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## Water Quality and Infrastructure in New York State

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*Water quality and infrastructure are vital to the success and wellbeing of New York State's residents. With nearly all of the state's residents utilizing public water systems, it is critical that they are maintained, regularly assessed, and held to the highest standard possible. In order to determine what the future of water infrastructure and quality in New York State could look like, this research included economic and policy analysis to identify current issues and potential resolutions.*

### Scope of the Problem

Throughout New York State, 95% of residents rely exclusively on public systems for access to clean water. The state has over 22,000 miles of underground sewage systems designed to deal with wastewater, demonstrating a high reliance on the water infrastructure system. In New York City, for example, approximately 9 million residents utilize these sewer systems on a daily basis. Despite this high dependence, more than 95% of projects dedicated to maintaining these clean water systems remain unfunded under the Drinking Water State Revolving Fund. In addition, 25% of the state's wastewater facilities are more than thirty years old, which surpasses their expected useful life expectancy. Approximately 7,000 of the 22,000 miles of sewer systems have exceeded their useful lifetime but have yet to be updated or replaced (ASCE 2014).

On a national level, spending on water infrastructure peaked in 2003 and declined by over 5% during the following 10+ years. As a result, state and local governments bear much of the burden when it comes to spending on water infrastructure and consistently spend more on operation and maintenance of existing systems than on capital investments to update these systems (CBO 2015). The situation is no different in NYS where capital requirements for both drinking water and wastewater systems individually total well over \$30 billion. Monetary needs get stretched further when one considers that NYS has the third highest per-capita needs for water infrastructure at \$571/resident, but only 20 cents of every dollar spent on infrastructure goes towards water-specific projects (ASCE 2014). This per capita need is so high due to the vastness of New York's public water

systems, especially in New York City, and its continued lack of funding. Communities throughout NY, especially small, rural ones, depend heavily on aid from the DWSRF. However, as these funds vary from year to year, and are not large enough to help the entire state, projects go unfunded and needs subsequently continue to grow. When inflation is considered as costs normally rise on a year-to-year basis, the issue becomes even more dire due to the timeline of completion for these needs. If started today, wastewater system repair would take more than twenty years, barring any new developments, while repairing of drinking water pipes would take more than a century to repair and replace. This is not only due to construction constraints, but a need for continued funding, legislative support, and community involvement. Projects cannot be completed until decision makers at every level in the state are on board. Action needs to be taken now or the problem will only worsen, taking longer to complete and costing more money. Short-term prospects do not look promising as NYS' latest plan, the NYS Clean Water Infrastructure Act, only proposes to spend \$126 per capita on water infrastructure, not being enough for the \$571 per capita need (NYS Gov 2017).



## Past and Current Policy

In 1996, the federal and New York State governments to provide low interest loans and grants for water system improvement projects created the Drinking Water State Revolving Fund (DWSRF). Since that time, New York State has invested almost \$2.4 billion in drinking water infrastructure through the DWSRF program. This fund was developed as part of New York State's Chapter 413 of the Laws of 1996 (Clean Water/Clean Air Bond Act, "Bond Act") and passage of the 1996 Amendments to the Safe Drinking Water Act (Public Law 104-182) by the U.S. Congress. In addition, in the event of severe hardship, Additional Financial Assistance (in the form of grants) may be available. The New York State Department of Health (DOH) and the New York State Environmental Facilities Corporation (EFC) administer the DWSRF jointly.

Since the start of the DWSRF program, the state has received approximately \$612.5 million in DWSRF capitalization grants from the federal government and contributed an additional \$355 million in match dollars. If the State provides a match in excess of the required amount, which is generally 20%, the excess balance may be banked toward subsequent match requirements. States generally report the total amount of their matching for a capitalization grant in an annual CWSRF report to EPA. In 2008, New York received \$36.2 million from the federal government for the DWSRF program, down from \$59.2 million in 1997. This decrease in federal funding limits the federal and state assistance available. As a result, the burden of maintaining drinking water

infrastructure falls on local governments and many local municipalities have trouble convincing residents of the need for proactive management of their water infrastructure. They often only look at immediate needs or plan for five to ten years into the future. In the past, DOH and EFC have exercised the federal Safe Drinking Water Act

Hardship Provision that allows states to obligate at least 30% of their annual DWSRF Federal Capitalization Grant to provide grants beyond the interest free financing rate to eligible disadvantaged communities.



