# Balancing Stormwater Infrastructure Costs

## How Governors & States Can Equitably Address Stormwater Funding

NATIONAL GOVERNORS ASSOCIATION

# Background

States and local jurisdictions are facing dual challenges of upgrading older stormwater infrastructure (storm sewers, ditches, and flood control reservoirs), while at the same time, needing to install new grey and green stormwater infrastructure to serve as flood control, address water quality and quantity issues, and adapt to more frequent and intense storms resulting from climate change.

The American Society of Civil Engineers 2021 Infrastructure Report Card notes that damages from urban flooding cause $9 billion in losses annually.[1] The U.S. EPA says that urban stormwater is the only major source of water pollution that is growing all over the country.[2] Stormwater pollution is also a major issue in small and rural communities that don't need federal permits because of their small size.[3] Yet, across the country, stormwater remains the least funded of the water infrastructure needs.

Several reports highlight the gaps in stormwater infrastructure funding. In a 2016 report to Congress, the U.S. EPA estimated that $67.2 billion is needed for stormwater infrastructure and program investments for municipal separate storm sewer systems and combined sewer systems over the next 20 years.[4] In 2020, the Water Environment Federation estimated the annual funding gap just for the 7,500 jurisdictions with federal permits for municipal separate storm sewer system's to be $8 billion.[5]

Federal loan and grant programs support planning and installation of stormwater practices, but these programs do not fund operations and maintenance. Given the magnitude of funding needed to fully address the problems with stormwater systems, a variety of sources will need to be used, including federal, state and local programs.

Local jurisdictions have started to adopt comprehensive stormwater programs and to consider ways to fund their neglected water infrastructure needs but there is much room for progress. A survey of the 7,500 jurisdictions with federal permits for separate stormwater and sewer collection systems, shows that only about 1,800 of them have adopted dedicated funding for stormwater programs through some type of stormwater fee or utility.[6]

At the same time, the country has started to recognize that existing funding structures should be more equitable. For communities already struggling to remain financially solvent and provide basic services, the added cost of stormwater management is sometimes overlooked, causing the community further harm from flooding and environmental degradation. EPA notes that communities that consist of minority, low-income, tribal, or indigenous populations are impacted by multiple factors, including environmental and socio-

economic stressors, that combine to affect health and the environment and contribute to persistent environmental health disparities. These communities are referred to throughout this paper as "overburdened" communities.[7] From an equity lens, overburdened communities need more assistance to obtain stormwater funding because they may lack staff expertise, capacity, and resources to be able to evaluate and apply for financing options.

## Introduction

Water quality and flooding significantly impact communities in every state, which are why these issues are important to Governors, and can be addressed in part through stormwater infrastructure. This paper follows a workshop that the National Governors Association held with Delaware River Basin states, Delaware, Pennsylvania, New Jersey, and New York on stormwater funding equity in April 2021.[8] In this paper, we examine the equity implications of paying for stormwater services through general funds and stormwater fees (or utilities). We also examine how states can help low income and overburdened communities adopt stormwater authorities that operate as separate governmental entities that can charge fees to residents, obtain grants, and can take on loan debt that a jurisdiction in financial distress may not be able to assume. This leads to an exploration of how states can use their Clean Water State Revolving Funds to assist overburdened communities with their stormwater infrastructure needs. Throughout this paper we highlight key actions that Governors and state officials can take to provide more equitable stormwater funding to communities across their state.

