EXECUTIVE SUMMARY

The practice of managing stormwater has evolved from carrying runoff away as fast as possible to, now, handling as much of it where it falls as possible. 2015 marks the 25th anniversary of the U.S. Environmental Protection Agency's stormwater permitting program. The sector has accomplished much and set the stage for even more meaningful progress.

Despite these efforts, stormwater is the only growing source of water pollution in many watersheds throughout North America. While the challenges of stormwater management appear to be vast, overcoming them creates opportunities to make gains beyond improving water quality. The sector has a unique opportunity to further advance sustainability, resiliency, and community livability. Stormwater is a maturing sector that is poised for major growth.

The release of *Rainfall to results: The future of stormwater* is the first action of the Water Environment Federation (WEF) Stormwater Institute. The institute and report are designed to help the stormwater sector address challenges by leveraging WEF's leadership, diverse membership, breadth of knowledge, and varied partnerships.

On July 27 and 28, 2015, WEF convened a meeting of stormwater professionals from across the U.S. The Johnson Foundation at Wingspread cosponsored the meeting, which was held at their conference center in Racine, Wis. These stormwater sector leaders participated in a discussion that captured current trends and conditions in stormwater, as well as opportunities and pathways toward a sustainable and financially sound stormwater sector.

This report presents a vision for the future and six overarching objectives that will help achieve this vision. The vision conveyed here is formed not through consensus of the discussion participants, but through their shared input as described by WEF.

A VISION FOR THE FUTURE OF STORMWATER

In the future, all stormwater will be considered a resource and managed through an optimized mix of affordable and sustainable green, gray, and natural infrastructure. Pollutant source control and management of runoff volume will be pursued aggressively as a complement to traditional stormwater controls. Stormwater infrastructure will be funded fully and managed by a true utility with a comprehensive asset management plan that benchmarks for future success. Management techniques will improve continually through new science, experiences, technical innovations, and responsive regulations. Stormwater management will be part of doing business and part of community resiliency and quality of life. The community will value and understand the many benefits of stormwater infrastructure.

OBJECTIVES FOR STORMWATER SUCCESS

WORK AT THE WATERSHED SCALE

All communities will have integrated, watershed-scale assessments of water resources needs and challenges. Stormwater management efforts will be aligned with larger watershed priorities, while local governments maintain their land use authority. Communities will understand what is necessary to overcome these challenges and will have the technical and financial capacity to sustain stormwater operations.

Recommended actions

- Better connect stormwater needs and investments to other community priorities and long-range planning efforts across jurisdictions within watersheds.
- Understand and incorporate the co-benefits of stormwater controls into community decision-making at the watershed scale.

TRANSFORM STORMWATER GOVERNANCE

Stormwater regulations will stimulate stormwater control innovation and performance improvement by focusing on program outcomes. Permitting frameworks will embrace the long-term nature of solving stormwater challenges and encourage integrated approaches that support cost efficiencies. Stormwater institutions will be funded fully and serve as the focal point for stormwater management within the community.

Recommended actions

- Explore ways to emphasize stormwater program outcomes in permits and design and maintenance requirements.
- Support development of long-term, adaptive frameworks for stormwater management.
- Encourage integrated planning and management across all water services and departments.
- Catalyze further formation of stormwater utilities.
- Increase state agency capacity to support sustainable stormwater management.

SUPPORT INNOVATION AND BEST PRACTICES

A broad suite of verified stormwater controls and best practices will support confident planning and maintenance. Sharing experience gained by evaluating stormwater programs and controls will encourage further innovation.

Recommended actions

- Ensure up-to-date best practices information is readily available.
- Create an integrated, needs-driven stormwater research agenda.
- Improve development and deployment of innovative technologies.
- Increase the ability to analyze and value stormwater management on a multi-benefit basis.
- Advance the tools and methods necessary to support continual improvement of stormwater management.
- Support pollution prevention through source control efforts and retention-based systems.

MANAGE ASSETS AND RESOURCES

Stormwater systems will be maintained through robust asset management programs and supported by innovative information technology. A multidisciplinary workforce will support the proper design, installation, and inspection as well as operations and maintenance, repair, and timely replacement of stormwater infrastructure.

Recommended actions

- Expand deployment of comprehensive asset management programs for stormwater infrastructure.
- Integrate operations and maintenance planning with stormwater capital project development.
- Develop the use of automated information technology to support sustainable stormwater management.
- Support development of a diverse, highly skilled, and multidisciplinary stormwater workforce.

CLOSE THE FUNDING GAP

Communities will align stormwater management efforts with broader community goals to garner funding options and will have access to innovative financing opportunities. Elected officials will support the investments needed to meet sustainable stormwater management objectives.

Recommended actions

- Support communities in identifying stormwater funding needs, inventorying the funding currently available, and describing the gap.
- Identify funding sources for stormwater management and articulate how stormwater management can meet the requirements of available sources.
- Support communities in understanding and accessing the full range of stormwater funding and financing approaches.
- Reduce the cost of sustainable stormwater management.

ENGAGE THE COMMUNITY

Communities will value the contribution stormwater management makes to flood risk reduction, clean and safe water, climate resiliency, and other benefits. This understanding and regard will translate into the decision-making capacity and financial support needed for sustainable stormwater programs.

Recommended actions

- Improve the ability of the stormwater sector to engage various audiences.
- Encourage and support peer-to-peer information sharing between public officials on stormwater challenges, successes, and failures.