WATER INFRASTRUCTURE INVESTMENT PROGRAM



UTILITY & TRANSPORTATION CONTRACTORS ASSOCIATION

Executive Summary

Problem Statement

The overall condition of New Jersey's water infrastructure assets—drinking water supply, wastewater, and stormwater—can be summed up in one phrase: *grossly inadequate*. We begin this document with this condition assessment as an accepted fact, ably documented by others and largely unchallenged. Although there are many examples (both public and private) of well-run water systems, by and large our existing systems cannot meet the needs of today. Equally disconcerting is that these systems cannot be reasonably expected to meet the projected needs of tomorrow, given growth patterns and changes to the environment resulting from climate change.

In recent years, water infrastructure issues have been well documented, and in New Jersey, they go far beyond the national stories that came to light during the Flint, Michigan lead crisis. It is clear that New Jersey is not alone in its sad state of affairs; consistent failure to invest and perform proper maintenance over decades, coupled with a startling absence of public awareness has led much of our country into a similar predicament. At the same time, diminishing federal support has left states to largely fend for themselves.

DID YOU KNOW?

- New Jersey loses **130 million gallons per day** of treated drinking water
- Hoboken has averaged **20 water main breaks each year since 2000**, because much of its water infrastructure was built in the mid-to-late 1800s
- Despite a 20% reduction since 2015, New Jersey still has **210 Combined Sewer Outfalls** (CSOs) that discharge untreated sewage and storm-water to waterways

In New Jersey, water main and sewer breaks disrupt the everyday life of our residents and businesses. These events shut down roads and transit, shutter business operations, and create public health hazards. In older communities, lead service lines and inadequate internal plumbing turns otherwise clean, treated drinking water into a risk to our children's health and development. Water production plants face challenges in meeting new drinking water standards that are rightly being put in place to protect public health. Inadequate wastewater and stormwater infrastructure are leading contributors to localized flooding, which will only be exacerbated by rising sea levels. These conditions put our residents and their property at risk during a normal rain event—let alone when a named storm is barreling up the eastern seaboard.

Our residents and businesses rely heavily on water infrastructure. Most people never give pipes a second thought, so long as there is water flowing from the tap and a properly flushing toilet. However, a 2011 poll by the Monmouth University Polling Institute showed an overwhelming percentage of New Jerseyans prioritize water supply over many other pressing public policy matters.

Public support is constrained by an overall lack of confidence in federal, state, or local government to effectively spend their money wisely. This lack of confidence must be overcome. When residents and businesses are educated on these issues they are willing to pay more to modernize water infrastructure assets. Choosing between clean water and other important priorities like education and public safety is a zero-sum game that has no winner.



Pure and simple, the problem is inaction—or better stated, the lack of meaningful action to make a dent in the long-standing issues with our water infrastructure. We are treading water, doing only just enough to avoid disaster. This is a failed approach, and we are already dealing with the repercussions of this inaction.

Overcoming Inaction

Up to this point, the mounting needs of our drinking water, wastewater, and stormwater systems have largely been addressed in public discourse through the lens of symptoms such as unsafe drinking water or desired outcomes such as fewer flood events. However, defining a problem in terms of its symptoms obscures the real cause, and in turn, proposed solutions fail to truly address the underlying issue: a lack of governance and process.

The comprehensive statewide water infrastructure investment strategy described in this document presents an efficient and sensible approach to improving our water infrastructure systems in a transparent and cost-effective manner. Unlike many other problems facing New Jersey, we know how to fix this. The actions proposed in this program are based upon existing structures and institutions, and are all within the short-term reach of our elected leaders.

> More than just money, the four goals and corresponding actions presented in this document create a clear structure of accountability and investment for all New Jersey water systems: statewide capital planning; capacity building; project prioritization; and a reduction in project review times and costs.

Water infrastructure - like transportation and energy infrastructure - is a basic building block of our economy and quality of life and should be stewarded as such. In order to achieve the desired outcomes – cleaner drinking water, less flooding, etc. – we must first establish a statewide, structural relationship between our water systems, regulators and lawmakers, and the Infrastructure Bank. Instituting a transparent and cyclical statewide planning process along with a corresponding annual capital program creates a platform of progress and accountability for ratepayers, while also leveling the regulatory playing field across the state.

While funding is certainly a primary driver in advancing water infrastructure projects, we must avoid the trap of being either dissuaded by or led by the cumulative price tag of the work. Increasing capital investment is an unavoidable aspect of fixing this problem; but without a structured process to ensure accountability and fairness, new money will do little to address the root cause.