## Lessons from Other States

When recommending policy that New York State can follow, it is important to evaluate states that NY can learn from. One such state is Maine, a relatively proximate state in terms of environment, geographical location, and current condition of water infrastructure. Like New York, Maine lacks the money necessary to fund all of its projects. In 2015, only 50% of projects submitted to receive DWSRF funding were approved. Additionally, their funding from the US Department of Agriculture Rural Development for Communities fund fell by more than two-thirds since 2012. Maine still uses water treatment plants that are over 100 years old and regularly does not meet the target 1% replacement rate for its existing water systems. This is because throughout Maine, local communities are not keeping records of needs such as funding, not following any sort of maintenance standards, and failing to get water infrastructure on the issue agenda. Issues such as these are especially prevalent throughout Maine's more rural communities and provide a foundation in which can be drawn off of in order to prevent other communities in various states from repeating the same mistakes (ASCE 2016).

Similarly to Maine, New York faces its largest issues in regards to water infrastructure from funding shortfalls. However, instead of emulating Maine, it can use the state as a case study for what not to do. In order to reduce the burden on local governments in terms of paying for water infrastructure, New York needs to lobby on behalf on increasing annual allotments for the Drinking Water State Revolving Fund and the USDA-Rural fund as these funds represent less than 0.03% of NY's annual budget. This can be done through educating both local residents and legislators on water quality issues which will be beneficial in increasing issue saliency and getting it on the political agenda (ASCE 2016). Moreover, it is recommended that NYS continue using a 20% state match for projects funded by DWSRF funds as this will help ensure proper usage of the the \$830 million for clean water infrastructure projects and the \$350 million for drinking water projects that were allocated to the state in 2017 by the EPA (Covington . 2017).

When it comes to wastewater, recommendations that are applicable for Maine also carryover to the State of New York. Due to its high rate of unfunded wastewater

innovation projects, wastewater and state officials needs to work together to enforce a set of maintenance standards as an eligibility requirement to receive funds for infrastructure investment.

The current system gives money based on existing problems, not on what is being done to solve these problems nor any sort merit given for following prior rules or regulations. Standards and enforcement will not only ensure that local governments maintain proper standards but will also mean that money will be going to those who not only need it, but are who are more likely to use the money in a responsible manner which will in turn reduce overall costs and prevent future reliance on state and federal funding. Moreover, to ensure that funding is based on needs, not political agendas or



favors, NYS should produce some sort of asset management program that creates detailed records of remaining lifetime estimates of existing systems, depreciation schedules, etc. This will hold local municipalities responsible for supervision of their systems and

allow for statewide record keeping of system condition

that can be used for both funding allotment and for reporting to the EPA for funding requests.

Records are needed for funding but not required to be kept meaning some municipalities fall into a cycle where they can not receive funding because they have not kept adequate records. Finally, local communities can work to lobby legislators for better funding and work to promote local capital reserves that can be used to fund various wastewater and drinking water projects (ASCE 2016).

Vermont is another state whose need is so great that it's lack of funding has caused detrimental effects to its communities. Vermont has a total of 1,377 active public water systems, and 97% of these are small community systems. Aging pipes, outdated wastewater plants, and

tainted drinking water supplies are serious issues that affect southern Vermont. About 2 percent of Vermonters drink water from a system with known health violations, and many residents in the Bennington region are affected by drinking water contaminated with PFOA. In August of 2011 Vermont was also hit by hurricane Irene, causing extreme flooding in at least ten of Vermont's seventeen major river basins. The storm affected 225 municipalities with major devastation to almost all sectors of Vermont's infrastructure. The effects of Irene are still felt around Vermont, with ongoing infrastructure repairs in some areas, and large debts that exist due to completed projects. In addition to these debts, the state is still in a legal battle with FEMA for reimbursement of emergency funds. Flooding has taken a major toll on Vermont's infrastructure. Just months before Irene hit, a disaster was declared due to record high water levels in Lake Champlain that impacted the surrounding communities.

