

StormCon[®]

The Surface Water Quality Conference & Expo **2017**

Conference Course Schedule

This is a preliminary program and is subject to change.

Presentations and Expo Tuesday-Wednesday will be held at the Meydenbauer Center.

Thursday featured presentations, panel discussions and tour will be held at the Hyatt Regency Hotel

Tuesday, August 29

10:00 a.m. – 11:30 a.m.

BMP Case Studies.....	Room 406
Green Infrastructure.....	Room 405
Stormwater Program Management I.....	Room 404
Stormwater Program Management II.....	Room 402-403
Advanced Research Topics.....	Room 407-408
Water-Quality Monitoring.....	Room 409

2:00 p.m. – 3:30 p.m.

BMP Case Studies.....	Room 406
Green Infrastructure.....	Room 405
Stormwater Program Management I.....	Room 404
Stormwater Program Management II.....	Room 402-403
Advanced Research Topics.....	Room 407-408
Industrial Stormwater Management.....	Room 409

4:00 p.m. – 5:30 p.m.

BMP Case Studies.....	Room 406
Green Infrastructure.....	Room 405
Stormwater Program Management I.....	Room 404
Stormwater Program Management II.....	Room 402-403
Advanced Research Topics.....	Room 407-408
Water-Quality Monitoring.....	Room 409

Wednesday, August 30

8:00 a.m. – 9:30 a.m.

BMP Case Studies.....	Room 406
Green Infrastructure.....	Room 405
Stormwater Program Management I.....	Room 404
Stormwater Program Management II.....	Room 402-403
Advanced Research Topics.....	Room 407-408
Industrial Stormwater Management.....	Room 409

10:00 a.m. – 11:30 a.m.

BMP Case Studies.....	Room 406
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3:30 p.m. – 5:00 p.m.

BMP Case Studies.....	Room 406
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5:00 p.m. – 6:00 p.m.

BMP Case Studies.....	Room 406
Green Infrastructure	Room 405
Stormwater Program Management I	Room 404
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Advanced Research Topics	Room 407-408
Water-Quality Monitoring	Room 409

Thursday, August 31

8:00 a.m. – 12:00 p.m.

All Thursday sessions will be held at the Hyatt Regency Bellevue Hotel
(Room numbers to be determined. Each session will be one or more hours in length and will end at 12 noon)

Hot Topic Sessions

Panel Discussions:

Urban Flooding: Learning to Walk on Water

Stormwater Infrastructure Policies - A Management Perspective

Special Sessions:

EPA – An update on EPA stormwater program

Rethinking Urban Water Management: Integrating Natural and Engineered Systems

Tour:

Stormwater Bus Tour: Stormcon 2017 City of Tacoma Point Defiance Park and Port of Tacoma
(Bus leaving hotel lobby at 8am)

Program Tracks

BMP Case Studies

Examples of structural and nonstructural best management practices to achieve water-quality goals

Green Infrastructure

Low impact development (LID) techniques as well as smart growth and other green infrastructure practices

Stormwater Program Management

Funding, public education and outreach, staffing, regulatory compliance, and other elements of managing a successful program

Water-Quality Monitoring

Water-quality assessment, monitoring and sampling techniques, and modeling practices

Industrial Stormwater Management

Industrial stormwater management and permitting, focusing on publicly and privately owned facilities covered by industrial stormwater permits or EPA's stormwater multi-sector general permit

Advanced Research Topics

Comparing BMP performance, evaluating testing protocols, and trends in stormwater research

Conference Courses

This is a preliminary program and is subject to change.

Tuesday, August 29, 10:00 – 11:30 a.m.

BMP CASE STUDIES

Room 406

B11 10:00 – 10:30 a.m.

Reducing Soluble Phosphorus Loads in an Agricultural Watershed

Rebecca Carlson, Wenck, Golden Valley, MN
Cole Loewen, Clearwater River Watershed District, Annandale, MN

B12 10:30 – 11:00 a.m.

Iron-Enhanced Sand Filter Performance for Reducing Phosphorus From a Regional Stormwater Pond

Maddie Vargo, Capitol Region Watershed District, St. Paul, MN
Bob Fossum, Capitol Region Watershed District, St. Paul, MN
Britta Suppes, Capitol Region Watershed District, St. Paul, MN

B13 11:00 – 11:30 a.m.

Stormwater Management at Facilities Draining to Sediment Superfund Sites

Philip Spadaro, The Intelligence Group, Seattle, WA

GREEN INFRASTRUCTURE

Room 405

G11 10:00 – 10:30 a.m.

Developing a Monitoring Program to Assess Large-Scale Implementation of Green Infrastructure in Washington, DC

Nikolaos Apsilidis, Greeley and Hansen, Alexandria, VA
Bethany Bezak, District of Columbia Water and Sewer Authority, Washington, DC

G12 10:30 – 11:00 a.m.

Lifecycle of Green Infrastructure: Evaluations Five Years After NYC Pilot Implementation

Matthew Jones, Hazen and Sawyer, Raleigh, NC

G13 11:00 – 11:30 a.m.