Similarly, there is no silver bullet. The nuances of each system are unique and a continued partnership with them is an essential component of any successful program. The exact investments for each system cannot be dictated from a central office in Trenton. Keeping an open dialogue between regulators and the systems they regulate is imperative.

The time for talk is over. Now, we must get to work. Beyond the health and environmental benefits, this work will create good jobs for the long-term, will accelerate economic development opportunities, and will increase opportunities for outdoor recreation.



Outcomes: A Mission-Driven Program

This program is meant to **ensure that all water infrastructure assets (drinking water, wastewater, stormwater) are:**

- Invested in at a rate of at least **$2B per year for the next 20 years.**
- Appropriately **upgraded** and **maintained** in a state of good repair.
- Ready to meet the challenges of tomorrow in a **cost-effective** manner.

To meet this mission, the following goals and related actions have been established:

GOAL 1 **Create** a Comprehensive Water Infrastructure Investment Strategy

GOAL 2 **Build** Institutional & Financial Capacity in Every System

GOAL 3 **Accelerate** Key Projects of Regional/Statewide Significance

GOAL 4 **Bring** All Water Infrastructure Projects to Construction Quicker & Cheaper

Meeting the Mission

Goal 1: Create a Comprehensive Water Infrastructure Investment Strategy

Action 1- Adopt a Comprehensive Water Infrastructure Strategy

By statute, authorize the development and adoption of a 20-year, Comprehensive Statewide Water Infrastructure Investment Strategy. This document would clearly define the scope of work, document the need for additional funding, provide options to fill funding gaps, and ultimately produce a formal Water Infrastructure Capital Program (see Action 2) mimicking, to the extent practical, the existing Transportation Improvement Program (TIP) that guides investments in transportation. This would build on the policies established in the New Jersey Department of Environmental Protection's (DEP) "Intended Use Plan" published annually as a requirement of federal funding. The existing "fix it first" philosophy should be continued.

This strategy would include a goal of meeting or exceeding $2 billion in annual construction funded by various, previously identified programs and sources of revenue. A key component of this strategy would be to incentivize good business practices for the water industry and build capacity for future success. By leveling the playing field for all water systems, New Jersey will avoid throwing good money after bad. As such, subsidizing systems that are unwilling to address operational efficiencies should be discouraged.

Structure:

- Adopted by the NJ Infrastructure Bank (the "I-Bank") in consultation with the DEP, Board of Public Utilities (BPU), and the New Jersey Department of Community Affairs (DCA)
- Reexamined every five years in a transparent and efficient manner: Avoids putting responsibility under one "Water Czar" and reflects the shared authority of various state agencies as well as the need for systems to be responsibly operated and managed regionally/locally and not centrally by the State of New Jersey
- Provides the opportunity for public input at various points of development, and posted on a public website upon adoption
- Builds on utility-system asset management programs, County Wastewater Management Plans, CSO Long Term Control Plans, and other stormwater plans developed at the local level
- Respects confidentiality/security issues related to individual public and private water systems
- Prepared with input from an unpaid, State Water Infrastructure Advisory Board, (also established by this legislation) whose members possess qualifications and knowledge including:
  - 3 PROFESSIONALS FROM PUBLIC WATER AND WASTEWATER AGENCIES
  - 3 PROFESSIONALS FROM INVESTOR-OWNED UTILITIES
  - 1 REPRESENTATIVE OF PROFESSIONAL ENGINEERING COMMUNITY
  - 1 REPRESENTATIVE OF THE NJ BUSINESS COMMUNITY
  - 1 REPRESENTATIVE WITH EXPERTISE IN UTILITY FINANCE
  - 1 REPRESENTATIVE OF REGIONAL PLANNING COMMUNITY
  - 1 REPRESENTATIVE OF PUBLIC HEALTH COMMUNITY
  - 1 REPRESENTATIVE OF UTILITY CONTRACTORS



Ex Officio Members Including:

- DIVISION OF THE RATE COUNSEL REPRESENTATIVE
- NJ CLEAN WATER COUNCIL REPRESENTATIVE
- NJ WATER SUPPLY ADVISORY BOARD REPRESENTATIVE

Contents:

