank staff at the DEP and the I-Bank, and with support from consulting firm BRS, Inc., we have pursued several approaches. First, we have provided two CSO cities with technical assistance for the process of applying for Water Bank funding. Second, we have conducted interviews, meetings and informal conversations with Water Bank staff and applicant staff and consultants to learn what works best about the application process and where opportunities for new approaches may be found. We also reviewed lessons learned from New Jersey Future's [Build It Green](#) initiative. Finally, we have worked collaboratively with DEP and the I-Bank to prepare an Applicants' Guide for Water Bank GI financing.

This report provides an overview of the Water Bank program for green infrastructure projects in combined sewer communities that highlights:

- ✓ Program accomplishments and successes;
- ✓ Current policies that support green infrastructure projects in CSO communities and will be important to preserve moving forward;
- ✓ Approaches for applicants to improve their ability to access financing; and
- ✓ Potential future directions for the Water Bank's green infrastructure financing program.

# WATER BANK FUNDING FOR GREEN INFRASTRUCTURE IN CSO COMMUNITIES

The Water Bank provides low-cost financing for environmental infrastructure projects and is funded and managed jointly by the New Jersey Infrastructure Bank (I-Bank)<sup>2</sup> and the New Jersey DEP.

The goal of the Water Bank is to provide funding to needed, construction-ready water quality improvement projects. To do this, the Water Bank leverages and lends federal and state revolving funds at zero percent interest with publicly issued bonds to provide low-interest-rate loans for the planning, design and construction of clean water infrastructure projects and the purchase of related equipment.

Green infrastructure is included as an eligible category of projects for Water Bank financing. Green infrastructure projects are stormwater management components that treat stormwater runoff through infiltration into subsoil, through filtration by vegetation or soil, or by storing stormwater runoff for reuse. Eligible GI projects include, but are not limited to rain gardens, bioswales, stormwater bump-outs, porous asphalt or concrete, green roofs, cisterns, and street tree trenches.<sup>3</sup> Green infrastructure projects do not need to be stand-alone projects. By contrast, a conventional stormwater system that contains stormwater runoff using engineered pipes and reservoirs is referred to as “gray” infrastructure. Green infrastructure projects often work well when added onto traditional larger infrastructure projects.

Green infrastructure funding is particularly important for New Jersey’s 21 CSO communities, which are located in urban areas of the state. According to DEP, a CSO community has combined sanitary and storm sewers that share underground piping networks and direct both sewage and stormwater to a central treatment system before it is discharged into a waterway. During heavy rainfall or significant snowmelt, the systems overflow, causing discharges of mixed sewage and stormwater to the waterway.<sup>4</sup>

In 2015, DEP issued permits to 25 municipalities and wastewater treatment plants requiring them to reduce or eliminate CSO events and, with active community involvement to evaluate a range of alternatives, including gray and green infrastructure; both types of infrastructure can limit the amount of pollutants that stormwater washes into nearby water bodies and can prevent CSO events.<sup>5</sup> According to the Water Bank, “effective use of green infrastructure is an important tool in a comprehensive approach to reducing the overflow of untreated wastewater from CSO outfalls.”

Water Bank financing programs for green infrastructure in CSO communities are described later in this paper in the section titled “Policies that Support Green Infrastructure.”

## PROGRAM ACCOMPLISHMENTS AND SUCCESSES

Interviews with applicants have revealed an overwhelmingly positive experience with the Water Bank program, especially for applicants with traditional gray infrastructure projects. At the outset of this initiative, The I-Bank provided New Jersey Future and BRS with a list of every project with a green infrastructure component funded in FY2015 through FY2017 and a list of projects with green infrastructure components in the pipeline for FY2018 and beyond. These projects are shown in Tables 1 and 2 below. BRS conducted interviews with representatives of each application listed in the tables below, with the exception of the Borough of Seaside Park, where there had been turnover in municipal staff.