Low Impact Development Monitoring, Open Data Strategy, Tracking, and Assessment: California LID Evaluation and Analysis Network

Daniel Apt, Olaunu, San Clemente, CA

STORMWATER PROGRAM MANAGEMENT I

Room 404

P11 10:00 – 10:30 a.m.

How Do You Know Your Stormwater Program Is Working? Developing Measuring Sticks to Demonstrate Effectiveness

Art Jenkins, City of Spokane Valley, WA
Aimee Navickis-Brasch, HDR, Spokane, WA

P12 10:30 – 11:00 a.m.

Streamlining Onsite Stormwater Management: Helping Municipalities and Developers Implement New Stormwater Requirements in Washington State

Rebecca Dugopolski, Herrera Environmental Consultants, Seattle, WA
Bill Blake, City of Arlington, WA
Jonathan Boehme, City of Port Angeles, WA

P13 11:00 – 11:30 a.m.

Improving Your MS4 Program Through Use of a Simulated Audit

Mark Van Auken, Arcadis, Raleigh, NC

STORMWATER PROGRAM MANAGEMENT II

Room 402-403

P14 10:00 – 10:30 a.m.

Tacoma's Regional Facilities Payment In-Lieu-of Construction Program for NPDES Stormwater Treatment and Flow Control Requirements

Dana de Leon, City of Tacoma, WA

P15 10:30 – 11:00 a.m.

Empowering Community Partners to Build Green Infrastructure in the Bluegrass

Christopher Dent, Lexington-Fayette Urban County Government, Lexington, KY

P16 11:00 – 11:30 a.m.

Multi-Source Funding: Keeping the MS4 Stormwater Program at the University of Virginia Ahead of the Curve

Jeffrey Sittler, University of Virginia, Charlottesville, VA

Kristin Carter, University of Virginia, Charlottesville, VA

ADVANCED RESEARCH TOPICS

Room 407-408

R11 10:00 – 10:30 a.m.

Microbial Source Tracking, Pathogen Measurements, and Illness Risk During Wet Weather: The Nation's First QMRA Case Study at a Marine Beach

Kenneth Schiff, Southern California Coastal Water Research Project, Costa Mesa, CA

R12 10:30 – 11:00 a.m.

What Happens When Stormwater Discharges Are the Cause But Not the Source of Bacteria Violations?

Daniel Ahern, National Stormwater Center, Beaufort, SC

R13 11:00 – 11:30 a.m.

Investigation of Toxic Chemicals in Roof Runoff

Taylor Haskins, Washington State University, Puyallup, WA

Lisa Rozmyn, Washington State University, Puyallup, WA

WATER-QUALITY MONITORING

Room 409

Q11 10:00 – 10:30 a.m.

Advances in Microbial Source Tracking for Bacteria TMDLs

Tony Hancock, Brown and Caldwell, San Diego, CA

Lisa Skutecki, Brown and Caldwell, San Diego, CA

Q12 10:30 – 11:00 a.m.

Sediment Trap Pilot Project

James Packman, Aspect Consulting, Seattle, WA

Beth Schmoyer, Seattle Public Utilities, Seattle, WA

Q13 11:00 – 11:30 a.m.

Using Multiple Lines of Evidence to Prove Contamination of a Water Supply Lake by Septic Systems

Rob Zisette, Herrera Environmental Consultants, Seattle, WA

Tuesday, August 29, 2:00 – 3:30 p.m.

BMP CASE STUDIES

Room 406

B21 2:00 – 2:30 p.m.

Bioretention Hydrologic Performance Modeling

Douglas Beyerlein, Clear Creek Solutions, Mill Creek, WA

B22 2:30 – 3:00 p.m.

Combined Sewer Overflow Reduction Facilities: It All Flows Downhill

Jason Ziemer, Clear Creek Systems, Pacific, WA

B23 3:00 – 3:30 p.m.

Stormwater Nutrient Reduction Using Riparian Buffers and Upland Urban Forest Systems

Eric Kuehler, USDA Forest Service, Athens, GA

Jennifer Miller, Arcadis US, Atlanta, GA

GREEN INFRASTRUCTURE

Room 405

G21 2:00 – 2:30 p.m.

Are Parks the CSO Solution? Lessons Learned from Omaha Parks Designed to Reduce CSOs

Ryan Bentley, Big Muddy Workshop, Omaha, NE

Thomas Bentley, Vireo, Omaha, NE

G22 2:30 – 3:00 p.m.

Evolution of Integrating Green Infrastructure in Spokane, WA

Marcia Davis, City of Spokane, WA

Mark Papich, City of Spokane, WA

G23 3:00 – 3:30 p.m.

Fleet Avenue Green Street Uses Vacant Lot for CSO Reduction

Thomas Evans, AECOM, Cleveland, OH

STORMWATER PROGRAM MANAGEMENT I

Room 404

P21 2:00 – 2:30 p.m.

Stormwater Credit Trading Program Architecture: Practical Advice for Increasing Program Flexibility and Reducing TMDL Compliance Cost While Avoiding Unintended Consequences

Vaikko Allen, Contech Engineered Solutions, Ojai, CA

Derek Berg, Contech Engineered Solutions, Scarborough, ME

P22 2:30 – 3:00 p.m.