- Establish funding targets for annual and long-term goals (e.g. $40 billion in 20 years)
- Recommend grant programs for Asset Management, including but not limited to inventory and criticality assessments, merger/regionalization studies, challenged systems due to lack of ratepayers, or socio-economic factors impacting their ratepayers
- Ensure coordinated use of current federal, state, and local funding resources
- Identification of annual and long-term revenue sources that will overcome the identified gap in funding, including prioritization of capital projects to meet public policy goals as set forth in the Intended Use Plan
- Prioritize green and grey projects in areas vulnerable to the effects of climate change
- Review the application of emerging best practices in utility and construction management and recommended policy solutions to embracing these trends
- Integrate with other statewide planning efforts for development & redevelopment, transportation, housing, energy, etc., and require review by municipalities during re-examination of local Master Plans under the Municipal Land Use Law
- Assess and recommend appropriate opportunities for public – private partnerships (P3's)
- Assess and recommend programs that address rate affordability
- Recommend ways to accelerate review, approval, and reconstruction of priority water, wastewater, and stormwater assets

Action 2—Create an annual water Infrastructure Capital Program submitted to the Legislature each year beginning the first fiscal year after passage, mimicking, to the extent practical, that of NJDOT's TTF Process:

- Will be prepared and submitted to the Legislature by the I-Bank in conjunction with the DEP, BPU, and the DCA
- Increase planning and project coordination between water, energy, and transportation infrastructure and prioritize projects that can be accomplished simultaneously, when practical

Related Tasks

- Retain the I-Bank as the financial oversight/bonding entity and DEP as the technical review entity with support, as appropriate, from professional service providers
- Invest in the staff of DEP, BPU, DCA, and the I-Bank to enable them to better meet the mission. This goes beyond the number of employees on staff and goes into sufficient technical, management opportunities, and engagement opportunities with the owners/operators of water infrastructure assets

COMPREHENSIVE STATEWIDE WATER INFRASTRUCTURE INVESTMENT STRATEGY TIMELINE



Action 3—Filling the Funding Gaps Identified in the Water Infrastructure Investment Strategy

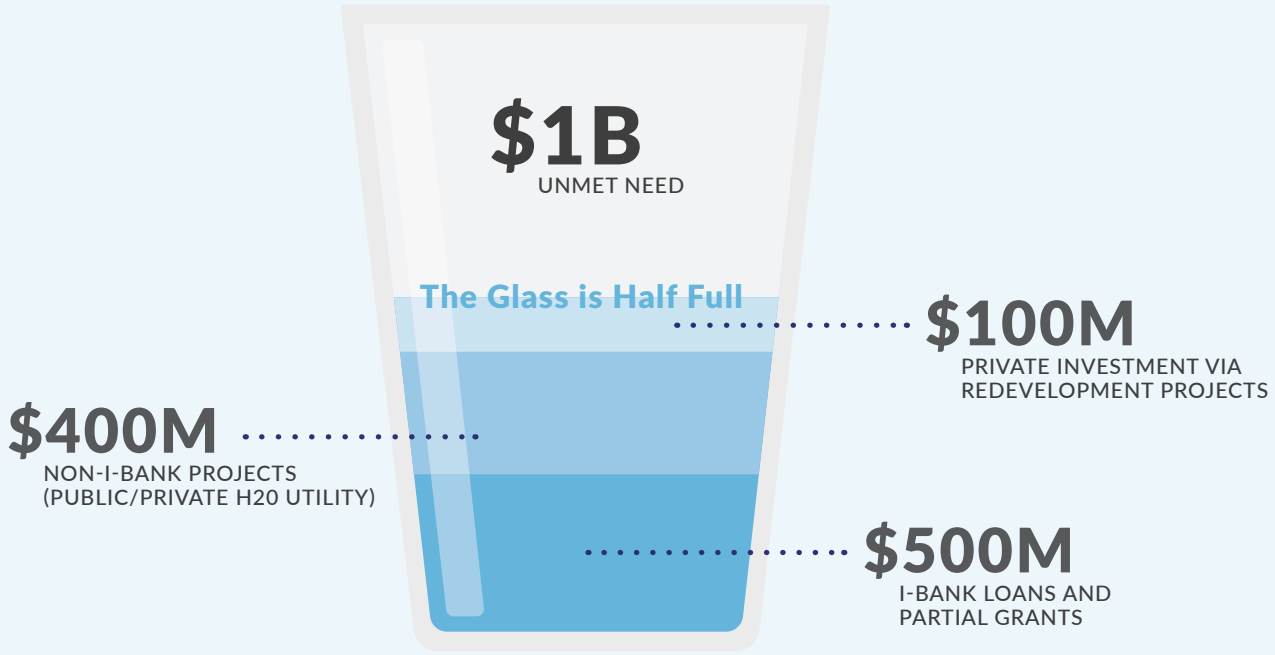
Short Term Tasks: Prioritize Discretionary State Funding/ Federal Advocacy to complement existing Clean Water State Revolving Fund (SRF) program efforts

