



**wef** | Stormwater  
Institute

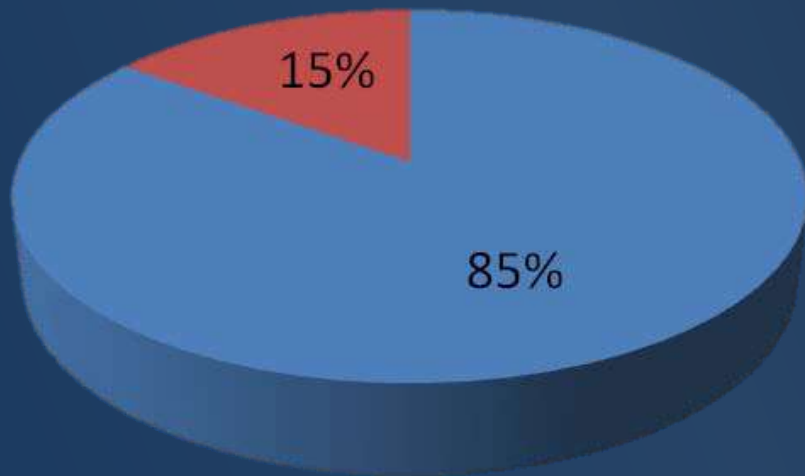


# WEF & STORMWATER

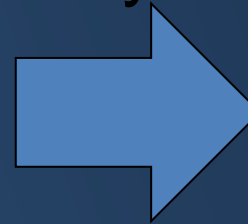


# The Rise of Nonpoint Source Pollution

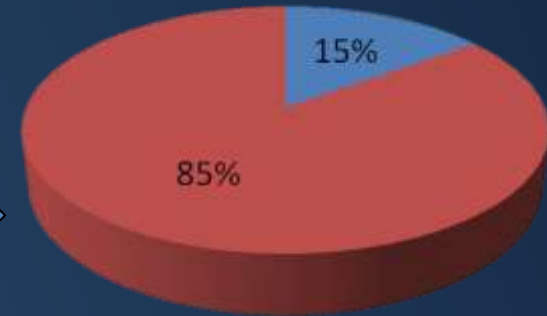
1970



40 yrs



2010



**Point Source vs. Nonpoint Source**

**Water Quality Impairments**

Source: William Ruckelshaus, *A New Shade of Green*, The Wall Street Journal, April 17, 2010

# Policies and Regulations

1980s

- Clean Water Act Amendments – NPS implementation projects, 1987

1990s

- MS4 Permitting Program, Phase I, 1990
- MS4 Permitting Program, Phase II, 1999

2000s

- NRC Urban Stormwater Runoff Report, 2008

2010s

- Integrated Planning Framework, 2011
- Withdrawal of Stormwater Regulatory Framework, 2014
- Formation of Green Infrastructure Collaborative, 2014
- Revised Memo on SW Permits & TMDLs, 2014
- MS4 General Permit Remand Rule, 2016

- Federation of Sewage Works (1928)  
↓
- Federation of Sewage and Industrial Wastes Association (1950)  
↓
- Water Pollution Control Federation (1960)  
↓
- Water Environment Federation (1991)  
↓
- Water Environment Federation – Stormwater Institute (2015)



# WEF and Stormwater 2009 – 2011

- WEF Board of Trustees appoints Stormwater Task Force, 2009
- Formation of Stormwater Coordinating Council, 2010
- WEF Position Statement on Stormwater Management, 2011
- “Future of Stormwater” meeting, 2011
- Formation of Stormwater Committee, 2011
- Stormwater Report, e-newsletter and website launched, 2011



# WEF and Stormwater 2012 – 2014

- WEF Stormwater Symposium, 2012
- 1<sup>st</sup> WEFTEC Stormwater Congress, 2013
- *World Water, Stormwater Management* magazine launched, 2013
- STEPP white paper released, 2014
- 2<sup>nd</sup> WEFTEC Stormwater Congress, 2014
- National Stormwater Summit, 2014





# 2014 National Stormwater Summit

“Consensus that WEF should take a national role in the sector, and convene future meetings”





# WEF and Stormwater 2015

- 1<sup>st</sup> National Phase I and Phase II MS4 Awards Program
- 3<sup>rd</sup> WEFTEC Stormwater Congress
- StormTV Awards
- *State of Stormwater and Action Agenda Meeting*
- *Launch of the WEF Stormwater Institute*



## National Municipal Stormwater and Green Infrastructure Awards Program

The National Municipal Stormwater and Green Infrastructure Awards program, led by the Water Environment Federation (WEF) through a cooperative agreement with the U.S. Environmental Protection Agency (EPA), has been established to recognize high-performing regulated Municipal Separate Stormwater Sewer Programs (MS4s). The objective of the program is to inspire MS4 program leaders to seek new and innovative ways to meet and exceed regulatory requirements in a manner that is both technically effective as well as financially efficient. Recognition of innovative approaches is also a highlight of this program.