**Table 1: Projects with green infrastructure funded by the Water Bank from FY2015 to FY2017**

FY	Project Sponsor	Project Number	Legislature Report Cost Amount	Description
2015	Camden County MUA	S340640-14	\$5,657,000	Green Infrastructure/CSO - Construction of 10 new rain gardens in Camden; replacing deteriorating combined sewer pipes; and remediation & construction of the second and final phase of Phoenix Park, a bioretention park.
2015	Hoboken City	S340635-04	\$10,587,764	Below-grade Wet Weather Pump Station - This sustainable stormwater component comprises four 1,200-gallon above-ground rainwater tanks (cisterns) to capture rainwater runoff from the roof of City Hall, and rain gardens in the northwest and southwest corners of the building that utilize the captured water.
2017	Camden County MUA	S340640-15	\$5,333,565	Green Infrastructure/CSO - Construction and installation of rain gardens, planter boxes, porous concrete sidewalks, and porous pavement to manage stormwater runoff from impervious areas and reduce pressure on Camden City's combined sewer system.
2017	Elizabeth City	S340942-19	\$6,435,644	Green project component: This project will include a test case for installing Green Infrastructure. A bioswale will be installed on the northeast side of Trumbull Street, a rain garden will be installed in the proposed park and if possible, tree boxes will be installed along Bond Street.
2017	Hoboken City	S340635-05	\$4,172,126	Acquisition/GI CSO – The newly opened Southwest Park addresses local flooding issues with green infrastructure and an underground retention system designed to handle a 10-year storm. The park's design combines passive rainwater collection, permeable paving, rain gardens and bioswales with sub-surface storage beneath a new community park.
2017	Hoboken City	S340635-06	\$31,091,350	Acquisition/GI CSO – The acquisition/environmental investigation/design and planning of a 5.4-acre park in northwest Hoboken. Includes stormwater retention, public park/open space, and sub-surface stormwater quality treatment. The sub-surface stormwater storage will allow approximately 1 million gallons of stormwater flows to be received, treated and discharged.
			<b>\$52,689,685</b>	

**Table 2: Projects with green infrastructure in the Water Bank pipeline (FY2018 and beyond)**

Anticipated FY	Project Sponsor	Project Number	Legislature Report Cost	Description
2018+	Camden County MUA	S340640-17	\$ 6,650,000	Green and Gray Infrastructure/CSO
2018+	Camden County MUA	S340640-20	\$ 6,500,000	Camden City Green Infrastructure
2018+	Elizabeth City	S340942-17	\$ 5,500,000	South Street Storm Water Resiliency
2018	Hoboken City	S340635-07	\$ 5,000,000	Resilient Green Infrastructure for CSO Reduction
2018+	Hoboken City	S340635-08	\$ 6,600,000	Southwest Resiliency Park Phase 2 – Acquisition and Rehabilitation
2018	Jersey City MUA	S340928-22	\$ 750,000	Green Infrastructure - Planter boxes, rain gardens, permeable surfaces
2018+	Jersey City MUA	S340928-27	\$ 500,000	Green Infrastructure - Martin Luther King Drive Tree Trenches
2018+	Newark City	S340815-25	\$ 400,000	Green Infrastructure - permeable surfaces
2018+	Newark City	S340815-27	\$ 3,800,000	Porous pavements, rain gardens, stormwater planters, and tree trenches
2018	Perth Amboy City	S340435-13	\$ 850,000	The Paving of Parking Lots C and RDH (GI)
2018+	Perth Amboy City	S340435-14	\$ 2,608,000	CSO Reparation (Pulaski Avenue / Parker Street / State Street)
2018+	Perth Amboy City	S340435-17	\$ 4,418,400	Second Street Corridor Project – Green Infrastructure as pedestrian safety features
2018+	Seaside Park Borough	S344200-02	\$ 2,800,000	Barnegat Bay Watershed Green Infrastructure Reconstruction of Parking Lots 1-3
			<b>\$ 46,376,400</b>	

## CASE STUDIES

These two CSO communities successfully utilized Water Bank funding to implement green infrastructure projects.