Key recommendations include:

1. ***Governors can propose or support legislation enabling local governments to charge dedicated stormwater fees.***

2. ***Governors can support equitable methods of charging stormwater fees by requiring local jurisdictions to adopt fees that correspond to the amount of runoff from a property.***

3. ***Governors can direct state agencies to provide local governments with technical assistance, case studies, outreach and connections with non-profits that can provide technical assistance and public education on equitable funding approaches.***

4. ***Governors can use up to 30% of baseline annual Clean Water State Revolving Fund federal capitalization grants and 49% of the Infrastructure Investment and Jobs Act State Revolving Fund federal capitalization grants for grants or principal forgiveness of loans for overburdened communities.***

5. ***Governors can prioritize outreach to overburdened communities to obtain input on Clean Water State Revolving Loan Fund Intended Use Plans and provide them with increased technical assistance.***

6. ***Governors can include specific language supporting their commitment to equity in Clean Water State Revolving Loan Fund program priorities and project selection criteria.***

7. ***Governors can increase the amount of funding per project available from Clean Water State Revolving Loan Funds for overburdened communities.***

8. ***Governors can provide legislative authorization and technical assistance to local governments to create stormwater authorities and help them form Community-Based Public Private Partnerships.***

9. ***Governors can coordinate peer-to-peer partnerships between agencies or municipal utilities and peers from overburdened communities to provide capacity and expertise on funding, operating and maintaining stormwater infrastructure.***

10. ***Governors can streamline the application process for federal, state and other stormwater funding streams that allows communities to leverage multiple funding streams for stormwater projects.***

## Federal Infrastructure Funding

There are several ways Governors and states can advance equity in stormwater funding. As record new federal funding is deployed from the *Infrastructure Investment and Jobs Act*, IIJA, through state run programs like the Clean Water State Revolving Fund, Governors can help position overburdened communities to access these funds.

The Clean Water State Revolving Fund, however, was mainly established to fund wastewater utility upgrades. So far only 3% of these funds have gone to plan and install stormwater practices, so state and local funding is still needed.[9] Local funding for stormwater is also necessary because the Clean Water State Revolving Fund only supports planning and installation of stormwater practices not operations and maintenance.

## Infrastructure Investment and Jobs Act

With passage of the Infrastructure Investment and Jobs Act, Governors can make a transformational investment in stormwater infrastructure and provide more assistance to overburdened communities. The Act provides $11.7 billion in additional funding for the Clean Water State Revolving Funds, over the next five years and requires 49% of the funds to be used for additional subsidization, in the form of grants and principal forgiveness of loans, for communities that meet affordability criteria set by the states.[10] Among other things, affordability criteria must take into account whether the community would experience substantial hardship raising revenue to finance a project without additional subsidization and can take into account other data relevant to the state.[11]

Also, for the first time, states will be able to use 2% of their Clean Water State Revolving Fund federal capitalization grant to pay for technical assistance for rural, small and publicly owned treatment works.[12] States that have been providing technical assistance, with funding from state funds or administration fees, can now use these additional funds for increased outreach to ensure overburdened communities are aware of the funding opportunities. In addition, the state matching funds required to receive the federal capitalization grant are reduced to 10% for 2022-2023, and returns to 20% in 2024-2026.[13]

The EPA has released expected state IIJA Clean Water State Revolving Fund allocations for 2022.[14] Funds are not expected to be received by states and utilities until spring 2022. The normal fiscal year 2022 funding for the Clean Water State Revolving Fund, expected to be around $1.7 billion, will be provided once Congress approves an appropriations package.[15]

# Ways of Funding Stormwater Infrastructure and Equity Considerations

There are a few primary ways of funding stormwater infrastructure and certain methods are more equitable than others; options include the use of general funds; stormwater fees; and use of federal-state funding such as the Clean Water State Revolving Loan Fund.

The different funding mechanisms, equity implications, and specific actions that Governors and their offices can take to support adoption of equitable approaches are discussed as follows.

## *1) Utility Rates and General Funds*

There are two main methods of capturing stormwater, either through combined sewer systems, where stormwater is funneled into the sewer system and treated before being released to surrounding waters, or through separate systems, called municipal separate storm sewer systems, where untreated stormwater is conveyed by gutters and drainage pipes to settling ponds or directly to surrounding waters.

In jurisdictions with combined sewer systems that do not charge a stormwater fee, the cost of stormwater treatment is spread equally over all sewer utility ratepayers regardless of the amount of impervious surface on a property. Therefore, some ratepayers end up paying the utility to treat much more stormwater than they generate from their own property. This approach can be burdensome to low-income households as they are less able to absorb the costs.