Vermont needs \$510 million over the next 20 years to meet the demands of the Small Community Water Systems (CWS), and additional resources are needed for the 24 medium and 7 large systems. These public Community Water Systems, or systems that serve at least 15 service connections used year-round by residents, meet the needs of at least 54% of Vermont's population. Like New York, Vermont receives subsidized low cost financing to municipal and privately-owned public water systems for capital improvements, but is one of 15 states that receives the minimum federal loan program allotment of 1%. This 1% allotment only exacerbates their annual funding deficits that have ranged from \$10 million to \$40 million over the past four years. This allotment only provides about half of the funding needed for Vermont's drinking water systems. The state was encouraged by the DWSRF that provides the 1% allotment to survey only the large systems in the state, and not collect data for medium sized systems to encourage focusing efforts on larger systems.

In order to better lobby for more funding, Vermont needs to encourage the development of a central reporting system that will track all water infrastructure security and asset management in the state, not just the larger water systems. Data sets that include small systems will better represent the detrimental state of Vermont's water infrastructure to legislators. New York could also benefit from this type of reporting system. Better representation of the small community water systems will hopefully provide more funding

## Data and Methods

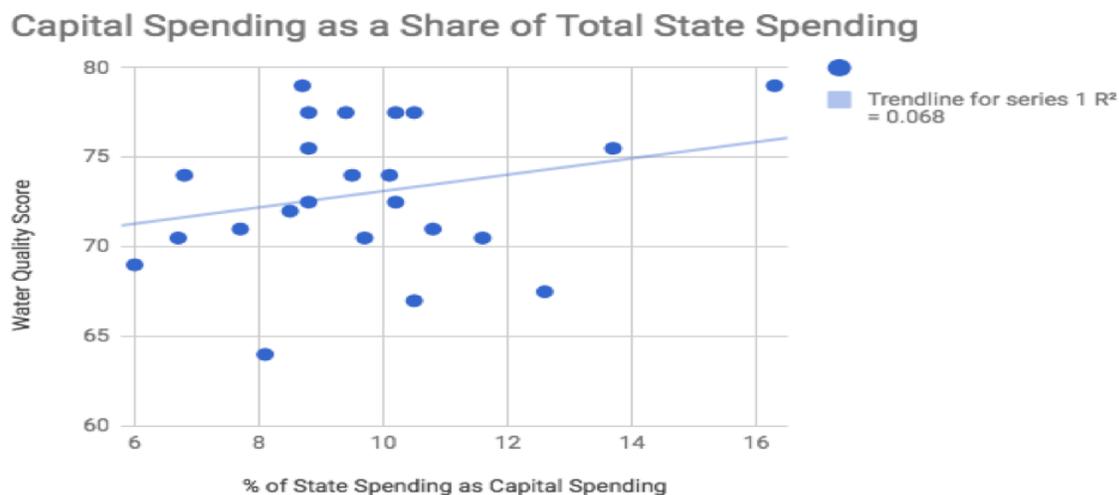
Each of the figures in the analysis section of this report aim to address the establishment of some sort of correlation between spending and water quality. The first variable used is capital spending as a share of total state spending. This measure creates a percentage that represents the portion of the total state budget that goes towards infrastructure updates and renovations. It is important to note that this capital spending is not water-specific, but that water infrastructure spending is likely to be included within it. Capital spending as a share was used as it creates a uniform measure that will not be skewed by differences in budgets between states.

A second variable used is the per capita environmental project spending of each state. Using data from the National Association of State Budget Officers, annual environmental project spending was calculated on a per capita basis. Averaging the environmental project spending from 2009 to 2014 and then dividing it by the average state population over the course of those years did this. Again, this was done to create a uniform measure for all states that is immune to extreme budget differences or population differences. The two variables above were then compared to subsequent state water quality scores. The idea here was to use various economic indicators as indicators of water quality. Using the national infrastructure report card, letter grades were taken from various aspects of a state's water quality. For our purposes, drinking water and wastewater quality were chosen. These letter grades were then translated into numerical grades in order to create a quantitative variable in which to compare the above economic indicators. A full description of the summary statistics of these variables can be seen in the appendix.