### → Phoenix Park, Camden

The Phoenix Park project remediated the former American Minerals site in Camden, N.J., and converted the brownfield site into a recreational area with a gravel walking path, overlook, parking area, and wetlands marshy area with plantings of approximately 30 native evergreen trees, native meadows, and turf grass. The Camden County Municipal Utilities Authority (CCMUA) received an \$8 million loan from the Water Bank, in addition to other funding sources, to develop this project. The newly remediated park provides multiple benefits, including access to the Delaware River for residents and a reduction in flooding, as the park's green spaces capture millions of gallons of stormwater annually. CCMUA collaborated with a number of partners on this green infrastructure project, including the City of Camden, Cooper's Ferry Partnership, Rutgers Cooperative Extension Water Resources Program, New Jersey Tree Foundation, the state Department of Environmental Protection and the Nature Conservancy.

*Below: Green infrastructure at Phoenix Park.*

*Photo credit: Camden County Municipal Utilities Authority.*

### → Southwest Park, Hoboken

The City of Hoboken received a \$5.1 million Water Bank loan to develop the Southwest Park project. Southwest Park is a one-acre parcel that has been designed to capture 200,000 gallons of stormwater runoff while providing access to green space for neighborhood residents. According to the I-Bank, Southwest Park serves as a small-scale model for integrating green infrastructure and underground retention to reduce flooding. The stormwater design combines passive rainwater collection, utilizing permeable pavement, rain gardens and bioswales, with subsurface storage beneath the park. All of the pavement within the park is permeable, so that the first rainfall is absorbed within the pavement. Subterranean storage chambers located in the zone between the park pavement and the water table collect overflow from the rain garden and any drain inlets within the park. The stored rainwater is then slowly released to reduce the peak flow to the city's sewer system and keep the combined sewer system from overflowing. This project qualified for \$1 million in principal forgiveness and is projected to save Hoboken \$2 million in interest over the 20-year term of the loan.



# WATER BANK POLICIES THAT SUPPORT GREEN INFRASTRUCTURE PROJECTS

Based on key interviews with past and present applicants for Water Bank funding, it is clear the Water Bank is already doing many things “right,” and that program leadership has implemented many improvements to the application process that maximize applicant success. The policies described below support applications for green infrastructure, including from CSO communities. Therefore, it is important that the Water Bank preserve policies and priorities that support green infrastructure projects.

## → Principal Forgiveness and Interest Rates

In the current fiscal year (FY19), the Water Bank offers a financing package for loans up to \$4 million that include 50 percent principal forgiveness for GI projects that manage stormwater to reduce the overflow of untreated wastewater from CSOs. Currently, project costs in excess of \$4 million are financed with 100 percent interest-free DEP funds. In addition, the Water Bank provides loans for the development and implementation of Long Term Control Plans in CSO communities. These Planning and Design (P&D) loans have historically been 100 percent interest free for terms of up to 10 years. The principal forgiveness component of the loan has frequently been a deciding factor for CSO communities in whether or not to pursue GI funding through the Water Bank. The alternative, according to applicants, would be to seek more expensive alternative sources of funding, to self-fund with cash on hand, or not to pursue the GI project at all.

Utilizing the low-interest loans offered by the Water Bank significantly lowers the annual debt service burden for borrowers and their rate payers, and is particularly important for CSO communities, which are located in the state’s urban communities and serve a high number of low-income households.

## → Eligibility

The Water Bank supports applications from both public-sector applicants and private-sector applicants, such as redevelopers, so long as the

private applicants have a local government sponsor. Called “conduit borrowing,” this funding arrangement has led to many successful redevelopment projects that not only benefit water quality but may also provide additional benefits such as jobs, tax revenue and access to open space. One such example is the Carteret Landfill reclamation project in Middlesex County, which received a \$38.5 million conduit loan as part of a successful commercial warehouse redevelopment project.

In addition, in state fiscal year 2019, eligibility was expanded to include both public and private colleges and universities. This change has the potential to be very beneficial for green Infrastructure applications as colleges and universities have historically been strong advocates and leaders for green infrastructure, have served as a resource to municipal governments and municipal utility authorities (MUAs) on the implementation of green infrastructure, and have demonstrated best practices in green infrastructure.