Some jurisdictions with multiple separate stormwater and sewer systems use general funds, which are generated mostly by property taxes, to pay for stormwater services. This is not equitable because property taxes are calculated based on the assessed value of a property which has no correlation to the cost of stormwater management for a property.[16]

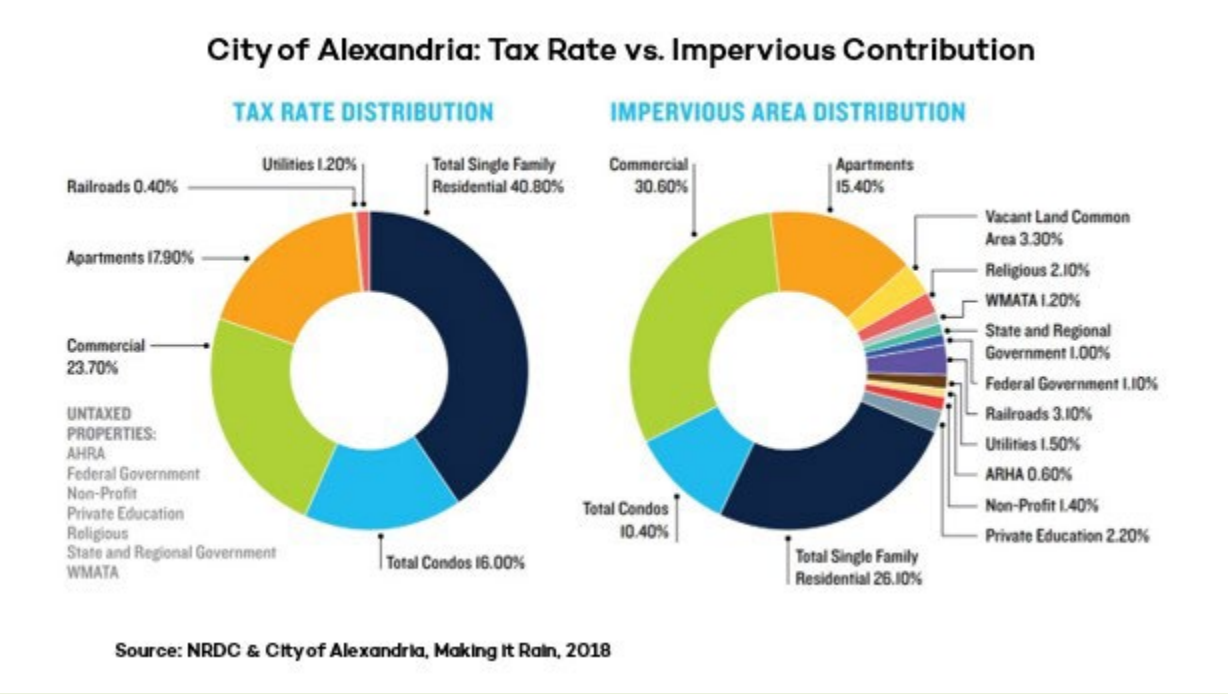
In both types of jurisdictions, combined sewer and stormwater systems and municipal separate stormwater sewer systems, the cost of stormwater management correlates to the amount of stormwater generated from a property, which depends on the amount of impervious surface on the property. Therefore, a separate stormwater fee based on impervious surface or stormwater contribution is a more equitable method for residents to pay for stormwater services.

In addition, when stormwater is funded by general funds, tax exempt properties like government properties, schools, and churches, which often have large parking lots, do not shoulder any of the costs of management. An inch of rain falling on one acre of hardened surface, like a parking lot, produces 27,000 gallons of stormwater runoff.[17] When this amount is multiplied by annual rainfall the volume of stormwater and pollutants delivered can be sizeable. If properties with large lots are not paying for stormwater treatment, then the rest of the taxpayers are essentially subsidizing this service for the non-payers. Seen from an equity lens this is more burdensome for low-income residents.

