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

WATER WEEK 2019

wef Stormwater Institute

nmsa National Municipal Stormwater Alliance

SUMMARY

The introductory text to the Clean Water Act (CWA) noted, "It is the national goal that the discharge of pollutants into navigable waters be eliminated by 1985." This goal has yet to be achieved, and new tools are needed to help make this goal a reality. This fact sheet outlines a long-term strategy to guide the stormwater program through the next 20 years. These strategies are reasonable and practical actions for Congress and the Executive Branch to enact. These recommendations address the fundamental issues of: reliable funding, infrastructure retrofit and maintenance and pollution source control as the next steps to achieve the goals of the Clean Water Act.

STORMWATER PROGRAM RECOMMENDATIONS

1. Stormwater Infrastructure Funding Tools

Request: Create a technical assistance grant program (at regional or federal level) to assist communities with identifying funding resources for stormwater infrastructure. The EPA is assessing funding options for the 'construction, rehabilitation, and operation and maintenance of stormwater infrastructure' with a congressionally authorized stormwater infrastructure task force.

Communities have a keen interest in securing sources of funding for stormwater and green infrastructure retrofits but lack a comprehensive set of tools to construct and maintain the required improvements. States, cities, DOTs and counties need infrastructure investment in the next decade to ensure public safety and meet the requirements of the Clean Water Act. Funding tools for states can help them identify approaches to finance the required infrastructure using general funds, grants, fees, and utilities in combination with public and private financing such as state revolving funds, bonds, private loans, social capital, and equity investments. These financing options can be utilized through emerging vehicles and platforms such as the Community-Based Public-Private Partnership, an approach championed by U.S. EPA designed to enhance project delivery efficiencies.

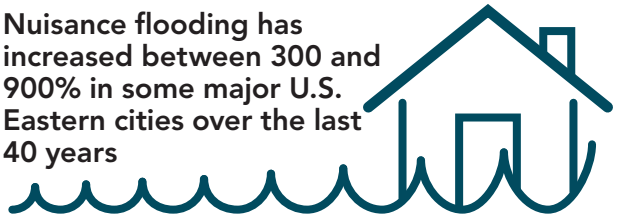
The available funding streams and project delivery options are complex and varied. Communities need assistance in developing successful financing mechanisms and reducing finance risk. We recommend that the current federal infrastructure task force be continued for a second year to develop funding, financing and project delivery templates for municipalities.

DID YOU KNOW?

85% of impairments were from **Traditional Point Sources** in **1970,** by **2010,**

85% were from **Nonpoint Sources** *(Ag and Urban Runoff)*

Nuisance flooding has increased between 300 and 900% in some major U.S. Eastern cities over the last 40 years



2. Stormwater Treatment System Verification Program Funding

Request: Provide funding to EPA Regions to develop a national performance verification program for stormwater best management practices (BMPs).

Stormwater pollution is a persistent issue in urban watersheds throughout the United States. To ensure that engineered stormwater management systems are achieving their intended benefits, better information is needed linking the performance of specific treatment system designs to their ability to remove common stormwater pollutants. The performance of conventional landscape-based stormwater treatment systems has been studied, however system designs and study techniques vary widely. As a result, performance estimation for specific treatment systems is challenging and imprecise.

In addition, over 50 different modular stormwater management systems have been developed in recent years by private industry for use in urban environments where available land area is scarce such as transportation corridors. These systems may be standalone solutions or can be integrated into treatment trains to enhance the functionality and increase the design life of green infrastructure (GI) systems. There are several successful state and regional stormwater treatment system testing and verification programs for these systems, but adoption of results from these programs outside of their immediate jurisdictions has been limited. A national performance verification program, drawing on the success of these programs, is being developed by local, regional and national stakeholders to:

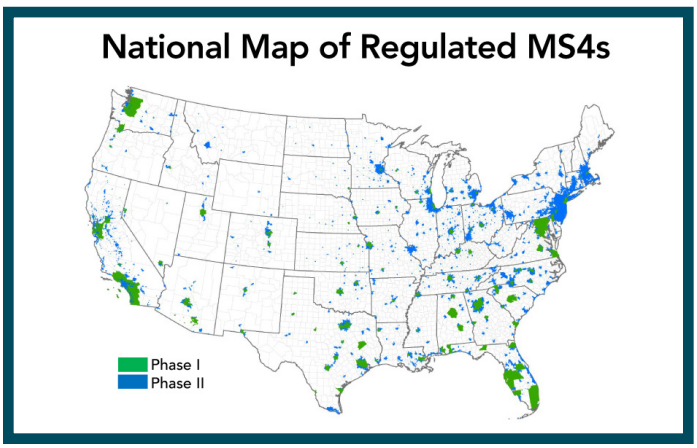
- inform and guide significant local investments in stormwater infrastructure,
- accelerate the implementation and adoption of innovative stormwater management technologies,
- create regulatory confidence and provide accurate "regulatory credit",
- to minimize duplicative performance evaluation efforts, and
- establish a common framework for testing and evaluation of both public domain and proprietary stormwater control measures.

3. Improved Stormwater Infrastructure Needs Data Collection

Request: Insert "municipal stormwater" in to the required data collected through the Clean Watersheds Needs Survey, CWA SEC. 516 (b)(1). Provide $500,000 per year for two years to the EPA to complete the Clean Watershed Needs Survey.

The Clean Water Act (CWA) regulates stormwater through the National Pollution Discharge Elimination System (NPDES), which requires permit holders, such as communities, business and industry, and state transportation departments, to meet federal regulatory water quality standards. The infrastructure needed to meet those regulations require a substantial investment by communities, primarily paid for by local taxes and utility rates. To improve design and maintenance efficiencies of practices needed for communities, a long-term data record relating design, maintenance activities, performance of stormwater practices, and cost is required.