## → Streamlined Application and Review (H2LOans)

The I-Bank replaced the paper application process for Water Bank funding with a web-based application, called **H2LOans** ([www.h2loans.com](http://www.h2loans.com)). The submission and review of application documents occurs on the **H2LOans** portal. Overall, applicants identified this as a major area of improvement for the application and review process, noting that the application portal itself is generally quite user-friendly and when questions arose, they were able to get in contact easily with someone at the I-Bank for assistance.

The switch to the **H2LOans** application interface has also replaced several previously required forms and affidavits with simple yes-or-no questions and checkboxes, saving time and money for applicants, particularly in the use of third-party professional consultants.



Finally, both applicants and agency staff noted that **H2LOans** is a good project management tool because it allows for document-sharing between a municipal team and its professional advisors, and between the municipal team and DEP/I-Bank staff.

The rollout of an online application portal has not been a static process. Instead the I-Bank and DEP staff are continuously looking for ways to improve **H2LOans** in ways that increase the number of application and award functions that can be conducted online while addressing issues encountered by applicants.

In the future, the I-Bank has indicated that it is working to incorporate additional functions to **H2LOans**, particularly focused on the financial components of the Water Bank financing program, including loan exhibits, loan administration and requisitions (i.e., project disbursements requested of the program by borrowers). The program will also be collecting additional metrics from the portal on an ongoing basis to be used in efficiency audits.

### → **Additional Funding Streams**

Another area where the Water Bank has made changes that have benefited applicants is to provide new types of funding streams, primarily, the addition of Planning and Design (P&D) loans, and removal of the cap on the amount of money an applicant can get for a P&D loan. P&D loans – which are part of the I-Bank’s expanded Short-Term or Construction Loan Program -- provide a single short-term loan at the beginning stages of a project’s planning to pay for the development of environmental and engineering planning documents up through, and including, the completion of construction.

The Water Bank presently offers these short-term loans 100 percent interest-free with a term of up to three full fiscal years and up to 10 years for CSO Long Term Control Plan projects, and with the requirement that any loan-financed studies or plans be rolled into a construction loan for the capital improvement project. This short-term loan can be extremely beneficial to those potential applicants who do not possess the upfront capital necessary to prepare the level of environmental planning documents that each applicant must submit as part

of the eligibility requirements of the Water Bank’s federally funded financing program.

### → **Deadline**

The Water Bank has no application deadline. Instead, the program has a year-round rolling application submission process. The removal of an application deadline was universally praised by applicants. One applicant stated that it was beneficial in times of internal transition, where staff changes may lead to an inability to submit an application at the required deadline. Another stated, “A huge improvement has been taking away the deadline. The rolling process has been an easier process to manage. It is more reflective of realistic timelines.”

Significantly, interviews with current and former agency staff and applicants have revealed that the removal of deadlines has been linked to a higher percentage of submitted applications being successful in receiving funding, primarily because applicants now wait until they are ready to begin the application process rather than rushing to submit applications for all projects anticipated in the upcoming fiscal year. Municipal applicants further stated that the removal of the deadline benefits applicants because if they were experiencing an internal transition or staff turnover around the time of the deadline, then they were oftentimes unable to submit eligible applications for funding for a full year.

Finally, according to I-Bank and DEP management, removing deadlines allows projects to proceed on the borrowers’ schedule. Management has seen (and heard from contractors) that spreading bids out throughout the year and going out to bid at different times, rather than bunching the bids together and saturating the market just prior to the old funding deadlines, has allowed contractors to allocate their bid staff’s time more effectively and bid on more projects. This has enabled applicants to receive more competitive, generally lower, winning contract prices for their projects as well as allowing interested contractors more opportunities to bid on a greater number of projects.