Can Trading and Incentives Drive Stormwater Infrastructure Investment? Feedback on a National Dialogue on Market-Based Approaches to Stormwater

Seth Brown, Storm and Stream Solutions, Alexandria, VA

Carrie Sanneman, Willamette Partnership, Portland, OR

Chad Praul, Environmental Incentives, South Lake Tahoe, CA

Chris French, Water Environment Federation, Alexandria, VA

P23 3:00 – 3:30 p.m.

Closing the Gap: Leveraging Impact Capital to Deliver Green Infrastructure Programs

Rowan Roderick-Jones, NatureVest at the Nature Conservancy, San Francisco, CA

Carrie Sanneman, Willamette Partnership, Portland, OR

STORMWATER PROGRAM MANAGEMENT II

Room 402-403

P24 2:00 – 2:30 p.m.

Risky Business? Development and Implementation of a Risk Management Program for Green Infrastructure in the Nation's Capital

Bethany Bezak, DC Water, Washington, DC

P25 2:30 – 3:00 p.m.

Seeking Partners for Green Stormwater Infrastructure in Seattle

Dustin Atchison, CH2M, Bellevue, WA

Shanti Colwell, Seattle Public Utilities, Seattle, WA

P26 3:00 – 3:30 p.m.

Street-Scale, Strategic Green Infrastructure Planning in the City of Los Angeles

Dawn Petschauer, City of Los Angeles Watershed Protection Division, Los Angeles, CA

Brad Wardynski, Tetra Tech, San Diego, CA

ADVANCED RESEARCH TOPICS

Room 407-408

R21 2:00 – 2:30 p.m.

Bioretention Hydrologic Performance of 10 Facilities Located Throughout the Puget Sound Basin

William (Bill) Taylor, Taylor Aquatic Science, Seattle, WA

R22 2:30 – 3:00 p.m.

Evaluating the Effectiveness of Permeable Asphalt for Treatment of Stormwater Runoff

Clara Olson, Parametrix, Puyallup, WA

Garrett Benson, Redmond, WA

Sarah Penso, Curitiba, Brazil

Emily Zikmund, State College, PA

R23 3:00 – 3:30 p.m.

Plant Growth Characteristics in New High-Performance Bioretention Media

Curtis Hinman, Herrera Environmental Consultants, Seattle, WA

Chris May, Kitsap County Public Works, Port Orchard, WA

INDUSTRIAL STORMWATER MANAGEMENT

Room 409

D21 2:00 – 2:30 p.m.

Recent Developments and Emerging Trends in State and Federal Industrial Stormwater Regulation: The Potential Future Implications for Stormwater Management and Compliance for Dischargers at Industrial Facilities

Jonathan Meronek, SCS Engineers, Santa Rosa, CA

D22 2:30 – 3:00 p.m.

Container Terminal Stormwater Treatment on a Superfund Site

Stephen Bentsen, Floyd|Snider, Seattle, WA

D23 3:00 – 3:30 p.m.

A Solution to Water-Quality Challenges at Petroleum Facilities

Tom Atkins, Aspect Consulting, Seattle, WA

Tuesday, August 29, 4:00 – 5:30 p.m.

BMP CASE STUDIES

Room 406

B31 4:00 – 4:30 p.m.

Optimizing Pollutant Removal in Stormwater Ponds

Todd Shoemaker, Wenck Associates, Woodbury, MN

Brian Beck, Wenck Associates, Golden Valley, MN

B32 4:30 – 5:00 p.m.

Effectiveness of Stormwater Retrofits for Treating Highway Runoff to Echo Lake

Carly Greyell, King County, WA

B33 5:00 – 5:30 p.m.

Improved Durability and Structural Performance of Pervious Pavements Reinforced With Recycled Carbon Fiber Composites

Karl Englund, Washington State University, Pullman, WA

Kenneth Fischer, The Boeing Company, Kent, WA

GREEN INFRASTRUCTURE

Room 405

G31 4:00 – 4:30 p.m.

Minnehaha Creek Greenway: Bridging Land Use and Water Resource Planning

Rena Clark, Minnehaha Creek Watershed District, Minnetonka, MN

Chris Meehan, Wenck Associates, Golden Valley, MN

G32 4:30 – 5:00 p.m.

Making Green Infrastructure Mainstream in Vancouver, BC

Melina Scholefield, City of Vancouver, BC

G33 5:00 – 5:30 p.m.

It's Not Easy Being Green: Planning and Design for GI

Jesse Williams, CH2M, Bellevue, WA

April Mills, Seattle Public Utilities, Seattle, WA

STORMWATER PROGRAM MANAGEMENT I

Room 404

P31 4:00 – 4:30 p.m.

Reaching the Construction Industry: Clean Water Contractors

Melissa Fetter, Erie Soil and Water Conservation District, Sandusky, OH

Emily Kuzmick, Old Woman Creek National Estuarine Research Reserve, Huron, OH

P32 4:30 – 5:00 p.m.

Protecting Shellfish One Rain Garden at a Time

Brian Stahl, Kitsap Conservation District, Poulsbo, WA

P33 5:00 – 5:30 p.m.