- Dedicate at least fifty (50) percent of constitutionally dedicated revenue from national resource damage (NRD) settlements to water infrastructure priorities that meet the criteria set in the recent public question. Added benefit of this action is that it would satisfy state match requirements for any new SRF federal funding
- As New Jersey reenters the Regional Green House Gas Initiative (RGGI) program, dedicate a percentage of revenue to water infrastructure priorities with a water-energy nexus. New revenue dedicated to water infrastructure priorities should be added to the SRF program. Consider using a portion of the existing BPU Societal Benefit Charge for the same type of projects. Added benefit of this action is that it would satisfy state match requirements for any new SRF federal funding
- Support legislation that would enable existing utilities (in most cases) to take on the role of "Stormwater Utilities" that would generate revenue to improve stormwater management and drive construction of projects that directly improve water quality throughout the state
- Support legislation enabling BPU to establish a wastewater Distribution System Improvement Charge (DSIC) modeled after the successful water supply DSIC program
- Engage in advocacy at the federal level to ensure that water infrastructure is viewed as a priority and not subordinate to other important infrastructure priorities
- Streamline approvals for increases in rates when the utility demonstrates that the projects are a priority

Mid Term Actions: Fill the long-term funding gap through one or more funding options recommended by the "Comprehensive Statewide Water Infrastructure Investment Strategy" that complement existing SRF program efforts. **Develop a platform for public approval of actions including but not limited to:**

- No later than one year after adoption, increase state funding to dedicate new revenue from identified sources or through authorized bonding. Any existing or new state or pass through federal funding would be spent consistent with the "Comprehensive Water Infrastructure Investment Strategy"
- Adopt local ordinances that would evolve existing utilities to serve the role of "Stormwater Utilities" which would raise revenues for local stormwater projects

Estimated Current Rate of Investment/Year



Goal 2: Build Institutional & Financial Capacity in Every System

Action 1—Implement the Water Quality Accountability Act ("WQAA")

DESCRIPTION: With the WQAA now in effect, the DEP must work swiftly with all required municipalities/utilities to conform with the newly- established requirements of the WQAA within 18 months. Any data collected from this work should directly inform the "Comprehensive Statewide Water Infrastructure Investment Strategy" and be used to create a statewide progress report, including the development of key achievement metrics.

Related Tasks:

- Support DEP and municipalities'/utilities' efforts to get the resources they need (staff, technology, etc.) to meet the requirements of the Act. Certain municipalities may require more assistance than others due to the size of their rate base or socio-economic factors impacting their ratepayers
- DEP should create an audit system to ensure that compliance certifications received from WQAA effected systems are a legitimate reflection of compliance

Action 2—Expand the WQAA

- Support legislation that would add non-CSO wastewater utilities as being covered by the WQAA to ensure that optimized separate sewer system maintenance and related issues are properly addressed
- Support legislation that would amend the Municipal Land Use Law/County Planning Act to require consideration of asset management planning by counties and municipalities in the process by which they reexamine the local master plan
- Support the addition of an enforcement mechanism into the existing WQAA structure

Action 3—Implement the WISE Act

DESCRIPTION: With the Water Infrastructure Savings Enabling (WISE) Act now in effect, it must be enforced by DCA—Local Government Services and municipalities must be challenged when they propose to use a source other than the I-Bank for borrowing for water infrastructure projects.

Action 4—Eliminate Misdirection of Ratepayer Funds

DESCRIPTION: There is evidence that some local governments consistently raid local utility funds.

- Support action(s) that would protect ratepayers and stipulate that revenues are reinvested into the utility for which they were collected, with an exception for a reasonable rate of return on capital to the responsible governing body—mirroring the private purveyor model. This will both mandate and incentivize reinvestment; the more governments invest, the more revenue they reap. Ratepayers have done their job by paying the bills every cycle and should not be on the hook for projects neglected due to unrelated local deficits.

Action 5— Support Incentives/Requirements for Business Efficiency

DESCRIPTION: The business of utility operation is expensive and with increases on the horizon, New Jersey ratepayers need to have full confidence that their hard-earned dollars are being used responsibly.