## → Intended Use Plan

EPA requires that each state revolving fund (SRF) program (including the New Jersey Water Bank) develop and submit an Intended Use Plan (IUP) as a prerequisite to receipt of the ensuing year's federal grant for the SRF program. The DEP determines the funding priorities and distribution of principal forgiveness every year and publishes this determination in the IUP. The IUP sets forth the intended uses of the funds in the SRF, including information on the types of activities to be supported by the SRF, eligible categories of costs, types of assistance to be provided, policies on setting the terms for the various types of assistance, and the criteria and method for the distribution of SRF funds. Importantly, it provides members of the public the opportunity to comment on the proposal prior to submission to the EPA. The DEP's federal FY2018 IUP is available on the DEP website at: [http://www.nj.gov/dep/dwq/pdf/njeifp\\_2018P\\_cw-dw\\_ppl.pdf#nameddest=Top](http://www.nj.gov/dep/dwq/pdf/njeifp_2018P_cw-dw_ppl.pdf#nameddest=Top).

The FY 2019 IUP has introduced many improvements over the prior year's version, including:

- ✓ Increased ease of readability,
- ✓ Condensed information,
- ✓ Interactive links, and
- ✓ Addition of pictures, charts and graphics for improved comprehension.

## → Marketing

The Water Bank is continuing its increased emphasis on marketing the program to potential applicants across the state. Efforts include making continuous updates to the information contained on its website, conducting seminars for eligible applicants and consultants, and sending teams of Water Bank staff out to meet with interested applicants and consultants to learn about potential projects and "tell the story of the program." Interested applicants are also able to request that Water Bank staff visit their communities to learn more about potential projects and discuss eligibility for various financing products.

## APPROACHES FOR APPLICANTS TO ACCESS FINANCING MORE EASILY

Despite the many program successes experienced by Water Bank applicants, a number still struggle with their application submissions, especially those who are not experienced with the program and/or are seeking funding for nontraditional projects like green infrastructure. Through our outreach, we have identified several opportunities for applicants to improve their ability to access financing.

**Opportunity: Not all GI applications meet minimum design standards and thresholds for financial feasibility.** Some first-time GI applicants lack the experience and knowledge of the program necessary to submit an application that meets all of the requirements. Additionally, they may not be aware of the need to engage an outside consultant or partner to assist with various aspects of the application process.

**Recommendations:** When appropriate, most successful GI applicants utilize qualified consultants and/or nonprofit partners like the Rutgers Water Resources Program and the New Jersey Tree Foundation for the development of technical and financial application components. The vast majority of successful applications for Water Bank funding also used a strong internal staff member to manage the consultants and the process. Less experienced applicants can seek peer-to-peer mentoring from successful applicant communities and utilities. Applicants can seek to institutionalize the Water Bank application experience within their local governments, for example by cross-training additional staff members on managing an application for Water Bank funding, so that when a person or department position turns over, the institutional memory does not need to be re-learned. Finally, even some successful applicants have found that not all people involved in their application team were knowledgeable about municipal finance, bond finance, etc. They should seek assistance from the I-Bank (609-219-8600) regarding the basics of the financing process and how to conduct a cost/benefit analysis.

**Opportunity: Some municipalities are not comfortable paying for green infrastructure projects. It can also be difficult for standalone green infrastructure projects to demonstrate a positive return on investment, particularly if a complete study of a project's indirect benefits and savings is not considered.** CSO mitigation benefits can be difficult to quantify and prove for standalone green infrastructure projects, and some communities do not view green infrastructure projects as “counting” towards regulatory requirements, in the same way that gray infrastructures projects do.

**Recommendation:** In its January 2018 document, “Evaluating Green Infrastructure: A Combined Sewer Overflow Control Alternative or Long-Term Control Plans,” DEP has provided clear guidance on how it will “count” green infrastructure projects towards CSO mitigation in Long Term Control Plans. CSO and green applicants should consult this document for guidance on how to conduct a cost-benefit analysis of green infrastructure projects and how to evaluate green infrastructure investments for reduction in the volume and peak flow of stormwater and CSO discharges. As the DEP guidance document notes, a cost-benefit analysis should consider non-monetary benefits, including improved air quality, reduced carbon emissions, reduced heat island effect, energy savings and increased property values.

**Opportunity: Remediation is frequently required prior to pursuing green infrastructure investments in urban areas, which makes the project more expensive and complicated.** Many CSO communities have contamination because of their industrial history.