Collaborating to Reach MS4 Public Education and Outreach Goals: A Regional Approach

Jessica Wenger, University of Virginia, Charlottesville, VA

Jeff Sittler, University of Virginia, Charlottesville, VA

STORMWATER PROGRAM MANAGEMENT II

Room 402-403

P34 4:00 – 4:30 p.m.

Tracking MS4 Jurisdictional Outfalls in a Linear ROW: Experience from NMDOT

Kelly Collins, CDM Smith, Albuquerque, NM

P35 4:30 – 5:00 p.m.

A Standardized Approach to Stormwater Mapping

Colleen Diessner, King County, Seattle, WA

P36 5:00 – 5:30 p.m.

Automated Stormwater Drainage Delineation for MS4 Permit Compliance

Becca Stoner, Arcadis, Richmond, VA

ADVANCED RESEARCH TOPICS

Room 407-408

R31 4:00 – 4:30 p.m.

An Evaluation of the Treatment Performance of a Bioretention Soil Media Mix Located in a Semi-Arid Region

Kyler Higgins, Spokane County, Bremerton, WA

Garrett Goudy, Medina, WA

Lacey Mehler, Seattle, WA

Russel Groves, Seattle, WA

Satya Dhital, Spokane, WA

R32 4:30 – 5:00 p.m.

Swale on Yale: Innovative Regional Green Stormwater Infrastructure in an Urban Neighborhood

Dylan Ahearn, Herrera Environmental Consultants, Seattle, WA

Doug Hutchinson, Seattle Public Utilities, Seattle, WA

R33 5:00 – 5:30 p.m.

Urban Stormwater Management Starts on the Roof: Computer Performance Modeling to Reveal Best Green Roof Design Requirements

Jure Sumi, Knauf Insulation, Shelbyville, IN

WATER-QUALITY MONITORING

Room 409

Q31 4:00 – 4:30 p.m.

Regional Approaches to Permit-Required Monitoring

Karen Dinicola, Washington State Department of Ecology, Olympia, WA

Q32 4:30 – 5:00 p.m.

A Regional Stormwater Monitoring Program in Washington

Brandi Lubliner, Washington State Department of Ecology, Olympia, WA

Q33 5:00 – 5:30 p.m.

How Toxic Is Your Stormwater?

Kenneth Schiff, Southern California Coastal Water Research Project, Costa Mesa, CA

Wednesday, August 30, 8:00 – 9:30 a.m.

BMP CASE STUDIES

Room 406

B41 8:00 – 8:30 a.m.

Catalyzing Urban Watershed Retrofitting Through Targeted Planning to Effective Implementation

Rick Schaefer, Tetra Tech, Seattle, WA

Robert Edwards, City of Edmonds, WA

B42 8:30 – 9:00 a.m.

Integrating Surface Water Quality Improvements Into Coastal Restoration: An Urban Retrofit BMP Case Study

Steve Gruber, Burns and McDonnell Engineering, La Jolla, CA

Brian Weiss, Burns and McDonnell Engineering, Kansas City, MS

Bob Stein, City of Newport Beach, CA

B43 9:00 – 9:30 a.m.

Urban School Retrofits: Sending Stormwater to Detention

Nate Zwonitzer, Capitol Region Watershed District, St. Paul, MN

GREEN INFRASTRUCTURE

Room 405

G41 8:00 – 8:30 a.m.

Where the Wild Things Are: RiverSmart Schools Integrating Design for Outdoor Education and Stormwater Management

P. Trinh Doan, District Department of Energy and Environment, Washington, DC

G42 8:30 – 9:00 a.m.

BikeShare Partnership: Using Bike Tours to Showcase Green Infrastructure

Heather Williams, Amec Foster Wheeler, Indianapolis, IN

Nancy Cho, Amec Foster Wheeler, Indianapolis, IN

G43 9:00 – 9:30 a.m.

Decatur WAY Creates a Green Opportunity in Lowell

James Drake, CDM Smith, Manchester, NH

STORMWATER PROGRAM MANAGEMENT I

Room 404

P41 8:00 – 8:30 a.m.

Bellevue's Approach to Stormwater Management

Don McQuilliams, City of Bellevue, WA

P42 8:30 – 9:00 a.m.

Innovative Program Management for Restoration and Retrofit

Sheri Lott, Anne Arundel County Watershed Protection and Restoration Program, Annapolis, MD

P43 9:00 – 9:30 a.m.

Transforming Springfield's Mill Race Into a Community Asset

Dan Schall, Amec Foster Wheeler, Portland, OR

STORMWATER PROGRAM MANAGEMENT II

Room 402-403

P44 8:00 – 8:30 a.m.

Approaches for Determining and Complying With TMDL Requirements Related to Stormwater Runoff

Anna Lantin, Michael Baker International, Irvine, CA

P45 8:30 – 9:00 a.m.

Watershed-Based Stormwater Permit Compliance: Opportunities and Lessons Learned

Heather Merenda, City of Santa Clarita, CA

P46 9:00 – 9:30 a.m.

Going Mobile: Bellevue's Approach to Developing a Mobile Workforce
Don McQuilliams, City of Bellevue, WA

ADVANCED RESEARCH TOPICS

Room 407-408

R41 8:00 – 8:30 a.m.