**The call for applications is now open!**

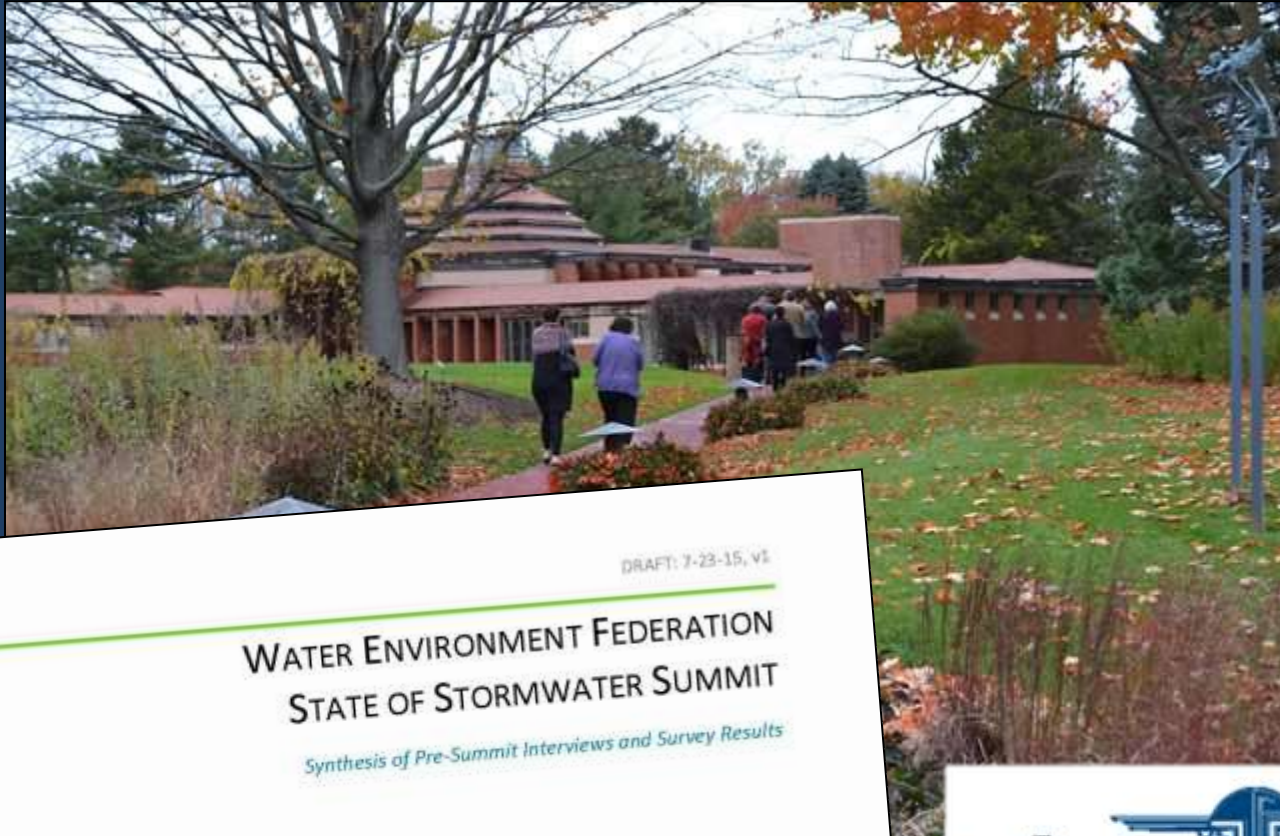
### **Award Winners:**

All submissions will be reviewed by the steering committee and all award winners will be announced and celebrated at the Stormwater Congress at WEFTEC this September. All applicants will be categorized into Bronze, Silver and Gold Levels and will receive a certificate celebrating their achievement. This certificate will also highlight their standing as compared to others in the industry (Bronze, Silver, or Gold level).

Phase I and Phase II communities in the following categories:



# 2015 State of Stormwater Summit



DRAFT: 7-23-15, v1

## WATER ENVIRONMENT FEDERATION STATE OF STORMWATER SUMMIT

*Synthesis of Pre-Summit Interviews and Survey Results*

### BACKGROUND

To inform discussions at the July 26 – 28 *State of Stormwater Summit*, the Water Environment Federation (WEF) with support from Ross Strategic carried out nine approximately 60-minute telephone interviews with stormwater experts and opinion leaders and surveyed the WEF Stormwater Working Group. Participants were asked a structured series of questions about strengths in the current stormwater system, challenges and opportunities, a long-range vision for stormwater management, and actions needed to overcome challenges, seize opportunities, and move toward the vision. This document summarizes the results of the interviews and survey. Please note the following caveats:

- "Statements of fact" made by participants have been taken as given, but not verified.
- The summary seeks to strike a balance between respecting the richness and detail of the interviews/survey while providing a reasonably digestible and compact presentation – some fidelity has been undoubtedly lost in translation.
- The material is drawn from individual contributions – any given statement should not be viewed as a consensus perspective, and at times statements, reflective of different perspectives, can contradict each other.

The  
**Johnson**  
Foundation  
AT WINGSPREAD

**wef** Stormwater  
Institute

# Participants

- Randy Bartlett – Deputy Director, Fairfax County Gov't Stormwater & Wastewater Management Dept.
- Mike Beezehold – Senior Planner, CDM (then) HDR (current)
- Lynn Boraddus – President, Broadview Collaborative, Inc.
- Geoff Brosseau – Executive Director, California Stormwater Quality Association
- Trevor Clements – Water Resources Director, Tetra Tech
- Theresa Connor – Research Program Director, WERF
- Jay Dorsey – Water resources engineer, Ohio Dept. Of Natural Resources
- Kyle Dreyfuss-Wells – Deputy Director of Watershed Programs, NWORDS
- Chris French – Regulatory Manger, CONTECH (representing SWEMA)
- Heather Harris – Project Manager, CH2M
- Terry Leeds – Director, Kansas City Water Services
- Brenna Mannion – Regulatory Affairs & Outreach Director, Nat'; Association of Clean Water Agencies
- Randy Neprash – Staff, MC Cities Stormwater Coaliti0on and Stormwater regulatory Specialist, Stantec
- Sue Olson – Project Engineer, City of Appleton Dept. of Public Works
- Fernando Pasquel – Vice President, ARCADIS
- Sandra Ralston – Principal, Consensus, LLC
- Andrew Reese – Vice President, AMEC Foster Wheeler
- Karen Sands – Manager of Sustainability, Milwaukee Metropolitan Sewerage District
- Nancy Stoner – Water Program Director, Pisces Foundation
- Robert Traver – Professor and Director of Villanova Urban Stormwater Partnership, Villanova University