As the example from Alexandria, Virginia shows below, fees based on actual impervious area are more equitable.

### Before and After: Adopting an Equitable Fee Structure

Until 2017, the city of Alexandria, Virginia, charged property owners a stormwater fee based on their property tax rate. However, as demonstrated by these side-by-side charts, this system did not reflect the city's distribution of impervious area, which more closely correlates with the cost of stormwater management. To correct this inequity, the city decided in 2017 to switch to an impervious area-based fee system.[18]




Source: NRDC & City of Alexandria, Making It Rain, 2018

## *2. Stormwater Utility Fees*

***Governors can propose or support legislation enabling local governments to charge dedicated stormwater utility fees.***

A stormwater utility fee is a dedicated funding mechanism that can be managed by a local government or Stormwater Authority. Stormwater utility fees are structured like an electric, gas, water or sewer utility fee in that they are based on actual usage of the service, which is determined by a property's contribution to stormwater pollution. The stormwater utility funds can cover stormwater planning, installation of green infrastructure practices or grey stormwater infrastructure and can also cover maintenance, among other things.[19] Local jurisdictions in approximately 41 states have adopted stormwater fees.[20] Most local jurisdictions need state-level enabling legislation to provide them with the authority to charge stormwater fees. Pennsylvania adopted enabling legislation in 2013 and in the past 11 years at least 35 local jurisdictions in the state adopted fees.[21]

***Governors can support equitable methods of charging stormwater fees by requiring local jurisdictions to adopt fees that correspond to the amount of runoff from a property.***

New Jersey adopted enabling legislation in 2019 called the "Clean Stormwater and Flood Reduction Act" that allows local jurisdictions to charge a stormwater utility fee to create, operate and maintain stormwater utilities and to issue bonds for the same purpose.[22] Equity was in built into this law in that it requires that fees adopted by local jurisdictions be based on a "fair and equitable approximation of the proportionate contribution of stormwater runoff from a real property."[23]

***Governors can direct state agencies to provide local governments with technical assistance, case studies, outreach and connections with non-profits that can provide public education on equitable funding approaches.***

New Jersey's enabling legislation requires the New Jersey Department of Environmental Protection, to provide technical assistance to local jurisdictions and authorities that are establishing a stormwater utility fee and to provide guidance on establishing fees and credits, developing asset management plans for stormwater systems and conducting public education and outreach. To comply with the law, the department created a website offering guidance and resources for local governments that includes an overview of the process for establishing a stormwater utility fee, funding sources and a free mapping and inventory tool and examples of successful fees in several jurisdictions.[24]

Even with ample technical assistance, it is still politically difficult for local officials to propose a new fee to residents, especially in overburdened communities. But, if local officials provide clear messaging showing that the existing structure of paying for stormwater through general funds is the least equitable method, then the public may accept and even champion the new method. This is especially true if there is a commensurate reduction in residential customer's tax bills to balance the new fee. For example, Ithaca, New York calculated that the average homeowner had been paying about $100/year for stormwater services and would pay half that amount under the new stormwater user fee structure.[25]

Many smaller jurisdictions and especially those with overburdened residents, do not have staff capacity to perform the type of analysis and outreach to residents that demonstrates the inequity of using general funds rather than stormwater fees. This is where extra help from the state is needed.

For example, the New Jersey Department of Environmental Protection provides examples of successful utility fees and provides an equity score for different rate structure designs on their stormwater utility fee guidance website.[26] They also analyze the equity considerations behind different rate structures and note how each impacts the ease of program administration.[27] New Jersey also provides

local governments with guidance on engaging stakeholders and the public, and on developing a stormwater credit system that enables property owners to reduce their stormwater fee.

## *3. Clean Water State Revolving Fund*

The Clean Water State Revolving Fund is a state-federal partnership that operates like an environmental infrastructure bank and is run by states under a broad federal framework. Because states run the programs, set policies, and prioritize projects, Governors can shape their state programs and guide program investments to reflect their commitments to equity by providing increased funding and technical assistance to overburdened communities.