For the third analysis, NYS specific data was used. As an economic indicator, differences in the annual allotment of the NYS Drinking Water State Revolving Fund were calculated. In terms of water quality, using CDC data, changes in individuals using community water systems that had unsafe levels of nitrates were found. The rationale here was that since 95% of New York residents rely on CWS, and because these systems are publically funded, often times using DWSRF money, it would make sense that budgetary changes would have an impact on the number of individuals relying on unsafe water systems. Summary statistics can be found in the appendix.

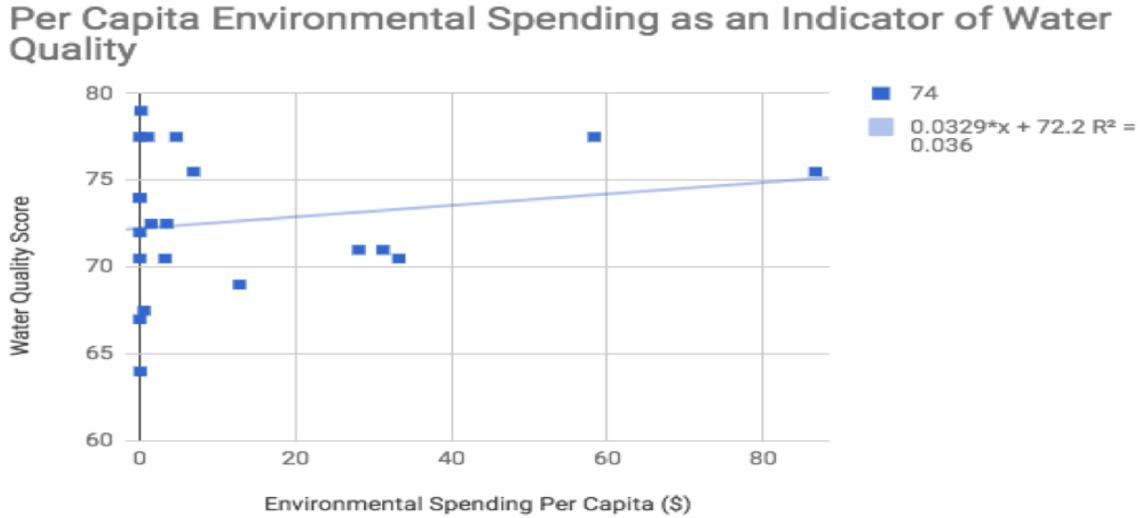
## Analysis

**Figure 1.**



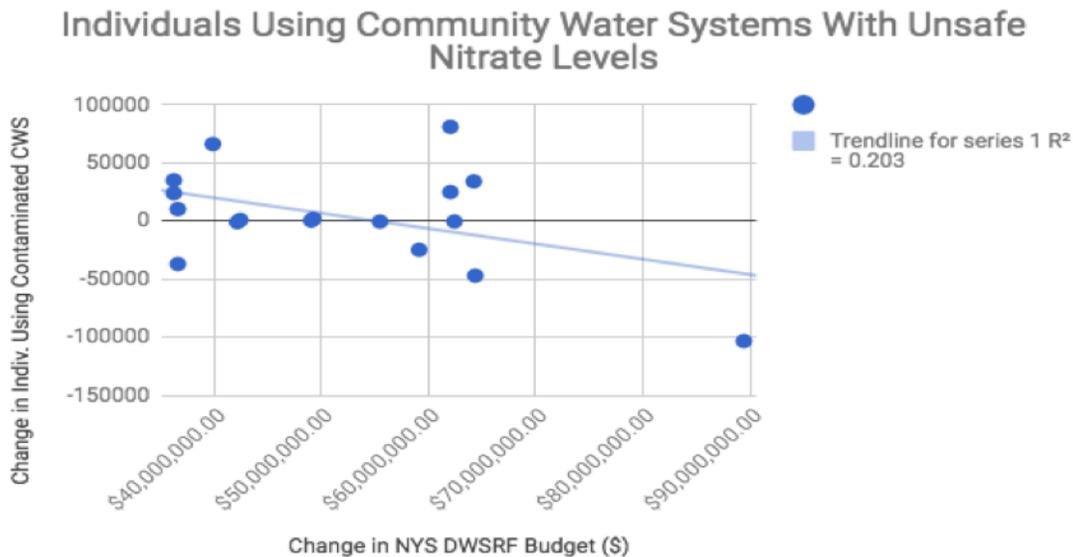
To analyze the effect of spending on water quality, a number of approaches were taken. First, using the Infrastructure Report Card, 23 states with both drinking and wastewater data were given a numerical score to represent the the quality of these measures. Then, these scores were compared to their respective states annual capital spending as a share of total state spending as water infrastructure spending is represented within capital spending. Figure 1 below represents these comparisons. A slight, yet positive correlation is shown between increased capital spending and water quality. However, this test is limited by the lack of states who have data on drinking and wastewater quality. It is additionally restricted as the general trend among states who do report water quality data is low water quality scores. Despite the low statistical significance, this testing does demonstrate that states such as Iowa and the District of Columbia have very high water quality scores and demonstrate higher spending levels than other states.