## Phone Interviews

- Chris Kloss - Green Infrastructure Coordinator, USEPA Office of Water
- Bob Newport – Stormwater Specialist, US EPA Region 5
- Scott Taylor – Sr. Vice President, Michael Baker International
- Sherry Wilkins – Stormwater Director, Huntington Stormwater Utility
- Steve Leo – Stormwater Management Division director, Gwinnett County
- Wes Snyder – Municipal Separate Stormwater System Program Manager, Louisville Metropolitan Sewer District
- Will Harris – National Sales Manager, Modular Wetlands System Inc., (representing SWEMA)



# 2015 State of Stormwater Report



“Stormwater is the only growing source of water pollution in many watersheds across the country. With urban populations expected to grow to nearly 70% by 2050, and more frequent and intense storms occurring across the country, there is ever-increasing pressure on stormwater systems and water infrastructure.

While the challenges of stormwater management appear to be vast, overcoming them creates a unique opportunity for governments, industry, academia, and civil society to further advance sustainability, resilience, and community livability.”

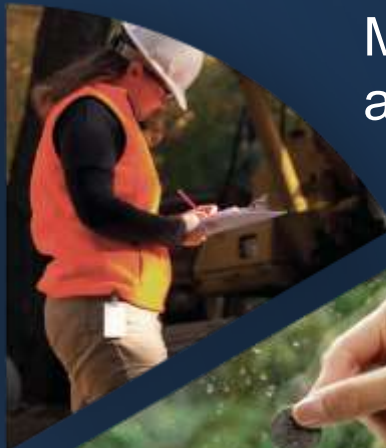
<http://wefstormwaterinstitute.org/rainfall-to-results>

# Objectives for Stormwater Success

Work at the watershed scale



Manage assets and resources



Close the funding gap



Transform stormwater governance



Support innovation and best practices

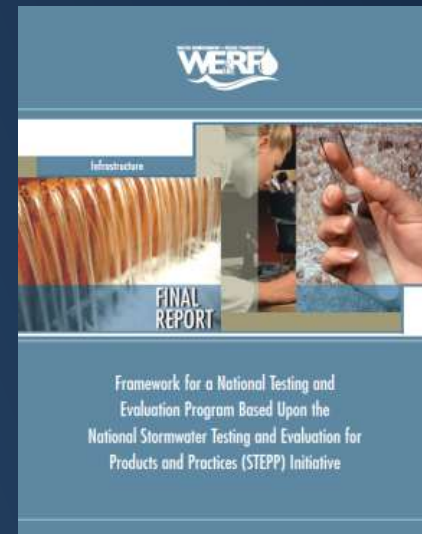
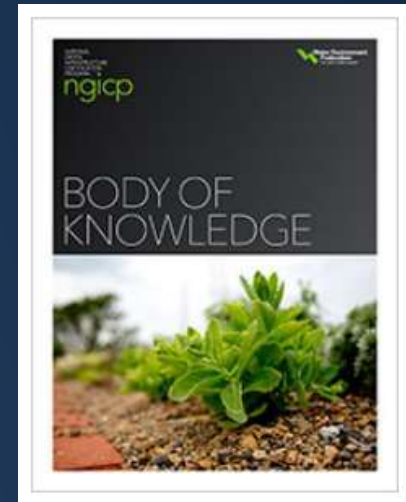


Engage the community




# WEF and Stormwater 2016

- 2<sup>nd</sup> National Phase I and Phase II MS4 Awards Program
- 4<sup>th</sup> WEFTEC Stormwater Congress
  - Technical Program
  - Stormwater Pavilion
- Inauguration of National Green Infrastructure Certification Program
- Launch of SWI Membership Program
- Creation of the SWI Advisory Committee
- Water Week stormwater focused policy meeting
- Framework for STEPP Initiative released





# WEF Stormwater Committee Structure

 = Steering/Leadership Committee

 = Mission Area Stewards / Subcommittee Chairs



Heather Harris,  
Chair



Rebecca Arvin-Colon,  
Committee Manager  
(and other staff)



Wes Sydnor, 1<sup>st</sup>  
Vice Chair



Partners/Liaisons

Programmatic/  
Organizational  
Liaisons  
Various



Ginny Roach, 2<sup>nd</sup>  
Vice Chair

Technical Excellence  
Dwayne Myers  
Stephanie Hanses

Policy Engagement  
Randy Neprash  
Brandon Koltz

Focus on Innovation  
Mark Doneux  
Jason Vogel

Public Communication and Outreach  
Elizabeth Krousel

Collaboration  
Jim Schlaman  
Debra Lutske

Committee Members

Technical Products

Workgroups



# Stormwater Committee - Committee Survey

- Professional background
  - 86% consultant, 42% public, 24% regulatory
  - Remaining steady over past two years
- Mission areas of interest (listed as 1<sup>st</sup> or 2<sup>nd</sup> choice)
  - Technical Excellence (66%), Focus on Innovation (57%), Policy Engagement (44%), Public Outreach and Communication (21%), Collaboration (13%)
- Skills provided to committee
  - Reading/reviewing (91%), Public engagement (83%), Technical writing (68%), Database Management (12%)
- Engagement – monthly calls highest commitment level