Evaluating Urban Air Deposition on an Industrial Facility in Seattle
Stephen Bentsen, Floyd|Snider, Seattle, WA

R42 8:30 – 9:00 a.m.

Zooming in on Particle Size: Understanding Metals in Industrial Stormwater
Alan Flemming, Kennedy/Jenks Consultants, Portland, OR

R43 9:00 – 9:30 a.m.

Particle Size Matters: How to Use PSD Analysis and Metal Solubility Curves to Make Better Treatment Decisions
TJ Mothersbaugh, WaterTectonics, Everett, WA

INDUSTRIAL STORMWATER MANAGEMENT

Room 409

D41 8:00 – 8:30 a.m.

Port of Port Angeles: Evaluation of Stormwater Treatment and Conveyance Options at an Industrial Facility With Cultural Resources
Laura Weiden, Kennedy/Jenks Consultants, Federal Way, WA

D42 8:30 – 9:00 a.m.

Industrial Stormwater Treatment Along the Lower Duwamish Waterway
Nathan Holloway, Clear Water Services, Everett, WA

D43 9:00 – 9:30 a.m.

Removing Copper From Stormwater at a Small Foundry
Paul Eger, Global Minerals Engineering, Hibbing, MN

Wednesday, August 30, 10:00 – 11:30 a.m.

BMP CASE STUDIES

Room 406

B51 10:00 – 10:30 a.m.

PennDOT Collaborates With Universities Along I-95 in Philadelphia to Understand SMP Maintenance

Edwina Lam, AECOM, Conshohocken, PA

Eric Henery, AECOM, Conshohocken, PA

B52 10:30 – 11:00 a.m.

Diagnosing and Repairing a Stormwater Management System: The Good, the Bad, and the Ugly

Steve Thibaudeau, US Army Corps of Engineers, Louisville, KY

Tara O'Leary, US Army Corps of Engineers, Louisville, KY

B53 11:00 – 11:30 a.m.

Targeted Watershed IDDE Investigations

Brian Behrens, Woolpert, Greenville, SC

GREEN INFRASTRUCTURE

Room 405

G51 10:00 – 10:30 a.m.

Story of Stormwater Restoration: Green Infrastructure in the 63-Acre Breewood Tributary

Christy Ciarametaro, Montgomery County Department of Environmental Protection, Rockville, MD

Lisa Feldt, Montgomery County Department of Environmental Protection, Rockville, MD

G52 10:30 – 11:00 a.m.

Sustainable Stormwater Analysis for the Ford Site Redevelopment, St. Paul, MN

Bob Fossum, Capitol Region Watershed District, St. Paul, MN

Wes Saunders-Pearce, City of St. Paul, MN

G53 11:00 – 11:30 a.m.

Manchester Stormwater Park

Christopher May, Kitsap County Public Works, Port Orchard, WA

STORMWATER PROGRAM MANAGEMENT I

Room 404

P51 10:00 – 10:30 a.m.

Where Drinking Water Meets Stormwater

Kim Swan, Clackamas River Water Providers, Oregon City, OR

P52 10:30 – 11:00 a.m.

Flow Restoration Planning in the Stormwater Impaired Potash Brook Watershed, South Burlington, VT

Andres Torizzo, Watershed Consulting Associates, Burlington, VT

Kerrie Garvey, Watershed Consulting Associates, Burlington, VT

P53 11:00 – 11:30 a.m.

Watershed-Scale Stormwater Modeling and Planning in a Watershed Dominated by Groundwater

Tom Kantz, Pierce County Public Works, Tacoma, WA

STORMWATER PROGRAM MANAGEMENT II

Room 402-403

P54 10:00 – 10:30 a.m.

Watershed Approach to Recovering Urban Streams: Developing the Plan

Andy Rheume, City of Redmond, WA

P55 10:30 – 11:00 a.m.

Watershed Approach to Recovering Urban Streams: Tosh Creek Case Study

Steve Hitch, City of Redmond, WA

Beth Peterson, HDR, Bellevue, WA

P56 11:00 – 11:30 a.m.

Watershed Approach to Recovering Urban Streams: Monticello Creek Case Study Using SUSTAIN

Eric LaFrance, City of Redmond, WA

Tarelle Osborn, Osborn Consulting, Bellevue, WA

ADVANCED RESEARCH TOPICS

Room 407-408

R51 10:00 – 10:30 a.m.

The Case for Performing Historical Research to Understand Stormwater Conveyance System Evolution

Emily Jones, Floyd|Snider, Seattle, WA

Lisa Meoli, Floyd|Snider, Seattle, WA

R52 10:30 – 11:00 a.m.

Stormwater Technology Testing Center: A State-of-the-Art Facility for Evaluating the Maintenance Requirements and Performance of Emerging Stormwater Treatment Technologies

John Lenth, Herrera Environmental Consultants, Seattle, WA

Paul Wirfs, Oregon Department of Transportation, Salem, OR

R53 11:00 – 11:30 a.m.