The state revolving fund provides subsidized loans for water infrastructure projects that protect public health and water quality. It does not support flood control projects or operations and maintenance of projects, so it is still important for local jurisdictions to develop a funding source for long term support of stormwater projects.

Under the traditional state revolving fund framework that governs annual baseline appropriations, the U.S. Environmental Protection Agency provides states with an annual capitalization grant and states are required to provide a 20% cash match to obtain the federal dollars. Around $1.7 billion in annual baseline funding is expected to be appropriated to states under the traditional state revolving fund guidance in 2022. An extra $11.7 billion for the Clean Water State Revolving Fund has been provided for the next five years (2022-26) from the Infrastructure Investment and Jobs Act. It's important to note that slightly different requirements apply for this funding, as compared to traditional state revolving fund provisions, such as reduced state cash match requirements and increased subsidization for the $11.7 billion of Infrastructure Investment and Jobs Act funds.[28] States can use these combined federal and state funds from revolving funds to provide low-interest loans with repayment up to 30 years for water quality projects although most are set for a 20-year repayment. When funds are repaid into the state revolving fund, principal and interest repayments are used to finance other water quality and public health projects.

The state revolving fund mainly funds new or improved municipal wastewater facilities and decentralized wastewater treatment systems, but states are also authorized to fund green stormwater infrastructure that replicates natural processes like green roofs, rain gardens and natural filters like wetlands and tree canopy. It can also fund grey stormwater infrastructure like pipes, storage, and treatment systems.[29]

Nationally, only 3.6% of state revolving fund dollars have been used to finance non-point source projects such as stormwater infrastructure. However, this small percentage is still an important source of funds for stormwater. And, because the

program is run by state government, Governors have discretion to set some program priorities and guidelines that can reflect their commitment to funding equity.[30]

States can customize loan terms for small or overburdened communities. They also set specific loan terms like repayment periods and interest rates, which can range from zero percent to anywhere below market rate. States also develop their own affordability criteria that determines eligibility for better loan rates, grants, and loan forgiveness.

***Governors can use up to 30% of baseline annual Clean Water State Revolving Fund federal capitalization grants and 49% of the Infrastructure Investment and Jobs Act State Revolving Fund federal capitalization grants for grants or principal forgiveness of loans for overburdened communities.***[31]

For communities that have limited economic resources and experience disproportionate environmental harms and risks, access to funds that do not need to be repaid is critical to help them address their stormwater issues. The Clean Water State Revolving Fund gives Governors the flexibility to use up to 30% of the annual baseline state revolving fund federal capitalization grant for additional subsidization (grants and principal forgiveness of loans) and 49% of the Infrastructure Investment and Jobs Act's capitalization grant for the same purpose. This flexibility gives Governors the opportunity to prioritize additional funding for overburdened communities.

Annual baseline appropriations for the revolving fund were $1.7 billion in 2021 and is proposed at the same level for 2022.[32] Previous appropriations bills mandated that states use 10% of the federal state revolving fund capitalization grant for additional subsidization to communities that meet state developed affordability criteria, but also allowed states to use 30% for this purpose. The Infrastructure Investment and Jobs Act made this subsidization mandate for annual baseline appropriations permanent.[33]

The Infrastructure Investment and Jobs Act requires 49% of the additional $11.7 billion going to the Clean Water State Revolving Fund over the next five years to be used for subsidization, through grants or 100% principal forgiveness of loans.[34] However, there is no requirement that these funds be directed towards overburdened communities that meet affordability criteria. The EPA is still developing spending guidelines but, based on the flexibility provided to states on how spend additional subsidization in the annual baseline appropriations, this is an area where Governors may have discretion to prioritize where the subsidization is directed.