# Stormwater Committee - Committee Survey

- Technical areas of interest
  - SWM Design/Analysis – 78%
  - SW Program Oversight – 70%
  - Stormwater-focused Research – 63%
  - Watershed Management/Modeling – 58%
  - MS4 Permitting – 53%
  - Water Quality/Quantity Modeling – 47%
  - Wet Weather Issues - 38%
  - Stream Restoration - 38%
  - Project Management – 36%



# Stormwater Committee - Committee Survey

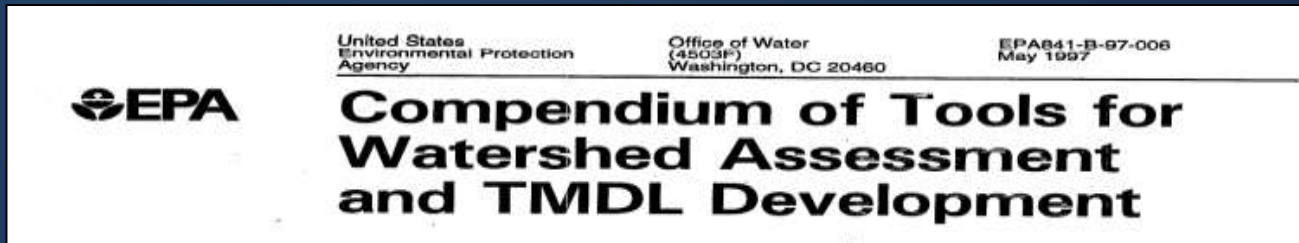
- Technical areas of interest (continued)
  - Water Quality Testing/Monitoring – 33%
  - CSO/SSO Modeling/Management - 30%
  - Erosion & Sediment Control - 30%
  - Floodplain Management/Modeling – 17%
  - Other – 9%
- Interest>Background: Stream Restoration, Research, Water Quality/Quantity Modeling, Stormwater Program Oversight, and Watershed Management/Modeling
- Background>Interest in Project Management

# Stormwater Committee - Mission Areas

- Technical Excellence
- Focus on Innovation
- Policy Engagement
- Public Outreach and Communication
- Collaboration

# Stormwater Committee - Stormwater Models Compendium

- EPA prepared a compendium of modeling tools in 1997 but had not been updated in two decades



- WEF Stormwater Committee initiated a modeling overview document to provide information about different models/model types available to our industry.
  - WEF member volunteer authored document
  - No EPA funding support
  - Document chair and call for authors completed in 2016



# STEPP Initiative

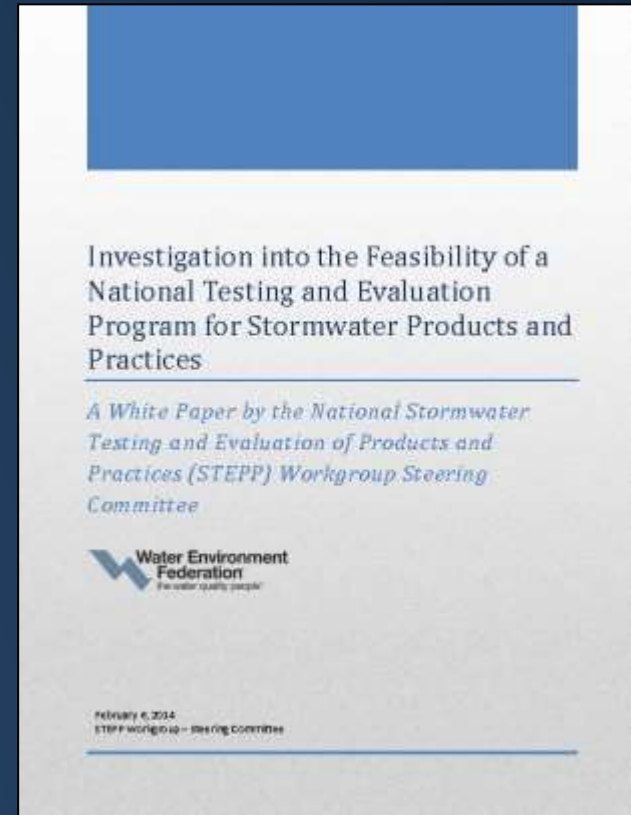
- Need for consistent stormwater treatment technology testing standard and evaluation program creates confusing marketplace
  - Regulators & stormwater managers unsure if reported best management practice (BMP) pollution removal numbers are real
  - Innovative technologies lack consistent regulatory recognition pathways, resulting in marketplace barriers
- STEPP seeks to establish a common performance testing protocol and evaluation process for stormwater BMPs



# STEPP White Paper - 2014

- National program is feasible and needed
- Engagement with EPA needed
- Engagement with states / groups needed
- Establish sustainable business plan
- Proprietary/public domain should be covered
- Distribute document widely
  - Paper and webcast are available free

[www.wef.org/STEPP](http://www.wef.org/STEPP)