**Figure 2.**



Using the same water quality scores, additional testing was done by comparing these scores to state environmental project spending, both as a percentage of total state budget and on a per-capita basis. State environmental spending includes local, state, and federal funds and was taken as average annual spending from the years 2009-2014. As a percentage of the total state budget, there was a slightly positive correlation between increased spending on environmental projects to higher water quality scores. This correlation becomes a bit stronger when environmental spending was evaluated on a per capita basis. This is represented by Figure 2 below. It should be noted that the analyses in figures one and two were tested using a multiple regression strategy. However, this additional testing did not change the results in a statistically significant way. The multiple regression testing results are included in the append

**Figure 3.**



In a NYS-specific analysis, there is a more established relationship between spending and water quality. Using a time-series analysis, a comparison of annual budgetary changes in the NYS DWSRF allocations and the number of NYS residents relying on community water systems that contain unsafe levels of nitrates is constructed in figure 3. The trend line shows that there is a somewhat established correlation between decreased allotments to the DWSRF and more individuals using unsafe water systems. However, as this test is limited to New York, it cannot be used to establish national trends. Despite this, it does give some reason to believe that more funding for clean water systems would help to reduce the likelihood of state residents using contaminated water. For example, from 2003 to 2003, the NYS DWSRF decreased by over \$375,000 while at the same time there was an increase of over 81,000 residents using contaminated water systems.

## Best Comparisons

In order to develop an idea of where the New York State government should be headed in regards to water infrastructure, it is important for state officials to look to states that have policies that have resulted in greater success and are proven to be more efficient. One state in particular that New York could look to for guidance is North Carolina. Both states have found themselves burdened by similar problems; aging physical infrastructure dating back nearly a century, the deterioration of public water quality as a result, and roadblocks for the allocation of funding. However, North Carolina as of late has managed to more successfully navigate the political



gridlock of state government and more adequately disburse funds to different projects, which could be the answer to improving physical infrastructure and water quality. This is done more specifically through the state's Connect NC Bond, which serves to substantially

increase assistance through the normal state reserve programs (North Carolina Environmental Quality 2017).

Normally, North Carolina infrastructure projects are directed specifically through the Clean Water State Revolving Fund, Drinking Water State Reserve, and Wastewater State Reserve. These reserve programs would be left to their own means to discern where to allocate their funds, with their inability to do so causing intense gridlock and nothing of significance being achieved. This is where the Connect NC Bond comes into play, offering assistance and guidance in deciding which projects should receive state funding in order to create a situation where the most critical projects get attention (NCEQ 2017). This is done through a thorough application process, with three rounds with deadlines in April, July, and September. The Connect NC Bond was crucial in selecting projects for funding, directing the money out, and contributing their own capital for disbursement.