**Recommendation:** Applicants can seek Water Bank funding for brownfield projects and/or pursue additional, non-Water Bank funding resources to support assessment and clean-up of brownfield sites.

**Opportunity: It can be difficult to assemble and coordinate the correct partners at the table.** Green infrastructure projects are often part of a larger project (e.g., a streetscape, trail, or parking area) and are championed by parties/individuals other than the water/sewer or MUA staffs, who tend to be more familiar with the Water Bank process and who are the holders of the CSO permits. In addition, there may be competition within a municipality for access to the Water Bank.

**Recommendation:** Applicants can identify and coordinate with other municipal employees, consultants and nonprofit partners that have the experience and knowledge of the project and the Water Bank application process prior to beginning the application process. They can also secure engineering consultants who are experienced in integrating green infrastructure into the design of other projects. Applicants that lack the upfront money to secure consultants may apply for a short-term loan for Planning & Design expenses.

**Opportunity: Submitting a green infrastructure project to the I-Bank for funding can be expensive.** The federal process under which the Water Bank operates requires a significant number of technical documents as well as quantitative estimates of project costs and benefits. In addition, there may be a number of required DEP permits.

**Recommendation:** Applicants are encouraged to bundle multiple green and gray infrastructure projects together into a single funding application. Each community has a minimum threshold of “what makes sense” in terms of a minimum project cost required to justify the fixed cost of applying for Water Bank Financing. For CSO communities that are eligible for Principle Forgiveness Loans this number could be as low as \$500,000. For other communities the cost will be higher.

## FUTURE OPPORTUNITIES FOR WATER BANK GREEN INFRASTRUCTURE FINANCING

Staffs at the DEP and I-Bank have made tremendous progress over the last few years in making the Water Bank programs more accessible to users, as evidenced by the many positive comments we heard from applicants. They have also prioritized green infrastructure projects and CSO reduction by offering targeted financing programs, and produced the tangible accomplishments outlined in this paper. We have been grateful for their willingness to work with us to consider additional opportunities to facilitate GI applications from CSO communities. This section outlines a few of the kinds of additional improvements that Water Bank borrowers can expect so that the borrowing process is as easy and rewarding as possible.

The program has an opportunity to communicate more clearly what is involved so that all potential applicants understand the timeline, application requirements, and likelihood of success before they embark on the application process. To this end, New Jersey Future has worked closely with the agencies to develop a detailed “Applicant’s Guide” that clarifies the sequence of application requirements and defines the standards that must be met at each step along the way. The proposed guide also offers tips based on successful applicants’ experiences, such as how to bundle green and gray projects together so that the application is large enough to justify the expense of applying. We anticipate that the I-Bank will host the Applicant’s Guide on its website this fall.

The Water Bank applicants interviewed as part of this project stated that certain aspects of preparing a funding application for green infrastructure projects are sometimes more difficult than for gray infrastructure projects. This is particularly true given the differences for designing and engineering a green infrastructure project and developing cost estimates for design, construction, and maintenance.

One possible solution is to improve technical assistance to CSO communities in support of GI applications for Water Bank financing, in part by ensuring timelier, more consistent information on project eligibility, technical feasibility, and project status. For example, the Water Bank could provide a “help desk” for applicants, and staff it with people who

have a deep understanding of the applicants, their projects, the local financing process and the program requirements both technical and financial. This help desk would be available to applicants who are new to the program, have limited capacity, demonstrate a need for additional assistance, and/or experience an application delay longer than 30 days. Additionally, the Water Bank could designate a dedicated point of contact at DEP for applicants with green infrastructure projects.

Another barrier to implementation of green infrastructure projects in New Jersey’s CSO communities is that municipal staff may experience difficulties articulating and quantifying the benefits associated with a green infrastructure project. Again, a help desk and dedicated point of contact at DEP may be able to provide resources. For example, through guidance like the 2018 document “Evaluating Green Infrastructure: A Combined Sewer Overflow Control Alternative or Long-Term Control Plans,” DEP can provide applicants with clear standards for measuring costs and benefits of green infrastructure, and provide clear guidance on how green infrastructure projects will count towards CSO mitigation in Long Term Control Plans. Finally, Water Bank staff can connect potential applicants with new partners like peer agencies and nonprofit organizations to provide technical assistance with the process.