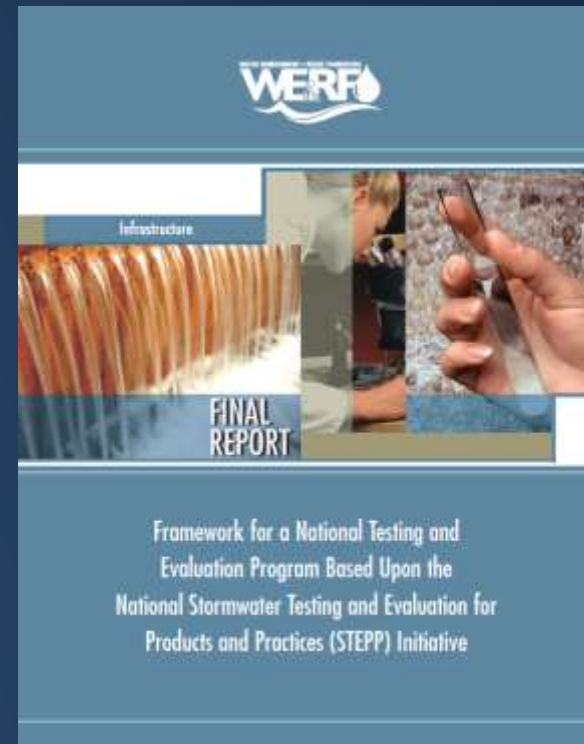
# Past/Existing Programs

- State/Regional testing programs have surfaced to attempt to address TAPE, NJCAT, VTAP, GTAP, TARP, ETV, others...



# WEF STEPP Initiative

- Recommendation builds on 2 widely recognized state verification/certification programs
  - Field Testing - Washington Dept. of Ecology TAPE Program
  - Laboratory Testing – New Jersey Corporation for Advanced Technology



July 2016





# WEF & STORMWATER CREATION OF THE SWI

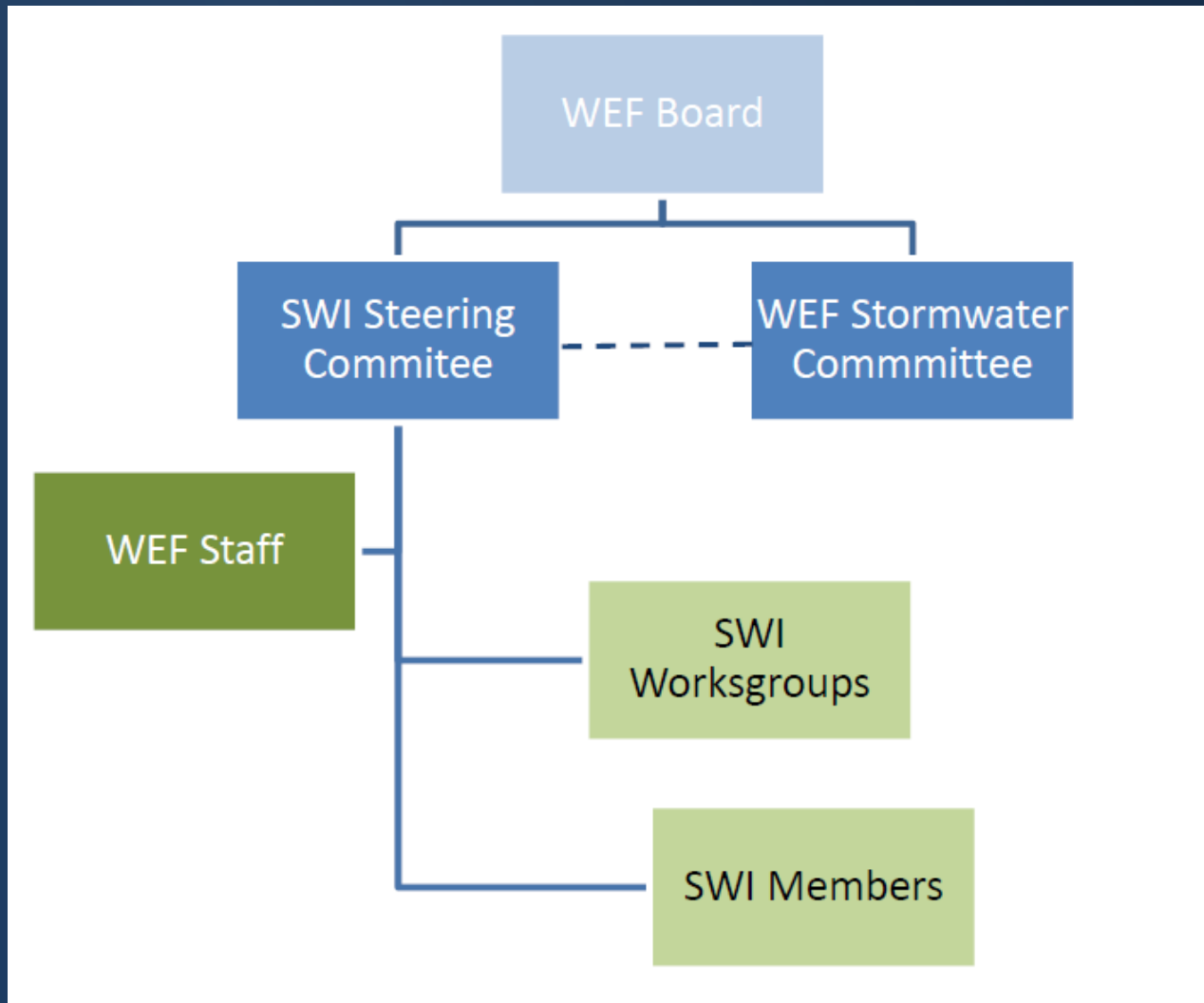
# Stormwater Institute (SWI)