We recommend that Congress insert "municipal stormwater" into CWA SEC 516 (b)(1). This would add to the EPA Clean Watershed Needs Survey data collection process the requirement that States request Municipal Separate Storm Sewer System (MS4) entities to submit data on the cost and effectiveness of their stormwater management and maintenance activities. This first of its kind database would then be reported to Congress through the Clean Watersheds Needs Survey to help guide national policy and stormwater infrastructure design and funding decisions. The last Clean Watersheds Needs Survey was completed in 2016 using 2012 data although the CWA statute directs EPA to complete it every two years. FY19 appropriations included $500,000 of the $1 million needed to complete the survey. Congress should provide the remaining $500,000 in FY20 to complete the survey and establish a permanent funding source for the Clean Watershed Needs Survey.



4. Modernize NPDES Permits

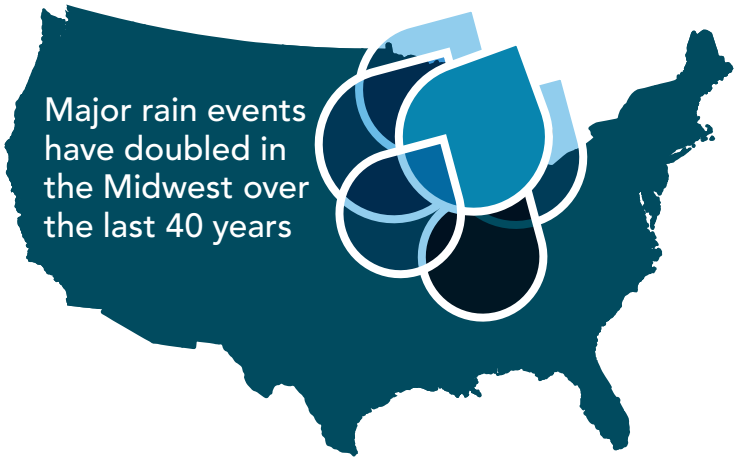
Request: Direct EPA to work with permit holders to develop incentives for development and implementation of integrated plans, as well as model permit language for watershed-based permits.

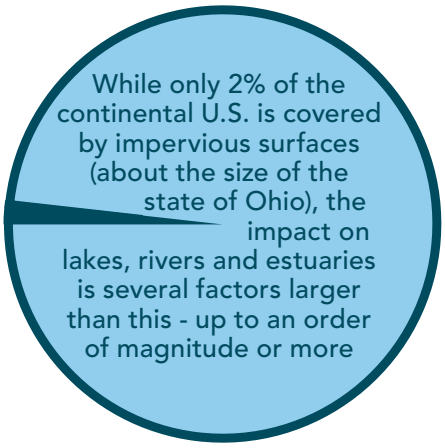
Water Infrastructure Improvement Act of 2018 (HR 7279), passed by Congress in late 2018 and enacted in early 2019, provides that the EPAs Integrated Planning Process is an option for municipalities to meet their wastewater and stormwater management requirements. It encourages municipalities to include green infrastructure and allows the use of compliance schedules to meet water quality standards. Stormwater NPDES permits should be written to encourage the use of EPA's integrated planning framework which would include the development of a master plan relating both water quality and quantity, from all contributing point and non-point sources. The plan needs to describe infrastructure improvement needs, modeling to demonstrate compliance with water quality goals and standards, asset management maintenance requirements, a schedule and a cost estimate, developed with community input. We recommend this legislation be followed by a congressional directive to EPA to provide guidance to the states for model permit language for both integrated planning and watershed-based permits. This is the critical next step to modernize the NPDES permit process, integrating all components of the issue, promoting innovation and bringing new efficiencies for stormwater program implementation.

5. Implement Source Control for Stormwater Pollution

Request: Direct EPA to examine the authority under the Clean Water Act and Toxic Substances Control Act and other legislation as appropriate, to control pollutants in stormwater at the source, and assist states developing pollutant source control programs. We recommend that Congress direct EPA to identify a preferred regulatory pathway for source control and develop tools to support source control implementation by permit holders.

It is technically infeasible to remove many common pollutants once they become entrained in stormwater. It is also costly to treat or remove pollutants once they are in the environment. Source control is by far the most effective and cost-efficient approach for control of pollutants such as pesticides, nutrients, many metals and emerging pollutants. An example of source control is the reduction of copper in automotive brake pads, instituted in California and Washington. Vehicle brake linings were found to represent up to half of the copper load in urban stormwater. Substituting other materials in brake pads is estimated to save over $1 billion in California at the municipal level by eliminating urban copper control programs. EPA's use restriction of several organophosphate pesticides is another successful example of the application of source control. Other examples include measures in Minnesota to restrict phosphorus in lawn fertilizer and ban the sale and use of coal-tar sealants on pavements. The only practical approach to controlling emerging pollutants such as PFAS/PFOA and microplastics is source control. These actions will save municipalities billions of dollars in future expenditures attempting to remove pollutants from the environment.





(note: developed land is not impervious surface area - approximately 25% of developed land is impervious)

WEF Stormwater Institute

http://wefstormwaterinstitute.org/

Adriana Caldarelli, Director, Stormwater Institute
703.684.2406 | acaldarelli@wef.org

National Municipal Stormwater Alliance

http://nationalstormwateralliance.org/

Scott Taylor, P.E., D.WRE, FASCE | Chair
760.603.6242 | STaylor@mbakerintl.com