ISO 14001 is a set of international business standards of efficiency for environmental management systems already adopted by some utilities (especially investor-owned utilities). This is a model that publicly owned utilities like the Camden County Municipal Utilities Authority (CCMUA) have embraced, with great success. In the case of the CCMUA, it was able to realize significant administrative and programmatic efficiencies. Heavily incentivizing and eventually mandating adoption or the use of a business standard like ISO 14001 makes good business sense for all municipalities and utilities.

Action 6—Address Water Systems that have Excessive Water Loss & Infiltration

DESCRIPTION: Support DEP efforts to strengthen regulations to require appropriate water loss audits and infiltration assessments for relevant systems.

The DEP should not simply penalize non- compliant water systems financially, but instead look to options that result in improvements to the underlying problem. Incentivizing good actions with special access to grant funds for planning and assessment avoids the trappings of an unfunded mandate while helping to ensure utilities are properly maintaining their assets.

Action 7—Require Inventorying of Non-CSO Municipal Stormwater Assets

DESCRIPTION: Recently finalized DEP MS4 permits do not require a full inventory of all municipal stormwater assets. Mandating and supporting this process will help pinpoint areas of concern and prioritize need.

- Support legislation that would require this inventory in the next permit cycle and provide funding for municipalities to perform this work in an efficient manner that capitalizes on existing technology and staff

Goal 3: Bring All Water Infrastructure Projects to Construction Quicker & Cheaper

Action 1—Require State Rule Making to Consider Impact to Water Infrastructure Reinvestment

DESCRIPTION: Support Gubernatorial Executive Order (EO) that would require any state agency engaged in rulemaking to avoid unintended consequences of new or existing rules that may stymie necessary reinvestment in water infrastructure. The EO should contain the stated goal of reducing the average review time down to one year or less.

The EO should direct DEP to cut "red tape" for water infrastructure projects (or those requirements of funding from the federal government) for all approvals, especially those that require construction timing restrictions. Updated regulations should focus on a "one water" approach that avoids impacting environmental protections while still creating efficiencies for state agencies, project sponsors, and contractors.

The EO should also direct the review and modernization of DEP/I-Bank regulations and any state or federal requirements that provide the technical standards of review for all projects.

In addition, the EO should direct the DEP to create a process by which projects that are replacing existing, common water infrastructure assets experience reduced environmental/ cultural reviews as the risks to public interests are minor compared to the risks of not fixing the water infrastructure. This includes projects that are eligible for the current or any expanded BPU Distribution System Improvement Charge (DSIC).

Action 2—Complement DEP Technical Review with Outside Assistance

DESCRIPTION: Even with the investment recommended in current staff under Goal 1, it is unlikely that the DEP can meet the challenge of greatly accelerating the pace of approvals for water infrastructure projects without outside assistance. DEP should follow through with procuring the services of qualified firms to accelerate approvals for water infrastructure projects that have been or will be submitted to the SRF. This should only be considered when it can be demonstrated that more support is needed than the DEP can reasonably provide and only be in place for the time period of need.

Action 3—Electronic Permitting/Program Efficiencies

DESCRIPTION: Following the lead of the SRF program's H2OLoans system, all environmental agency permits should be electronic and any antiquated steps in the approval processes should be eliminated.

Action 4—Increased Assistance for Challenged Systems

DESCRIPTION: One hurdle faced by projects eligible for SRF funding is the reporting requirements tied to all federal funding. New Jersey has several options to help mitigate these difficulties:

I-Bank mentoring:
Paperwork, especially for a smaller loan, can be daunting. Allowing experienced Commissions, Authorities, and County Utility Authorities (CUAs) to help shepherd Municipal Utility Authorities (MUAs) and town through the I-Bank process would encourage use of this critical program.

Technical Assistance Grants:
When the need for administrative help is demonstrated, provide for small, technical assistance grants to accompany capital grant.

Action 5—Consequences to SRF Applicants That Do Not Proceed With Projects After Bidding Work

DESCRIPTION: Establish new program provisions for borrowers so the I-Bank/DEP can recover professional costs wasted if the borrower fails to proceed with a certified project that has been publicly advertised. Provisions in this new policy should include exemptions for the reasonable circumstances that borrowers may encounter that result in discontinuing a project.

Action 6—Reexamine & Modernize Residential Site Improvement Standards

DESCRIPTION: The Residential Site Improvement Standards are managed by the DCA and establish Statewide requirements for improvements relating to residential development, including streets and parking, water supply, sanitary sewers, and stormwater management. These standards are outdated and need to be improved to incorporate contemporary water infrastructure solutions (e.g. green infrastructure) and the realities of mixed-use development that is now dominating the New Jersey real estate market.