Overcoming Design Waste With Clear Visualization of Green Infrastructure Design

Zach Sample, XP Solutions, Portland, OR

Ashley Francis, Magnusson Klemencic Associates (MKA), Seattle, WA

WATER-QUALITY MONITORING

Room 409

Q51 10:00 – 10:30 a.m.

Locating Sewage Discharges Into Surface Waters Using Autonomous Dataloggers, or Why It Is Not Appropriate to Just Grab

Jonathan D. Frodge, Seattle Public Utilities, Seattle, WA

Q52 10:30 – 11:00 a.m.

Low-Cost, Open-Source Wireless Sensing and Control for Smart Stormwater Management

Anthony Aufdenkampe, LimnoTech, Oakdale, MN

Q53 11:00 – 11:30 a.m.

Lessons Learned in Stormwater Monitoring

Mick Bartlett, San Antonio River Authority, San Antonio, TX

Wednesday, August 30, 2:00 – 3:00 p.m.

BMP CASE STUDIES

Room 406

B61 2:00 – 2:30 p.m.

Safe Conveyance of Rare Storm Events

Brian Wagner, KCI Technologies, Sparks, MD

B62 2:30 – 3:00 p.m.

Effectiveness of Low Impact Development Design in Poorly Draining Soils in British Columbia's Lower Mainland

Sara Pour, Kerr Wood Leidal, Burnaby, BC

GREEN INFRASTRUCTURE

Room 405

G61 2:00 – 2:30 p.m.

Kickstarting a GI Program: Choosing the Locations and Types of GI for Your Initial Projects

Caitlin Feehan, DC Water, Washington, DC

G62 2:30 – 3:00 p.m.

Collaborative Approach for Development of the City of Rochester/Monroe County (NY) Green Infrastructure Retrofit Design Manual

David Hanny, Barton and Loguidice, Rochester, NY

Thomas Robinson, Barton and Loguidice, Rochester, NY

STORMWATER PROGRAM MANAGEMENT I

Room 404

P61 2:00 – 2:30 p.m.

Stormwater BMP Tracking Database

Alan Barrows, Waukesha County, WI

P62 2:30 – 3:00 p.m.

Asset Management: Telling a Comprehensive Story for Stormwater Management

Uki Dele, City of Shoreline, WA

STORMWATER PROGRAM MANAGEMENT II

Room 402-403

P63 2:00 – 2:30 p.m.

The RainReady Approach: Linking Municipalities and Residents to Manage Combined Sewer Basement Backup

Marcella Bondie Keenan, Center for Neighborhood Technology, Chicago, IL

Deanna Doohaluk, The Conservation Foundation, Naperville, IL

Anna Wolf, Center for Neighborhood Technology, Chicago, IL

P64 2:30 – 3:00 p.m.

Rain Check: Residential Stormwater Management in Philadelphia

Zachary Popkin, Pennsylvania Horticultural Society, Philadelphia, PA

ADVANCED RESEARCH TOPICS

Room 407-408

R61 2:00 – 2:30 p.m.

The Green Planning Committee: Taking Onondaga County Save the Rain to the Next Level

Zachary Monge, CH2M Hill, Syracuse, NY

R62 2:30 – 3:00 p.m.

Two Tales of Stormwater Education and Outreach Effectiveness Studies: The Study and the QAPP

Aimee Navickis-Brasch, HDR, Spokane, WA

Jessica Shaw, City of Wenatchee, WA

INDUSTRIAL STORMWATER MANAGEMENT

Room 409

D61 2:00 – 2:30 p.m.

Redeveloping a Shipping Terminal With Stormwater in Mind

Ross Dunning, Kennedy/Jenks Consultants, Federal Way, WA

D62 2:30 – 3:00 p.m.

Implementation of an Innovative Stormwater treatment System at Port of Olympia Marine Terminal: Overcoming Obstacles in Pursuit of Success

John Mandelin, Clear Water Services, Everett, WA

Wednesday, August 30, 3:30 – 5:00 p.m.

BMP CASE STUDIES

Room 406

B71 3:30 – 4:00 p.m.

Neighborhood Revitalization Through Collaborative Stormwater Management: Rodney Cook Sr. Park
Cory Rayburn, City of Atlanta, GA

B72 4:00 – 4:30 p.m.

Los Angeles County Public Works Project at Marina Del Rey Parking Lot 9: Creating Open Public Spaces While Treating Storm Flows

Nicole Mi, Los Angeles County Department of Public Works, Alhambra, CA
Charles Chen, Los Angeles County Department of Public Works, Alhambra, CA

B73 4:30 – 5:00 p.m.

Verification of Project Sustainability in the Staten Island Bluebelt Using Envision

Ifetayo Venner, Arcadis, Tampa, FL
Sofia Zuberbuhler-Yafar, New York City Department of Design and Construction, New York, NY

GREEN INFRASTRUCTURE

Room 405

G71 3:30 – 4:00 p.m.

California Low Impact Development Technical Assistance and Barriers Removal

Daniel Apt, Olaunu, San Clemente, CA
Darla Inglis, Central Coast LID Initiative, San Luis Obispo, CA
Wayne Carlson, AHBL, Seattle, WA

G72 4:00 – 4:30 p.m.