For the second round of allocations the state dealt out in July of 2017, the applications for which were due in April, requests by different projects totaled \$332 million. Unable to meet the needs of all projects, the Connect NC

Bond was critical in the allotment of state funds to projects that were deemed of the highest necessity. With the \$169.5 million available, the Connect NC Bond was able to allocate nearly all of it (\$168,504,184) to 62 different water infrastructure projects across the state, as is evident through dissection of Tables 1 and 2 (North Carolina State Water Infrastructure Authority 2017). The tables below adequately depict how much money was available for disbursement through the reserve programs, the amount of applications/requests submitted (which shows how much need there is in the state), and the actual amount that was granted to specific projects through the three major reserve programs. The North Carolina State Water Infrastructure Authority also provided in a report the location of the specific projects receiving funding, the goal of the project, and the exact amount they received, which can be made available upon request. This efficient use of funds to solve various water infrastructure problems throughout North Carolina through the NC Connect Bond has found great success in overcoming gridlock in state government, and could possibly be useful if applied within New York.

Looking at New York's current process for the allotment of funds, the primary device for direction comes through the Clean Water Infrastructure Act of 2017 announced by Governor Andrew Cuomo that provides regional grants to projects in need across the state (New York State Association of Counties 2017). With a \$2.5 billion budget, it would seem a great deal of funds would most definitely be dished out across the state (NYSAC 2017). However, Table 3 below shows how much of that budget is really being put directly into state infrastructure projects. The data shows that only a small portion of that budget is being allocated to different regions of New York, and even the funds that are being disbursed are not enough to adequately meet the monetary needs of the regions and their specific water infrastructure projects.



**Table 1. Summary of April 2017 Connect NC Bond Applications Pending Approval for Funding July 19, 2017**

Program	Funding Available	Project Type	Amount Considered in Applications that were Complete, Eligible, and for which Applicant would Accept Funding
Drinking Water State Reserve	\$17.9 million / grants \$36.8 million / loans	Drink Water Projects	\$56.2 million
Wastewater State Reserve	\$5.8 million / grants \$34 million / loans	Wastewater Projects	\$269.2 million
Clean Water State Revolving Fund (CWSRF)	\$75 million / loans	Wastewater Projects	\$270.5 million
<b>Total Funding Available</b>	<b>\$169.5 million</b>	-----	-----

North Carolina State Water Infrastructure Authority, *Funding Decisions*, July 19, 2017

**Table 2. Summary of April 2017 Connect NC Bond Applications Approved for Funding July 19, 2017**

Project Funding Program	Number of Applications Approved for Funding	Funding Amount
Drinking Water State Reserve (loans & grants)	32	\$56,240,666
Wastewater State Reserve (loans & grants)	20	\$37,762,296
Clean Water State Revolving Fund (loans)	10	\$74,501,852
<b>Total</b>	<b>62</b>	<b>\$168,504,814</b>

North Carolina State Water Infrastructure Authority, *Funding Decisions*, July 19, 2017

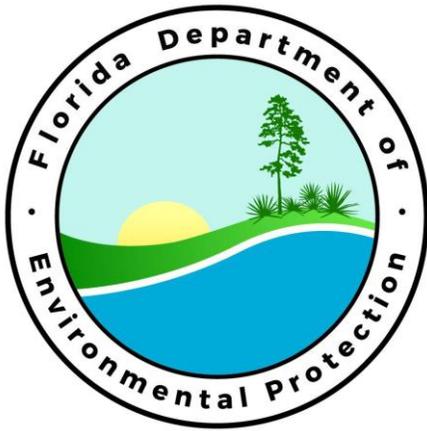
**Table 3. Summary of 2017 NYS Regional Grants Funded Through the Clean Water Infrastructure Act**

Region	Estimated Project Cost	Estimated Grant Award
Western New York	\$76,040,369	\$20,289,228
Northern New York	\$122,799,152	\$30,112,107
Finger Lakes	\$59,410,907	\$22,195,098
Southern Tier	\$71,345,219	\$23,021,023
Mohawk Valley	\$91,379,389	\$29,661,723
Central New York	\$87,065,002	\$26,651,977
Capital Region	\$174,456,201	\$43,879,705
Mid-Hudson Valley	\$122,571,630	\$33,997,654
Southern Tier	\$71,301,167	\$26,604,625
<b>Total</b>	<b>\$876,369,036</b>	<b>\$256,413,140</b>

New York State Association of Counties, *Clean Water Infrastructure in New York State*, December 4, 2017.