Looking forward, it is critical that the Water Bank retain its leadership role in supporting green infrastructure projects in CSO communities. It already incentivizes loans for all types of infrastructure projects in CSO communities through its principal forgiveness package, and has improved the application experience by moving it online, eliminating application deadlines, making the IUP more readable and user-friendly, and allowing for conduit borrowing. The Water Bank has also transformed the way it markets the program to new borrowers and for new project types. With a few program additions, the Water Bank can increase the number of high-quality, successful funding applications, and further support its goal of improving water quality in the State of New Jersey.

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We also thank the many people we interviewed about their experience applying to the Water Bank for GI financing, and the members of a peer group from the Jersey Water Works Asset Management and Finance Committee, who provided feedback on the applicant's guide.

## About the Authors

**Chris Sturm**, New Jersey Future's managing director for policy and water, spearheaded this project and helped write this report. Chris directs the organization's water programs, including leading backbone support for the cross-sector Jersey Water Works collaborative and managing New Jersey Future's work on green infrastructure, water financing, and community organizing. She has built successful teams and collaborations to accomplish legislative, regulatory and programmatic innovations in areas including climate resilience, state and regional planning, land preservation, and compact, equitable growth.

**Leah B. Yasenchak Ph.D. AICP PP CEcD EDP** is a co-owner of BRS Inc. with more than 22 years of experience at the federal and local levels in environmental policy, grant writing and administration, and brownfields redevelopment. She oversees BRS's redevelopment planning efforts for environmentally compromised property and for resiliency projects, and is the principal in charge of the firm's environmental planning, outreach, and grant writing and management services.

**Katie-Rose Imbriano AICP PP**, the primary author of this report, leads the planning and grant management services at BRS. Her work focuses primarily on assisting communities with environmental planning initiatives, including brownfield redevelopment, green infrastructure, and coastal resiliency projects. She also performs funding research, grant writing, land use analyses, mapping, and community outreach related to long-range planning initiatives.

**BRS Inc.**, formerly Brownfield Redevelopment Solutions, Inc., was formed in the beginning of 2003 with the sole purpose of assisting the public sector and quasi-public sector with establishing sustainable and aggressive community revitalization programs. BRS has stayed true to its mission of providing resources and expertise needed to bring projects from inception to completion by addressing community challenges through redevelopment, revitalization, and resiliency planning, while safeguarding the integrity of the public trust. We accomplish this by providing services to the public and non-profit sectors that include funding access and grant management, environmental assessment and management, land use planning, energy services, and other activities to facilitate local redevelopment initiatives.

## Endnotes

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<sup>1</sup> Prior to 2018, the Water Bank was called the New Jersey Environmental Infrastructure Funding Program, or NJEIFP.

<sup>2</sup> Prior to January 16, 2018, the New Jersey Infrastructure Bank (also known as NJIB or the “I-Bank”) was called the New Jersey Environmental Infrastructure Trust (NJEIT).

<sup>3</sup> The New Jersey DEP provides detailed information on the implementation and management of GI on its website. For more information on green infrastructure, visit DEP’s [Green Infrastructure in New Jersey](#) site.

<sup>4</sup> Department of Environmental Protection, Combined Sewer Overflows, “CSO Basics” <http://www.nj.gov/dep/dwq/cso-basics.htm>, accessed May 24, 2018.

<sup>5</sup> Environmental Protection Agency, “Green Infrastructure,” <https://www.epa.gov/green-infrastructure>, accessed May 24, 2018.

## About New Jersey Future

Founded in 1987, New Jersey Future is a nonprofit, nonpartisan organization that promotes sensible growth, redevelopment and infrastructure investments to foster vibrant cities and towns, protect natural lands and waterways, enhance transportation choices, provide access to safe, affordable and aging-friendly neighborhoods and fuel a strong economy. The organization does this through original research, innovative policy development, coalition-building, advocacy and hands-on strategic assistance.



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