Lake Whatcom Homeowner Incentive Program: Retrofits on a Watershed Scale

Eli Mackiewicz, City of Bellingham, WA
Anitra Accetturo, City of Bellingham, WA

G73 4:30 – 5:00 p.m.

Watershed-Scaled Stormwater Treatment for Industrial Neighborhoods

Kate Snider, Floyd|Snider, Seattle, WA

STORMWATER PROGRAM MANAGEMENT I

Room 404

P71 3:30 – 4:00 p.m.

Unicorns and Effective Sweeping Programs: Do They Really Exist? Considerations to Improve a Street Cleaning Program

Art Jenkins, City of Spokane Valley, WA

P72 4:00 – 4:30 p.m.

A Case Study in Cured-in-Place Pipe for Stormwater Pipe Repair

John Featherstone, City of Shoreline, WA

P73 4:30 – 5:00 p.m.

Why Stormwater BMPs Are Rarely Maintained

Pasquale Napolitano, Hydro International, Portland, ME

STORMWATER PROGRAM MANAGEMENT II

Room 402-403

P74 3:30 – 4:00 p.m.

IDDE Analysis: A Five-Year Study of Phase I Data

Dan Smith, Pierce County, Tacoma, WA

P75 4:00 – 4:30 p.m.

Stormwater Source Control Effectiveness in Western Washington

James Packman, Aspect Consulting, Seattle, WA
Greg Vigoren, City of Lakewood, WA

P76 4:30 – 5:00 p.m.

From Cr*p to Clean: King County's Approaches to Wastewater Discharges to the MS4 and Receiving Waters
Jeanne Dorn, King County, Seattle, WA

ADVANCED RESEARCH TOPICS

Room 407-408

R71 3:30 – 4:00 p.m.

Biofiltration and Downspout Filter Media Evaluation for BMP Decision-Making at the Port of Vancouver, WA
Sheila Sahu, Kennedy/Jenks Consultants, Portland, OR
Matt Graves, Port of Vancouver, WA

R72 4:00 – 4:30 p.m.

South Park Water-Quality Treatment: Testing the Waters
Vicki Sironen, HDR, Bellevue, WA

R73 4:30 – 5:00 p.m.

Toward Rapidly Cleaned Out Permeable Interlocking Concrete Pavers: Initial Field Tests
Harald von Langsdorff, Uni-Group U.S.A., Caledon, ON

INDUSTRIAL STORMWATER MANAGEMENT

Room 409

D71 3:30 – 4:00 p.m.

The California Industrial General Permit and the Solid Waste Industry
Laura Carpenter, Brown and Caldwell, San Diego, CA
Sean Porter, Brown and Caldwell, San Diego, CA

D72 4:00 – 4:30 p.m.

Stormwater Management for Superfund Dump Closure in Typhoon Alley
Aaron Sutton, GHD, Tamuning, Guam
Jake Russell, Geo-Logic Associates, Grass Valley, CA

D73 4:30 – 5:00 p.m.

An Empirical Model for an Industrial Stormwater Media Filter
Jeremy Fink, Hydro International, Portland, ME

Wednesday, August 30, 5:00 – 6:00 p.m.

BMP CASE STUDIES

Room 406

B81 5:00 – 5:30 p.m.

Biotic Soil Technology for Sustainable Erosion Control, Revegetation, and Stormwater Management: Successful Case Studies
Marc Theisen, Profile Products, Signal Mountain, TN

B82 5:30 – 6:00 p.m.

Use of Skimmers to Enhance Detention Basins
James McCutchen, CCAD Engineering, Greenville, SC

GREEN INFRASTRUCTURE

Room 405

G81 5:00 – 5:30 p.m.

Floating Treatment Wetlands for Improved Stormwater Pond Functioning in Cold-Climate Regions
Rebecca Tharp, Lake Champlain Sea Grant/University of Vermont/Vermont Department of Environmental Conservation, South Burlington, VT

G82 5:30 – 6:00 p.m.

Venema GSI: Using UICs in the Right of Way

Robert Parish, Osborn Consulting, Bellevue, WA

STORMWATER PROGRAM MANAGEMENT I

Room 404

P81 5:00 – 5:30 p.m.

Stormwater Retrofit in King County

Claire Jonson, King County Water and Land Resources Division, Seattle, WA

P82 5:30 – 6:00 p.m.

Bayou Vermillion District River Remediation Projects: Dissolved Oxygen Remediation Feasibility Study

Emile Ancelet, Bayou Vermillion District, Lafayette, LA

Chris Holland, Bayou Vermillion District, Lafayette, LA

Lauren Carter, Bayou Vermillion District, Lafayette, LA

ADVANCED RESEARCH TOPICS

Room 407-408

R81 5:00 – 5:30 p.m.

Improved Methods for Stormwater Infiltration Testing

J. Scott Kindred, Kindred Hydro Inc., Mercer Island, WA

R82 5:30 – 6:00 p.m.

Full-Scale Burial Testing of Pipes and Storm Chambers

James Sprague, TRI Environmental, Anderson, SC

WATER-QUALITY MONITORING

Room 409

Q81 5:00 – 5:30 p.m.