## Best Comparisons Continued

Another state that New York government officials could look to for inspiration in regards to water infrastructure improvement is Florida. Florida is a prime example of an efficient government body that has been able to effectively battle through the gridlock that normally encompasses state politics and disburse strong monetary aid to the most in need areas of the state. In recent years, significant funding has been allocated across the state of Florida under the tremendous leadership of Governor Rick Scott, who has openly displayed, both through speech and action, that he is dedicated to ensuring the health of Florida's citizens and environment. It is through this strong leadership and dedication to solving the problem of water infrastructure that significant change has been made, something New York needs more of.



In 2013, Governor Scott pooled funding from "Florida Families First" organization, the Florida Department of Environmental Protection, and many other local partners to pledge \$37 million in funds to 10 different water springs improvement projects across the

state that would serve to benefit the environment, as well as the health of Floridians in these areas (Kauffman 2013). In a completely separate move, Governor Scott announced that \$29 million would be allotted to 10 different wastewater and stormwater projects in Southern Florida that also would serve to ensure the health of residents and the natural environment of the region (Florida Government 2013).

The effectiveness of government leadership is really what separates Florida from New York in regards to water infrastructure improvements. Coming into office, Governor Rick Scott knew he was facing a great challenge with weakening water infrastructure and used creative tactics to make sure he responded efficiently. By pooling together funding from a variety of sources, Governor Scott has found a way to invest a large number of individuals and organizations into Florida water quality. He has taken great care and deliberation when deciding where the funding is most needed and where it would do the most good.

For similar change to be made in New York, pressure must be put on the state's government leaders like

Governor Andrew Cuomo. New York faces similar problems in regards to water infrastructure as Florida, yet this issue finds itself much lower on the totem pole in New York as opposed to Florida. If Governor Cuomo, is unwilling to see the importance of the issue himself, he must receive significant pressure from constituents to make change. With areas like the Adirondack Park that have great environmental fragility, or Hoosick Falls that are in great need, delays in support cannot be tolerated. New Yorkers need to start holding higher level government officials more heavily accountable for a lack of effort towards change, if that is done it is likely Governor Cuomo will revamp his policies regarding water infrastructure, hopefully to emulate the work of Governor Scott in Florida.

## Recommendations

New York State could certainly benefit from following other states' initiatives to improve water quality through making positive and sustainable changes to statewide infrastructure and systems. This process is lengthy, however, and begins on a local scale, particularly with lobbying efforts. Bringing awareness to communities whose municipal water systems may be in jeopardy is critical in and of itself, but it is equally important to raise awareness in nearby areas to facilitate the spreading of knowledge throughout the state. The more participants there are in lobbying efforts, the stronger the case for presentation will be.

Logistically speaking, it is essential for there to be an organizational system in place for management of water infrastructure, and this would best be done through the implementation of an asset management program, as mentioned previously. Such a program would entail developing a standardized, comprehensive program for how money is allocated, increased transparency of how money is allocated, and increased regulations on where the money goes and how it is spent. Moreover, it would be wise to create a Numerical Score to get funding, factoring in technical criteria, sanitation, funding, and governmental needs (Note: Score doesn't factor in the size of the plants).

Finally, there needs to be greater transparency and accuracy in data and information reported. In particular, water quality problems must take into account proportionality in terms of population. For example, New York City has a higher population than Hoosick Falls, so overall, it will appear to have more water quality violations. However, numbers alone do not necessarily mean that NYC's water is in worse condition than Hoosick Falls'. In addition, reports need to focus on the population affected in a situation versus the total population of an area, so as to put the problem into an appropriate perspective.