That said, when considering the percentage of funds to use for grants and principal forgiveness, states must carefully balance the level of subsidies they can provide with their need to use interest payments on Clean Water State

Revolving Fund loans to raise the required 20% state matching funds needed to access federal state revolving fund dollars. Some states use state appropriations to provide matching funds while others borrow funds through interagency loans and bonds that depend on interest payments from state revolving fund loans to repay the debt.

In addition to increasing the number and amounts of grants and principal forgiveness provided to overburdened communities through the Clean Water State Revolving Fund, Governors can also promote state level policies that help these communities qualify for state revolving fund subsidies. The additional subsidy is almost always provided through principal forgiveness of a state revolving fund loan, so a community first needs to be able to qualify and obtain the loan, which requires them to have the means to re-pay the loan. For overburdened communities whose local governments suffer from financial instability, adoption of a stormwater fee, or creation of a Stormwater Authority that can charge a fee and create a steady income stream for loan repayment, can help communities qualify for a Clean Water State Revolving Fund loan.[35] This importance of local governments having state enabling authority to adopt a fee and a stormwater authority, and the Governors role, is discussed below.

***Governors can prioritize outreach to overburdened communities to obtain input on Clean Water State Revolving Fund Intended Use Plans and provide them with increased technical assistance.***

A recent letter to states from EPA Administrator Michael Regan outlining the historic investments of the Infrastructure Investment and Jobs Act, acknowledges that disadvantaged communities have struggled to access state revolving funds due to lack of technical, financial and managerial capacity.[36] He urges states to remove barriers and prioritize distribution of grant funds to disadvantaged communities and notes that almost half of the $44 billion in Clean Water and Drinking Water state revolving funds are eligible for distribution as grants or fully forgivable loans. Administrator Regan said that EPA will help states, tribes and local governments by providing technical assistance to help disadvantaged communities access state revolving fund loans and grants. Governors can also provide more outreach and technical assistance to overburdened communities since, for the first time, the Infrastructure Investment and Jobs Act allows states to use 2% of the Clean Water State Revolving Fund capitalization grant for technical assistance.

***Governors can include specific language in the Clean Water State Revolving Fund Intended Use Plan supporting their commitment to equity in program priorities and project selection criteria.***

As part of the Clean Water State Revolving Fund process, states must develop an Intended Use Plan, which outlines the funding available and the state's planned uses, including priority projects.

In their draft 2022 plan, New York explicitly states that one of their long-term goals is to "Implement [Environmental Facilities Corporation's] financing programs in a manner that benefits the residents of Environmental Justice areas."[37] The New York State Environmental Facilities Corporation that administers the revolving fund created the Green Innovation Grant Program to use their additional subsidy dollars. The program specifically states that it aims to "Advance fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to development, implementation, and enforcement of environmental laws, regulations and policies."[38] In addition, the selection criteria that Green Innovation Grant Program projects are judged on includes the level to which the project addresses environmental justice issues, along with other standard criteria like restoring natural features, likelihood of success, transferability, and innovation.[39]

***Governors can increase the amount of funding per project available for overburdened communities.***

New York's Green Innovation Grant Program can cover up to 90% of eligible project costs for areas that serve environmental justice areas. All other green infrastructure projects are eligible to receive a maximum of 75% of eligible project costs. Eligible costs include planning, design and building of capital water quality projects.[40]

## State Assistance for Overburdened Communities

***Governors can provide legislative authorization and technical assistance to local governments to create Stormwater Authorities and help them form Community Based Public Private Partnerships.***

Ideally, every dollar invested in infrastructure should create as many community co-benefits as possible and stay as close to the community as possible. Governors can help this occur in overburdened communities by providing legislative authorization to local governments to create stormwater authorities that operate as separate governmental entities and can charge fees to property owners to deliver stormwater services for one or more municipalities. Depending on the authorizing legislation, authorities may also be able to raise grant funds,

take out loans, issue bonds and enter public private partnerships to build and maintain grey and green stormwater infrastructure.

Governors can also direct state agencies to provide technical assistance to local governments to help them form stormwater authorities. Delivery of this type of technical assistance can be coordinated by the state and provided by either existing staff, circuit riders, EPA staff or local, state and national non-profits.