- A center of excellence and innovation housed within WEF
- Provides a platform to develop best practices and share better approaches to stormwater management
- Ability to develop programs, services, and tools more quickly to meet priority needs
- Programs are SWI Member funded/guided
- Options for collaborative funding for additional key initiatives
- Ability to leverage and complement ongoing and proposed WEF stormwater programs

<http://wefstormwaterinstitute.org/>



# SWI Structure



# SWI Advisory Committee

Sandra Ralston- Chair

Fernando Pasquel-  
Vice Chair

Katherine Baer

Michael Beezhold

Amber Clayton

Jim Gibson, Jr.

Douglas C. Howie, P.E.

James Lenhart, P.E., D.WRE

William Sheriff , P.E.

Amy Siebert, P.E.

Scott Taylor, P.E., D.WRE

Robert Traver, Ph.D., P.E.,  
D.WRE

Consensus LLC

Arcadis U.S., Inc.

River Network

HDR, Inc. - WEF Stormwater Committee  
Appointment

City of Portland Environmental Services, OR

Sanitation District No. 1 of Northern  
Kentucky

Washington State Department of Ecology

Contech Engineered Solutions LLC

Metropolitan Water Reclamation  
District of Greater Chicago, IL

Town of Greenwich, CT

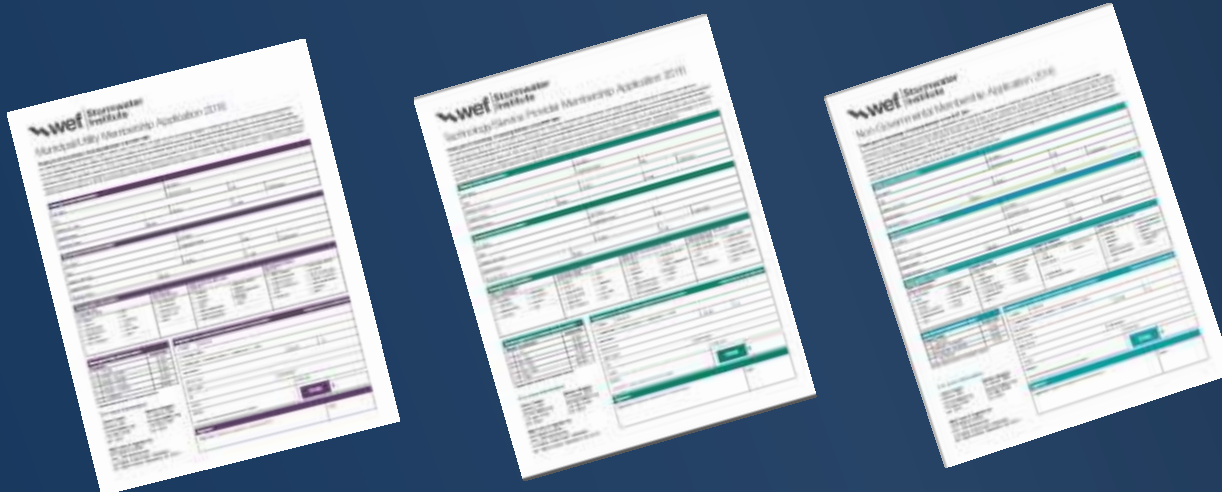
RBF Consulting, A Company of Michael Baker  
International LLC - Nat'l Municipal Stormwater Alliance

Villanova University



# SWI Membership

- Programs are SWI Member funded/guided
- Membership Categories
  - Municipal/Utility
    - Sliding scale based on population
  - Technology/Service Providers
    - Sliding scale based on number of stormwater employees
  - Non-Governmental
    - Sliding scale based on annual budget
  - Governmental Agencies
    - Sliding scale based on level of government



# Benefits of SWI Membership

- SWI Member names will be included in official SWI publications
- Receive special recognition at WEFTEC and SWI events
- SWI webpage will provide links to SWI Member websites
- Participate in SWI Program/Services priority setting
- Participate in SWI bi-annual State of Stormwater Report
- Receive invitations to participate in SWI special events
- Attend special SWI Member invitation only networking events



# Benefits of SWI Membership (cont.)

- Receive regular updates on SWI programs and other targeted SW communication
- Participate in SWI sub-committees to develop or review SWI products and services
- Receive World Water Stormwater Management magazine
- Ability to propose or participate in SWI Targeted Collaborative Programs (TCP)
- Receive briefings on SW legislative issues
- Participate in providing technical input on SW related rulemaking
- Participate in SW focused WEF Congressional Fly-In event



# SWI Members – Municipal/Utility

- Boston Water and Sewer Commission, MA
- Capital Region Water, Harrisburg, PA
- Capitol Region Watershed District, Saint Paul, MN
- City of Baltimore Department of Public Works, MD
- DC Department of Energy & Environment
- DC Water and Sewer Authority
- Fairfax County, VA
- Kansas City Water Services, MO
- Metropolitan Sewer District Louisville, KY
- Metropolitan Sewer District of Greater Cincinnati, OH
- Metropolitan Water Reclamation District of Greater Chicago, IL
- Milwaukee Metropolitan Sewerage District, WI
- Montgomery County Department of Environmental Protection, MD
- New Orleans Coalition, LA
- Pittsburgh Water and Sewer Authority, PA
- San Francisco Public Utilities Commission, CA