## References

- Akroyd, Cathy. 2017. "State Water Infrastructure Authority approves \$168.5 million in drinking water and wastewater funding ." *North Carolina Environmental Quality*. July 28. <https://deq.nc.gov/state-water-infrastructure-authority-approves-1685-million-drinking-water-and-wastewater-funding>.
- American Society of Civil Engineers. 2014. "2014 Report Card for Vermont's Infrastructure." *Infrastructure Report Card*. <https://www.infrastructurereportcard.org/wp-content/uploads/2016/10/2014-ASCE-VT-Infrastructure-Report-Card-LoRes.pdf>.
- American Society of Civil Engineers. 2017. *2017 Infrastructure Report Card*. <https://www.infrastructurereportcard.org/state-by-state/>.
- American Society of Civil Engineers. 2016. *Report Card for Maine's Infrastructure*. Institutional, Falmouth, Maine: American Society of Civil Engineers (ASCE).
- Center for Disease Control. 2018. *National Environmental Public Health Tracking Network*. Atlanta.
- Clean Water Council. n.d. *Maine's Drinking Water Infrastructure Needs*. <http://www.cleanwatercouncil.org/maine.html>.
- Coutré, Lydia. 2015. *Water infrastructure spending lags in North Carolina*. Wilmington, NC, September 28.
- Covington, Tayler. 2017. "EPA Provides New York \$186 Million for Wastewater and Drinking Water Improvements." *United States Environmental Protection Agency*. August 16. <https://www.epa.gov/newsreleases/epa-provides-new-york-186-million-wastewater-and-drinking-water-improvements>.
- Damon, Edward. 2017. "Sanders: Water infrastructure "top priority"." *Bennington Banner*. May 19. <http://www.benningtonbanner.com/stories/sanders-water-infrastructure-top-priority,507940>.
- Environmental Finance Center Network. 2015. *Funding Sources by State*. <http://efcnetwork.org/funding-sources-by-state/>.
- Florida Department of Environmental Protection. 2018. *Division of Water Resource Management*. <https://floridadep.gov/water>.
- Florida Governor. n.d. "Governor Scott Announces More Than \$29 Million To Improve South Florida Water Quality." *Rick Scott, 45th Governor of Florida*. <https://www.flgov.com/gov-scott-announces-more-than-29-million-to-improve-south-florida-water-quality/>.
- Kauffman, Paige. 2013. "Gov. Rick Scott Announces Investment Of \$37 Million For Water Quality Projects." *Florida's 89.1 WUFT-FM*. September 5. <https://www.wuft.org/news/2013/09/05/gov-rick-scott-announces-investment-of-37-million-for-water-quality-projects/>.
- National Association of State Budget Officers. 2017. "State Expenditure Report: Examining Fiscal 2015-2017 State Spending."
- . 2018. *States' Proposed & Enacted Budgets*. <https://www.nasbo.org/mainsite/resources/proposed-enacted-budgets>.
- New York State Department of Health. 2017. "Drinking Water Infrastructure Needs of New York State." *New York State Department of Health*. July. [https://www.health.ny.gov/environmental/water/drinking/infrastucture\\_needs.htm](https://www.health.ny.gov/environmental/water/drinking/infrastucture_needs.htm).
- . 2011. *Drinking Water State Revolving Fund*. [https://www.health.ny.gov/environmental/water/drinking/iup/information\\_sheet.htm](https://www.health.ny.gov/environmental/water/drinking/iup/information_sheet.htm).
- New York State. 2017. "Governor Cuomo Signs Legislation Investing \$2.5 Billion in Clean Water Infrastructure and Water Quality Protection." *Governor Andrew Cuomo*. April 26. <https://www.governor.ny.gov/news/governor-cuomo-signs-legislation-investing-25-billion-clean-water-infrastructure-and-water>.
- State Water Infrastructure Authority. 2017. *Funding Decisions Taken at July 19, 2017 Meeting of the State Water Infrastructure Authority on the Applications Submitted in April 2017 to the Division of Water Infrastructure*. Raleigh, NC: State Water Infrastructure Authority.

### Community Policy Institute

The Community Policy Institute builds capacity surrounding policy within the Capital Region. We provide research-based policy information to our community partners who use the information to modify best practices and advocate for policies that will further the development and effectiveness of direct community engagement.

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