Goal 4: Accelerate Key Projects of Regional/Statewide Significance

Action 1—Prioritize "On the Books" Projects of Regional/Statewide Significance

DESCRIPTION: The SRF queue includes projects totaling more than $3 billion. Many of these projects meet clear needs of local systems and improve conditions that are of regional/statewide significance. In recent years, tremendous progress has been made, and goals for overall program performance have been met and exceeded. In the coming years, this pace must be continued and accelerated. The following types of projects should get high priority to proceed to construction/completion.

The following projects, among others, represent an opportunity to improve the condition of several critical water systems and should be driven to construction/completion



Projects that eliminate/mitigate CSOs

Eliminate 25% of the 212 existing CSOs by 2022



Projects that eliminate existing lead service lines

Eliminate 25% of existing lead service lines by 2020



Projects required to meet newly or anticipated MCLs to meet drinking water standards

Install treatment on all water systems impacted by the forthcoming MCLs for PFNA, PFOA, PFOS, 1,2,3-TCP by 2022



Projects that reduce non-point source pollution in the Barnegat Bay by retrofitting existing stormwater basins

Replace/retrofit at least $20 million of outdated stormwater assets by 2022



Projects that partner with institutions of higher education to reduce non-point source pollution and/or contribute flows to CSO systems, including "Green Infrastructure" solutions

Replace/retrofit water infrastructure at four (4) institutions of higher education in CSO contributing areas by 2022



Projects of statewide/regional significance, for example:

- NJ Water Supply Authority projects that will improve its capacity to transmit water from the Delaware River to the service area of its customers and "shore up" existing water supply assets
- Passaic Valley Water Commission projects that will eliminate all uncovered finished water reservoirs



Projects that target failed on-site septic systems in areas of existing development

Extend centralized wastewater service to discrete areas with documented on-site septic system failures

Action 2—Bring Projects Identified in the Water Supply Plan to Construction

DESCRIPTION: New Jersey recently updated its Water Supply Plan for the first time in over a generation. There are opportunities identified in this Plan to improve the condition of our water supply system statewide. Projects like these should be exempt from provisions of 40:14A, which put a cap on rates on regional water systems struggling to meet their infrastructure investment needs. Projects that implement the Water Supply Master Plan include but are not limited to:

- Projects eligible for use of the Water Supply Bond Fund (over $30 million of unspent capital funds) that would greatly increase the operability of various water supply systems during times of drought
- Projects that resolve lead and contaminant issues in public portions of systems
- Projects that reduce non-revenue water loss
- Projects that increase water supply storage
- Projects that improve system resilience through interconnections
- Projects that shore up existing reservoirs of statewide importance
- Projects that address Uncovered Finished Water Reservoirs

Action 3—CSO Long Term Control Plans—Eliminate Outfalls

DESCRIPTION: In 2015, New Jersey issued final permits to all municipalities/utilities with combined sewer systems. Long-Term Control Plans are under development and are due in a matter of years. In the meantime, there are opportunities to eliminate a number of combined sewer outfalls in several municipalities. New Jersey should commit to eliminating a certain number of CSO outfalls prior to the delivery date for the complete long-term control plans by using discretionary funding given out as grants to systems capable of delivering on this outcome. Projects like these should be exempt from provisions of 40:14A, which put a cap on rates on regional water systems struggling to meet their infrastructure investment needs.

Action 4—Support Innovative Projects that Solve Long-Standing Problems

DESCRIPTION: Projects that meet this action include, but are not limited to:

- **Identify** state owned facilities that are operating non-compliant wastewater facilities and connect them into the regional systems
- **Eliminate** septic systems by connecting them to centralized wastewater systems where there are documented areas of failed systems due to age, geology, or other circumstances
- **Incentivize** greywater reuse whenever possible, especially for non-potable, public purposes. Support and incentivize municipalities/utilities that are pursuing better ways to treat sewage less like waste and more like a resource. For example; watering golf greens, street cleaning, fire-fighting, geothermal energy production, preventing seawater intrusion into freshwater aquifers, industrial processing, commercial laundering, restoring natural wetlands, and creating constructed wetlands

Projects like these should be exempt from provisions of 40:14A, which put a cap on rates on regional water systems struggling to meet their infrastructure investment needs.

