

wef | Stormwater  
Institute



RECOMMENDATIONS TO  
**IMPROVE THE  
STORMWATER  
PROGRAM  
IN THE U.S.**

APRIL 2021

# SUMMARY

Municipalities need federal assistance to fix aging stormwater infrastructure, reduce flood risk, and comply with Clean Water Act requirements. This fact sheet outlines the federal assistance local communities and utilities require to protect surface water resources in the US and to ensure public safety. Addressing long-term issues of funding, effective pollution control tools, and up-to-date environmental data necessary to make good decisions are reasonable and practical for Congress and the Executive Branch to enact in water resources and infrastructure stimulus bills.

## STORMWATER PROGRAM RECOMMENDATIONS

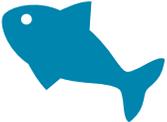
### 1. Stormwater Infrastructure Funding Tools

*Request: Establish dedicated stormwater funding for the construction, rehabilitation, and operation and maintenance of stormwater infrastructure. In addition, establish a technical assistance grant program (at regional or federal level) to assist communities and utilities with the creation of sustainable funding sources for stormwater infrastructure.*

In mid-2021 the EPA will be providing Congress with a report evaluating funding options for the 'construction, rehabilitation, and operation and maintenance of stormwater infrastructure'. The Report will be based on recommendations of a congressionally authorized Stormwater Infrastructure Funding and Financing Task Force (Section 4101 of the 2018 America's Water Infrastructure Act) provided to EPA in 2020. Local communities, permitted public entities, and utilities need stormwater infrastructure investment in the next decade to ensure public safety, increase resilience, and meet the requirements of the Clean Water Act. Dedicated federal funding and financing tools will help them identify approaches to finance the required infrastructure using general funds, grants, and stormwater fees in combination with federal and private funding from sources such as state revolving funds, bonds, grants, private loans, and equity investments. These funding sources can be combined with emerging Community-Based Public-Private Partnership approaches that can efficiently deliver public improvements.

The available funding streams and project delivery options are complex and varied. Communities and utilities need assistance in developing successful financing mechanisms and reducing finance risk. We recommend that Congress implement the recommendations of the congressionally authorized Stormwater Infrastructure Funding and Financing Task Force and expand existing federal infrastructure funding programs and/or establish new federal programs that will address our nation's stormwater infrastructure funding and operation and maintenance needs. Additionally, Congress should continue the federal Stormwater Infrastructure Funding and Financing Task Force for a second year to develop funding, financing and project delivery templates for local communities and utilities.

### DID YOU KNOW?

**85%** of lake and stream pollution was from sewage and industrial sources in **1970**, 

by **2010**, **85%** of lake and stream pollution was from urban and agricultural lands



A recent study suggests that

**over 100,000 jobs**

can be created when meeting the \$8.5 billion funding gap in the stormwater sector.

## 2. Stormwater Treatment System Verification Program Funding

*Request: Create up to 5 national centers of excellence and grant programs to drive research, planning and implementation of stormwater infrastructure as well as facilitate coordination between municipal stormwater permittees across all centers.*

Investment in stormwater infrastructure is a critical need throughout the United States to mitigate the impacts of pollutants and increases in stormwater runoff rates and volumes associated with urban development. The 7,550 stormwater permittees regulated under the Phase I and Phase II municipal stormwater programs are individually responsible for meeting water quality standards within their jurisdictions. However, EPA reports show that more than half of assessed streams, rivers and wetlands do not meet those standards, nor do over 70% of assessed lakes and ponds, estuaries, bays, coastlines and near coastal waters.

In order to improve water quality, we must:

- Inform and guide significant investments in stormwater infrastructure by sharing information between permittees and between regions to minimize duplicative performance evaluation efforts and to share best practices;
- Establish a common framework for testing and verification to accelerate the implementation and adoption of innovative stormwater management technologies; and
- Ensure that funds spent on stormwater infrastructure improvements maximize environmental benefits.