Effective Sediment Basins Require More Than Simply Containing 250 Cubic Meters Per Hectare of Runoff

Jerald Fifield HydroDynamics Inc., Parker, CO

Q82 5:30 – 6:00 p.m.

Monitoring Methods for Green Infrastructure and Stormwater BMPs

Nitin Katiyar, HDR, Mahwah, NJ

Julie Stein, HDR, Mahwah, NJ

Thursday, August 31, 8:00 – 12:00 p.m.

Thursday sessions are open to all attendees and will be held in the Hyatt Regency Bellevue Hotel. Start times and room numbers will be made available as we get closer to the event. All sessions will end by 12:00 noon.

Hot Topic Sessions

Panel Discussions

Urban Flooding: Learning to Walk on Water

Learning to “Walk on Water” means taking actions that are innovative, that transcend normal stormwater management considerations. After each session presentation, the audience will vote on whether that manager is “walking on water” or “sinking”. Each presentation will summarize with “Small steps at first”, that will set a foundation for future steps, ultimately to reduce urban flooding for many properties.

Walking on water topics include:

- 1) Understanding Rainfall from available NOAA sites
- 2) Mapping and modeling technologies
- 2) Infrastructure innovations: observing real time runoff
- 3) Long-term funding for stormwater

Panel Lead: Mark Hoskins, PE, CFM
Michael Baker International

Stormwater Infrastructure Policies - A Management Perspective

The topic, Stormwater Infrastructure Policies – A Management Perspective, will include interactive panel discussions focusing on a variety of topics related to stormwater and drainage infrastructure. Focus areas include national and regional perspectives on infrastructure conditions and needs, financial affordability/funding options, potential policy-shaping for the changing regulatory environment, and outreach/public relations strategies to address funding needs.

Panel Lead: James H. Lenhart, PE, D.WRE
Chief Technology Officer - Stormwater
Contech

Special Sessions

EPA – An update on EPA stormwater program

Additional information will be made available as we get closer to the event and once permissions' are approved.

Hosted by: EPA Region 10

Rethinking Urban Water Management: Integrating Natural and Engineered Systems

Over 80 percent of the U.S. population resides in urban areas (U.S. Census Bureau 2012). Increased urbanization (paved areas and buildings) and urban population growth exerts significant pressure on urban water demand and expansion of urban water infrastructure, i.e., potable water supplies and urban stormwater runoff control. Major characteristics of conventional urban water infrastructure are: (1) centralized and large-scale engineered systems; (2) the import of water and energy from outside urban boundaries; (3) generation of high volumes of stormwater runoff and associated contaminants; (4) deployment of extensive pipe networks to deliver potable water to consumers and a drainage network to transport stormwater runoff; and (5) the failure to plan and design integrated stormwater and potable water systems.

These urban water infrastructure characteristics, along with water scarcity concerns due to climate change, expose significant vulnerabilities to potable water supply, public health, and food production. Paradigm shift and new thinking will be essential to cope with the existing and emerging urban water problems. An integrated engineered and natural system approach aims to link urban water infrastructure and natural systems for sustainable urban water management. It envisions a holistic water and energy management system within built urban environments. This presentation will facilitate discussion and sharing of ideas and experiences that illustrate innovative solutions, particularly in the arena of low-impact stormwater management technologies and decentralized green water-infrastructure.

Speakers: Tamim Younos, Dr.Eng. and Alaina Armel, P.E.
Green Water-Infrastructure Academy, Washington, D.C.

Tour

**City of Tacoma Point Defiance Park and Port of Tacoma West Hylebos Pier Stormwater Bus Tour
(Bus leaving hotel lobby at 8am)**

The City of Tacoma and Port of Tacoma, located south of the Hyatt Regency, Bellevue in Washington, believe that sustainability and economic development go hand-in-hand and continually strive to enhance and minimize impacts on the environment. Both the Port and the City have incorporated outside-the-box stormwater management solutions at several of their facilities that are unique in the industry, providing a model for others to follow. The bus tour will showcase how green stormwater infrastructure and concepts have advanced to the next level with very small footprints to treat runoff from large industrial port facilities and vast impacted areas of the City, significantly improving the water quality of stormwater discharge to the Commencement Bay's prime salmon habitat.

Tour attendees will board buses at the Hyatt Regency for a ride to Tacoma, hosted by members of the Port and the City that managed design and construction of two biofiltration systems to address very difficult pollutant removal challenges. We'll begin at Point Defiance Park overlooking the South Puget Sound to see the unique multi-stage, cascading system that treats runoff from more than 750 acres of residential and commercial land, draining to an area of Commencement Bay, 303(d) listed for arsenic, copper, lead, and zinc.

From there we'll take a short ride to the West Hylebos Pier Log Yard, located in the heavily industrialized heart of the Port of Tacoma. We'll tour a four-stage treatment system utilizing two stages of media filtration, followed by two more stages of biofiltration to treat runoff from a 25-acre log yard containing pollutants very difficult to remove. This project was the first of its kind and has been functioning near flawlessly for over three years with minimal required maintenance.

The Ports' and City's innovative efforts strive to balance sustainable industrial activity and retrofit our urban environment with responsible waterway stewardship. Sign up for the bus tour to see some unique examples firsthand—you won't be disappointed.