# SWI Members – Technology/Service Provider

- Arcadis
- BaySaver Technologies
- Black & Veatch Corporation
- Contech Engineered Solutions, LLC
- Convergent Water Technologies
- EA Engineering, Science, and Technology, Inc., PBC
- Greyline Instruments
- Haskell
- Herrera Environmental Consultants
- Larry Walker Associates
- LimnoTech

# SWI Current Priority Focus Areas

- Technical Innovation
- Sustainable Financing
- Communication/Education
- Policy





# SUPPORT INNOVATION AND BEST PRACTICES

# SWI Innovation & Best Practices Activities

## Current

- STEPP Framework

## Forthcoming

- Oregon Dept. of Transportation Stormwater Technology Testing Center (STTC)
- WEF part of team with 3 year contract to facilitate facility operation
  - WEF providing technical expertise and SW BMP monitoring experience advice
  - Facility to align work with proposed STEPP testing protocols
  - WEF promoting and recruiting innovative technologies to participate
- Facility focus is on SW BMP lifecycle analysis and O&M
  - When does BMP failure occur if systems properly maintained?
- WEF to disseminate resulting information to our membership and SW sector



A close-up photograph of a hand dropping a coin into a white piggy bank. The piggy bank is in the foreground, and the hand is in the upper right. The background is a window with a view of green foliage. A blue horizontal bar is overlaid across the middle of the image, containing the text 'CLOSING THE FUNDING GAP' in white capital letters.

# CLOSING THE FUNDING GAP

# SWI Funding and Financing Activities

## Current

- Stormwater Finance Forum
  - Participant hosted by the New England Environmental Finance Center, the University of New Hampshire Stormwater Center, and EPA.
- Alternative SW Financing Workshop
  - Co-host with National Network for Water Quality Trading and the Willamette Partnership

## Forthcoming

- American Rivers/Great Lake Protection Fund (Phase II)
  - Partnership with NGO American Rivers, building on past successful grant
  - Focus on leveraging marketplace financing/incentives to accelerate GI adoption
  - Linkages to SW Utility programs and volumetric water quality trading/offsets to be explored
  - Work in Grand Rapids, MI and Northeast Ohio Regional Sewer District (metro Cleveland area)



A close-up photograph of water flowing through a metal grate on a cobblestone surface. The water is clear and creates ripples as it moves. The grate is made of dark metal bars. The cobblestones are light-colored and have a rough texture. A semi-transparent blue banner is overlaid on the left side of the image, containing the text 'MANAGE ASSESTS & RESOURCES'.

# MANAGE ASSESTS & RESOURCES

# SWI Managing Assets and Resources Activities

## Current

- National Green Infrastructure Certification Program – SWI-TCP Members
  - Program completed
  - 1<sup>st</sup> testing December 2016
- Alternative SW Financing Workshop
  - Co-host with National Network for Water Quality Trading and the Willamette Partnership

## Forthcoming

- MS4 Survey - 2017



NATIONAL  
GREEN  
INFRASTRUCTURE  
CERTIFICATION  
PROGRAM •

ngicp



# A Local and National Interest and Need Exists...

- **Comprehensive Program**
  - Led by independent, national third-party organization with respected stormwater credentials
  - Implemented nationally in jurisdictions with GI programs
- **Standards for GI Construction, Maintenance and Inspection**
  - Supports long-term performance of GI facilities required by NPDES Permit requirements
  - Covers full life-cycle of GI
- **Certification not Certificate**
  - Targeted for under/unemployed
  - Establishes career path for GI workers (construction, maintenance, inspection – not design focused)
- **Long-Term Sustainability/Viability**
  - Contract requirements for GI workers to hold certification
  - National model rolled-out regionally to ensure local requirements are achieved and national program is sustainable

DC Water Pilot Green Roof  
Maintenance Training Program



# Objectives of NGICP

- Ensure that a skilled labor pool is prepared to install, inspect and maintain GI facilities
  - Draft eligibility requirements include candidates having a high school diploma or GED *and* having participated in GI construction, inspection and maintenance training (min 40 hours combined classroom and field time)
- Support sustainable performance of GI practices
- Create perennial GI jobs that will pay a living wage to unemployed or underemployed local residents



Green Roof on DC  
Water's Fort Reno  
Reservoir



# Current NGICP Municipal/Utility Partners

- Milwaukee Metropolitan Sewerage District (MMSD)
- Montgomery County, Maryland
- Kansas City Water Services Department, Missouri
- Fairfax County, Virginia
- Baltimore Department of Public Works, Maryland
- Louisville Metropolitan Sewer District, Kentucky
- San Francisco Public Utilities Commission, California
- Capital Region Water, Harrisburg, Pennsylvania
- DC Department of Energy and the Environment
- Metropolitan Water Reclamation District of Greater Chicago, Illinois
- New Orleans Coalition, Louisiana
- Pittsburgh Water and Sewer Authority, Pennsylvania
- Metropolitan Sewer District of Greater Cincinnati, Cincinnati, Ohio





A diverse group of people is silhouetted against a bright window. The sun is low on the horizon, creating a lens flare effect. The people are standing in a line, and their reflections are visible on the floor. The background shows a cityscape with tall buildings.