Language was developed in S. 3591, the Senate version of Water Resource Development Act (WRDA) 2020 (Section 2019, Stormwater Infrastructure Technology) that would create up to 5 centers of excellence for new and emerging stormwater control infrastructure design and management. The language would also provide stormwater control infrastructure implementation grants to help communities implement best management practices and new technologies. We recommend that this language be incorporated into any water infrastructure, transportation, or environmental bill with a minor change. This change includes expanding the types of eligible entities and institutions to include “nonprofit organizations” who “demonstrate excellence in supporting the growth in implementation, development and verified performance of existing as well as new and emerging stormwater control infrastructure,” which would amplify stormwater technology performance verification efforts by the National Municipal Stormwater Alliance, the Water Environment Federation, and others. A voluntary stormwater technology performance verification program will ensure federal funding and ratepayer revenues are being spent on verifiably successful stormwater control technologies.

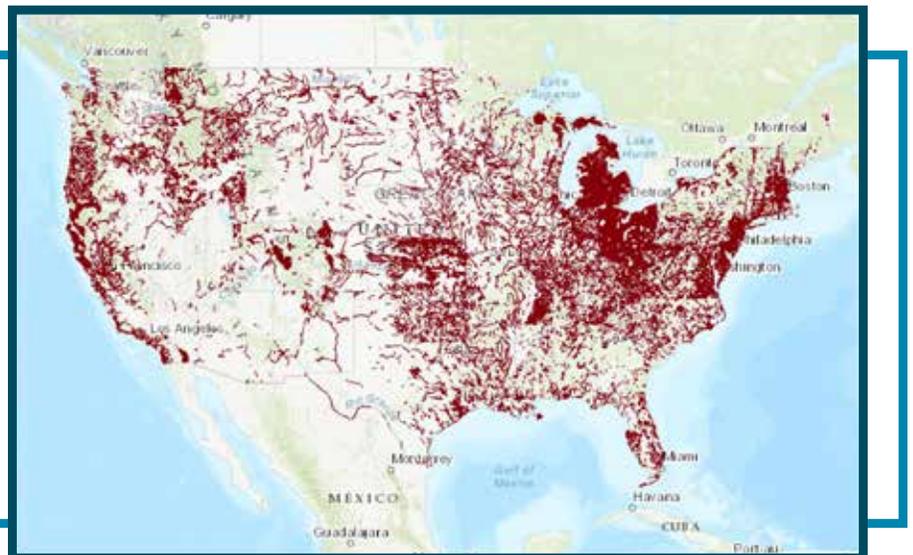
## 3. Local Flooding Product and Reference Development Funding

*Request: Provide funding to federal agencies to develop and maintain monitoring programs and technical products to enable local and state agencies to address current and projected local flooding challenges.*

A community’s ability to address existing flooding challenges as well as anticipated flooding impacts associated with climate change is dependent on both their technical capability and their capacity to implement the necessary changes. In smaller communities, technical capability may be lacking or a limitation of financial resources may limit the ability to contract necessary technical support for these services. Furthermore, data used for flood mitigation or prevention planning may be limited by the jurisdictional boundaries as watersheds often extend into

areas that cross the geographic limits of multiple jurisdictions. Also, while there are existing tools providing precipitation projections due to climate change, there is a lack of these projections provided at the community-scale. The macro-level nature of existing climate change tools limits the ability for cities and counties to adequately prepare for future hydrologic conditions. Lastly, the focus of flood impact studies is often limited to technical aspects of flooding, while the impacts of flooding are multi-faceted and include social and economic dimensions.