Using those same strategies, Governors can provide technical assistance to local governments to help them form community-based public private partnerships. This alternative procurement and delivery model is based on the traditional public private partnership approach but also focuses on providing environmental and community benefits.[41] Among other things, these benefits could include job training, jobs for local residents, attraction of new businesses, new and improved playgrounds and parks, and access to the water for recreation.

These long-term performance partnerships between public and private (or NGO) parties can drive down costs of "green stormwater infrastructure" while providing economic, social, and environmental benefits for a community. The partnerships provide the benefits of a typical public-private partnership like a fixed fee, performance goals and mixed public/private financing that can reduce financing costs, retention of assets by public entities, reduced project costs and delivery time, transfer of risk from public to private entities, and long-term operations and maintenance by private entities. In addition, a community-based partnership also incorporates key performance indicators developed by the community like procurement from local, minority businesses and creation of jobs for residents.

***Governors can coordinate peer-to-peer partnerships between agencies or municipal utilities and peers from overburdened communities to provide capacity and expertise on funding, operating and maintaining stormwater infrastructure.***

To assist overburdened communities with navigating financing and funding options, states can coordinate the development of peer-to-peer partnerships between agencies or municipal utilities and peers from lower-resourced communities to help create capacity and provide expertise on how to sustainably fund, operate and maintain stormwater infrastructure. This low-cost, high return action is recommended by the American Society of Civil Engineers in the stormwater section of their infrastructure report card, and has been adopted by some states.[42] For example, in 2020 New Jersey's Association of Environmental Agencies and Maryland's Department of Environment partnered with Moonshot Missions, non-profit water sector advisors, to create a peer-to-peer network that helps overburdened communities identify, fund, and implement strategies to deliver clean water.[43]

***Governors can streamline the application process for federal, state, and other stormwater funding streams that allows communities to leverage multiple funding streams for stormwater projects.***

One challenge to accessing Clean Water State Revolving Fund and other stormwater funding identified by under-resourced communities is the lack of staff capacity to apply for the multitude of grants and loans that exist to fund stormwater which are administered by different agencies and serve different purposes like land conservation, transportation, economic development, and housing programs. A single point of access to multiple sources of state funding saves time and effort and is a great benefit to overburdened communities. States can consider developing an information hub and streamlined application process to increase community awareness of all types of federal, state and other funding streams available and provide information on grant and loan funds that can be combined (capital stacking), to equitably build out stormwater infrastructure.

For example, former New York Governor Andrew Cuomo led an effort to streamline and expedite the grant applications process that can help applicants with capital stacking. The state developed the Consolidated Funding Application process for grants and loans that requires only one application to be considered for 30 different programs from nine state agencies.[44] The program includes grants for green innovation, water quality, climate smart communities, economic development and housing, all of which may be applicable to green infrastructure for stormwater. In addition, New York's Department of Environmental Conservation maintains a website with links to local, state and federal sources of funding for green infrastructure.[45]

## Stormwater Funding Case Study

The city of Chester, Pennsylvania, required many of the above-mentioned forms of support to establish a dedicated funding source to address their stormwater needs. Located on the banks of the Delaware River, Chester has a population of 34,000 and a median household income of $32,000.[46] The city's population is 68.9% Black or African American, and 11.6 % Hispanic or Latino and it has suffered from disinvestment for many years. In 1995, Chester was designated an Act 47 city (Pennsylvania's program that helps financially distressed communities) and by 2020 the city filed for bankruptcy.[47]

The city is served by a combined sewer-stormwater system that overflowed frequently, sending 739 million gallons of untreated sewage and stormwater annually into the Delaware River and local waters. By 2015 the regional water authority serving the city entered into a consent decree with EPA to create a long-term plan by 2018 to minimize flooding and eliminate sewer overflow to the

Delaware River and local waters.[48] The city created a green infrastructure plan to reduce the combined stormwater and sewer overflows and formed a stormwater authority. This was an important step to help the financially distressed city pursue funding from the Clean Water State Revolving Fund to address its stormwater issues.