ENGAGE THE COMMUNITY

# Objective: Engage the Community

- Work with variety of stakeholders to build public understanding of stormwater and governance issues
- Leverage limited resources and education program goals
- Build public support for programs



A row of classical columns in a hall, with a blue banner overlaid on the middle. The columns are white and have a fluted design. The floor is made of large, light-colored tiles. The lighting is bright, creating strong shadows.

# STORMWATER POLICY & GOVERNANCE

# National Municipal Stormwater Alliance

- An alliance of state and regional groups comprised of MS4 permittees solely focused on MS4 issues
- Services to provide:
  - Sector Support and Information
  - Messaging & Communication
  - Education
  - Policy/Advocacy





# SWI Policy and Governance Activities

## Current

- Comments regarding draft 2017 Construction Stormwater Permit
  - Suggestions re wash water and demolition activity implementation (possible PCB/toxics source)
- Comments on USGS/EPA Ecological Flows Technical Report
- Comments on proposed updates to NPDES permit program
- Collaborated to produce comments to EPA regarding (proposed) MS4 Phase II Remand Rule
  - Focus not only on state elements, but specifically how small MS4 communities might be affected by proposed rules

## Forthcoming

- 2017 Water Week SWI Member Event
  - Raise SW profile
  - Regulatory rules/regulation dissemination
  - Adapting to new administration
  - Establishing WEF thought leadership
  - Develop Position Statements

# Key WEF Remand Rule Recommendations

- Permitting Authorities provide maximum flexibility to regulate MS4 programs
- EPA should adopt the State Choice Approach (Option3)
- Permitting authorities should conduct the public notice, comment, and hearing process not MS4 permittees
- Supports position to NOT provide definition of “Maximum Extent Practicable



December 18, 2015 | [0 Comments](#)

## [EPA Releases Proposed Phase II MS4 Remand Rule](#)

The U.S. Environmental Protection Agency (EPA) has released its [proposed Phase II Municipal Separate Storm Sewer System \(MS4\) permit remand rule](#). The proposed rule addresses how small MS4s seek and incorporate public comment and agency reviews into their permits. The official proposed rule was published in the *Federal Register* Jan. 6, beginning a 75-day public comment period that will conclude on March 21. The Water Environment

## 2016 NPDES Remand Rule

**Final Rule § 122.34(a):** “Terms and conditions that satisfy the requirements of this section **must be expressed in clear, specific, and measurable terms**. Such terms and conditions may include narrative, numeric, or other types of requirements (e.g., implementation of specific tasks or best management practices (BMPs), BMP design requirements, performance requirements, adaptive management requirements, schedules for implementation and maintenance, and frequency of actions).”



# 2016 NPDES Remand Rule - Key Points

- Option 3 chosen - allowing permitting authorities to choose between 2 alternative general permit types
  - 1 - Comprehensive general permit – Sec. 122.28(d)(1)—all necessary permit terms and conditions are established up front in the general permit itself, using one permit issuance procedure
  - 2 - Two-step general permit – Sec. 122.28(d)(2)- necessary permit terms and conditions are established in two steps, using two issuance procedures.
- Procedural rule - no changes are made to the substantive federal requirements for small MS4s
- All permits must be written with terms and conditions that are *“clear, specific, and measurable”*
- Compliance with final rule expected by issuance of next small MS4 general permit, if general permits are used





# Public Review and Input

Permitting procedures - CWA procedures for issuing NPDES permits must be followed for all terms and conditions that are needed to implement the MS4 permit standard and other NPDES requirements

- Public notice of proposed terms and conditions of the permit
- Opportunity to comment
- Opportunity to request a public hearing
- Permitting authority review and final determination on permit
- EPA oversight



# EPA Guidances on Permit Requirements



- MS4 Permits COMPENDIUM OF CLEAR, SPECIFIC & MEASURABLE PERMITTING EXAMPLES
  - Office of Wastewater Management Water Permits Division November 2016 EPA-830-S-16-002
- COMPENDIUM OF MS4 PERMITTING APPROACHES PART 1: SIX MINIMUM CONTROL MEASURES
  - Office of Wastewater Management Water Permits Division November 2016 EPA-810-U-16-001
- COMPENDIUM OF MS4 PERMITTING APPROACHES PART 2: POST CONSTRUCTION STANDARDS
  - Office of Wastewater Management Water Permits Division November 2016 EPA-810-R-16-017

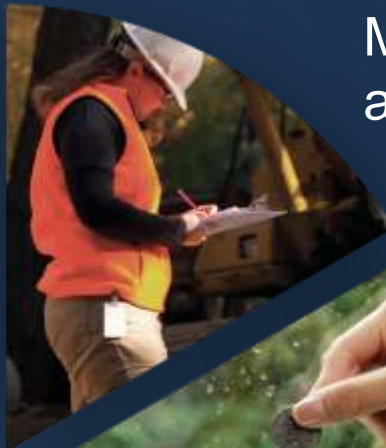
<https://www.epa.gov/npdes/municipal-sources-resources>

# SWI = Stormwater Solutions

Work at the watershed scale



Manage assets and resources



Close the funding gap



Transform stormwater governance



Engage the community



Support innovation and best practices





## Questions and Discussion

Marlou Gregory  
Sr. Advisor  
WEF-SWI  
703-684-2400  
mgregory@wef.org

Mike Beezhold  
Sr. Project Manager  
HDR  
816-783-3267  
Michael.beezhold@hdrinccom