**588,000 miles of streams** and **13 million acres of lakes** have been identified as impaired (polluted) by the EPA.



To enable more holistic solutions to address existing flooding problems and projected flooding scenarios, there is a need for an increase in federal investments to develop community-scale tools that can provide the information and data to better enable communities to capture the scale of physical and socioeconomic impacts of urban flooding, including environmental justice dimensions. Opportunities exist to leverage existing tools and data sets developed by NOAA, FEMA, USFS, USGS, EPA and others to meet these needs. An example is the currently proposed expansion of Atlas 14 to a national scale, which provides high-level storm event precipitation depths based upon historical data – however, this tool is macro-scale and does not provide future projections. An effort should be made to empower NOAA to expand this tool to provide greater value to communities across the U.S. by increasing the resolution of data coverage and output as well as providing climate change estimations for precipitation patterns. An effort should be made by federal agencies to identify other opportunities to leverage existing tools.

#### 4. Promote Comprehensive Source Control for Stormwater Pollution

*Request: Direct the US EPA to establish a permanent program within the Office of Wastewater Management, and provide funding to be dedicated to developing pollutant source control for stormwater.*

It is technically infeasible to remove many pollutants once they become entrained in stormwater. It is more costly to treat or remove pollutants once they are in the environment as compared to eliminating them from use, developing alternatives through green chemistry, or with product substitution. Source control is by far the most effective and cost-efficient approach for control of pollutants such as pesticides, nutrients, most metals, chlorides (salt) and a vast number of emerging pollutants. EPA's use restriction of several organophosphate pesticides is a successful example of the application of source control. New emerging toxic pollutants in the environment include PFAS (per- and polyfluoroalkyl substances and variants), microplastics and tire wear derivatives, such as 6PPD. Especially problematic are chemicals, such as PFAS, that bioaccumulate in the human body.

There are far too many chemicals for municipalities to be able to track, to test for, and to develop effective removal methods; therefore, local communities need help from the private sector to accomplish this task. There are more than 85,000 chemicals listed under the Toxic Substances Control Act, and there are over 55 million commercially available organic and inorganic compounds registered with the Chemical Abstract Service. A federal effort to assist municipalities in implementing source control is the only practical method to implement the goals of the Clean Water Act for stormwater.

#### WEF Stormwater Institute

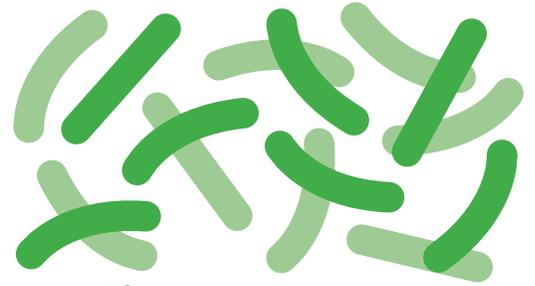
<http://wefstormwaterinstitute.org/>

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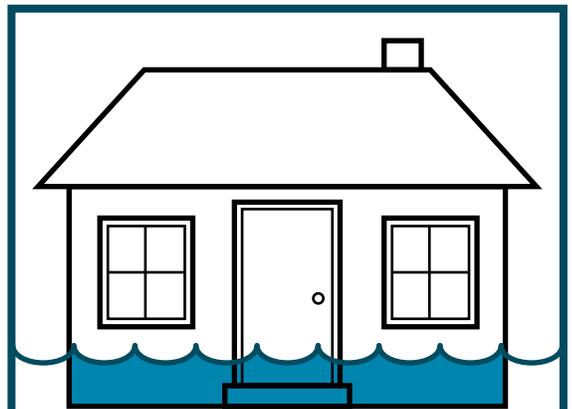
#### National Municipal Stormwater Alliance

<http://nationalstormwateralliance.org/>

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The most common pollutant in the U.S. is **pathogens**, compromising the sanitary quality of surface waters.



On average, the annual cost of damage from inland and coastal floods is higher than any other natural disaster event.

# MS4

Municipal Separate Storm Sewer System

The EPA estimates that more than 7,550 MS4 permittees (cities, towns and agencies) must comply with the MS4 stormwater provisions of the Clean Water Act.