Established in 2017, the stormwater authority of the city of Chester was the first stormwater authority formed under Pennsylvania's Municipality Authorities Act.[49] The independent authority was able to charge a fee to residents, which created a dedicated funding stream and gave the authority the ability to re-pay debt. Based on this ability, the authority was able to qualify and receive over $34 million in Clean Water State Revolving Fund loans for design engineering and construction and obtain a nearly $10 million loan that was awarded principal forgiveness from PENNVEST, the administrator of Pennsylvania's state revolving fund.[50]

To form the stormwater authority and implement a stormwater fee, however, Chester needed considerable support from PENNVEST, the U.S. EPA, and other stakeholders. The city received funding from PENNVEST to contract for additional expertise and worked with the authority's executive manager and board, along with the mayor and city council to identify community goals for the city's new stormwater utility and evaluate their funding and financing options. Assistance also included identification of local stormwater issues, grey and green infrastructure needs, local workforce needs, and minority small business development opportunities. It also required outreach to NGOs for input and information sharing, and outreach to local businesses to see how they could support or benefit from the effort.

Community leaders, including Dr. Horace Strand, who founded the Chester Environmental Partnership and currently serves as executive manager of the stormwater authority, the mayor of Chester, and authority board members worked with EPA experts to create a community-based public private partnership as a special purpose entity through which they could quickly develop and launch a stormwater utility for delivering large-scale grey and green stormwater infrastructure throughout the city of Chester.[51]

Outside experts helped draft the procurement documents, which included a requirement to hire a certain percentage of local, minority businesses to install and maintain green stormwater practices and included key performance targets. This technical assistance was critical to ensuring that stormwater management was driven by community values. The private company that assisted the city as the public-private partner not only aided the stormwater authority in pursuing significant Clean Water State Revolving fund dollars but also provided the necessary capacity to establish and operate the stormwater utility, including support for local outreach, fee collection and hiring.

Installations, upgrades and retrofits are happening throughout the city, integrating stormwater runoff controls that reduce the volume of flows and pollutants to local rivers and the Delaware River. To date, this unique partnership program has raised over $44 million in capital improvement funds, collected 80% of the targeted $2 million plus in annual revenues, removed nearly 47,000 tons of debris from the stormwater systems drains and inlets, and created over 90 local jobs. Seen through an equity lens, it is important to note that only 17% of the stormwater funds are raised from residents and the majority of stormwater fees are now being paid by commercial and industrial sectors in the city of Chester.

## Conclusion

The need for billions of dollars of new investments in green infrastructure to meet stormwater management needs comes at a time when social equity concerns are at the forefront of policy development. This provides an opportunity for Governors to examine practices and policies to advance more equitable funding frameworks for stormwater and other infrastructure projects.

To assist overburdened communities, Governors have policy levers to pull, including proposing legislation that allows local jurisdictions to charge stormwater fees, and legislation to allow local governments to establish a stormwater authority whose creditworthiness is not tied to a local jurisdictions' financial status. This allows overburdened communities to establish dedicated revenue streams that unlock other opportunities like creating community-based public private partnerships.

On the non-legislative front, Governors can consider structuring their Clean Water State Revolving Fund program to reflect equity priorities. This loan-grant program is partly funded by federal money. However, since the state revolving fund programs are managed by the states, Governors can advance their equity priorities by including specific provisions in project funding and eligibility criteria. Governors can also lead an effort to develop a consolidated stormwater funding application and can provide more technical assistance to overburdened local communities.

The recommendations in this paper build on and amplify the impact of each other, and for this reason Governors may want to take a holistic approach to this issue and use their power to convene stormwater stakeholders, to determine the challenges and needs of overburdened communities and how the state can best assist them.

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## Acknowledgements:

Funding for this project was provided by the William Penn Foundation. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of the William Penn Foundation.

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