PLENARY SESSIONS AND KEYNOTE PRESENTATION

Plenary Sessions | 8:40am

Beyond the Choir: building public will for clean, affordable, accessible water

Amy Skoczlas Cole, *managing director of American Public Media's Water Main*

Scientists have been sounding alarms about water issues for decades. If anything, however, the American public's awareness and willingness to act has declined. What do we know about how Americans really relate to water? How can we all do a better job of engaging the public in mobilizing action and creating solutions that transcend political, economic, geographic, and ethnic divides? What do we do when it seems even basic science lacks public trust? Amy Skoczlas Cole, managing director of American Public Media's Water Main, will share the research and strategies guiding her initiative's effort to build public will across the country for clean, affordable, accessible water.

Calling for A.C.T.I.O.N with people for clean water

John Bilotta, *Senior Research and Extension Coordinator*

The call to protect and improve water resources and to minimize our impacts requires action. Action is not just one verb, it requires a series of A.C.T.I.O.Ns. John's opening presentation will call us to action that requires us to acquire, capture, tackle, inspire, organize and negotiate with a focus on our current and future efforts around stormwater management.

Extension Engaged

Renee Pardello, *Assistant Dean University of Minnesota Extension*

The University of Minnesota Extension contributes to creating a stronger Minnesota through education and research. Asking questions about equity, responding to changing demographics, and improving diversity and inclusion across our staff, faculty and volunteers is essential in meeting our mission to make a difference by connecting community needs and University resources to address critical issues in Minnesota.

Keynote Presentation | 9:40am

Engaging People in Collaborative Modeling to Support Adaptive and Resilient Water Resources Management

Dr. Allyson Beall King, *Clinical Associate Professor, Associate Director Undergraduate Programs, School of the Environment, Washington State University*

Adaptive and resilient integrated water resource management requires us to thoughtfully integrate our knowledge of hydrologic, biogeochemical, ecological, and social systems. Collaborative modeling may be used to integrate multiple sources of information and, in so doing, create a better understanding of the system, problems, and potential solutions, as well as the types of uncertainty we face. As importantly, it helps us better understand ourselves and each other, individual contributions to current tragedies of our water commons, and how individual change may contribute to long term solutions. Highlights from collaborative modeling processes in the U.S. Inland Northwest will describe lessons learned while staying the course with basin stakeholders as they seek sustainable water resource futures.

SESSION DESCRIPTIONS

Breakout Session 1 | 10:45-11:30am

LAKES, RIVERS, & HABITAT RESTORATION

Argon Room

Hall's Island and Scherer Site Reconstruction: Planning, Community Engagement, and Design

Jon Duesman, *Project Manager, Minneapolis Park and Recreation Board*

Marcy Bean, *Capital Projects and Stewardship Specialist, Mississippi Watershed Management Organization*

Kurt Leuthold, *CE, Barr Engineering Company*

The Minneapolis Park and Recreation Board (MPRB) and its philanthropic partner, the Minneapolis Parks Foundation, have defined a long-term vision, called the RiverFirst initiative, for developing parks and trails along a 5.5-mile stretch of the upper Mississippi River waterfront. The first project to be implemented as part of RiverFirst is re-creation of historic Hall's Island and an adjacent eight-acre riverfront park. As the project moved from concept into planning, permitting challenges and stakeholder input helped form the fundamental goals of improving biodiversity and habitat connectivity while providing the public with opportunities for passive recreation and education. This presentation focuses on the planning and community engagement portions of the project, as well as some areas of the design.

STORMWATER

Discovery Hall

Transforming Central High School

Britta Hansen, *PLA, Landscape Architect, Emmons & Oliver, Inc.*

Julie Marckel, *Transforming Central Committee*

Nate Zwonitzer, *Water Resource Project Manager, Capitol Region Watershed District*

Transforming Central High School was a community effort to reshape the urban landscape of the oldest high school in Minnesota to improve students' daily experience and address the environmental impacts of the outdated campus. Grant funds through the Capitol Region Watershed District and Clean Water Funds were leveraged to treat greater than 90% of runoff in the project area while also creating a welcoming school façade that would foster learning and connection. The design includes an underground infiltration gallery, tree trenches, permeable pavers, and rain gardens to manage stormwater, while the new plaza area is defined by integrated seat-walls, additional planting areas, and an outdoor classroom. To engage the student body, stormwater monitoring equipment and interpretive educational opportunities were integrated into the Best Management Practices (BMP) designs. The project encapsulates a holistic approach to urban retrofit projects that addresses issues of equity and inclusion through the implementation of green infrastructure.

GROUNDWATER

Xenon Room

PFAS in East Metro Water Supplies: A Long Story

James Kelly, *Manager, Environmental Surveillance and Assessments, Minnesota Department of Health*

Per- and polyfluoroalkyl substances (PFAS) have captured the public's attention and concern to a degree rarely seen for other environmental contaminants. Unlike most environmental contaminants, many PFAS are not only environmentally persistent and bioaccumulative, but also highly water soluble and environmentally mobile. As a result, they have the potential to contaminate large areas of groundwater and surface water.

SESSION DESCRIPTIONS

Breakout Session 2 | 11:40am-12:25pm

LAKES, RIVERS, & HABITAT RESTORATION

Argon Room

Collaborating to Achieve Multiple Benefits of Water Resource and Transit Investments

Laura Jester, *Administrator, Bassett Creek Watershed Management Commission (BCWMC)*

Laura Scholl, *Associate Director, Metro Blooms*

Lisa Goddard, *Project Manager, Surface Water & Sewer Division of Minneapolis Public Works*

To inform redevelopment around two future light rail stations, the City of Minneapolis, BCWMC, and MPRB did a flood mitigation feasibility study to address water quality, flooding, and development challenges through an equity and empowerment lens in the Bassett Creek Valley. These efforts engaged historically underserved watershed stakeholders in an area with a long history of industrial pollution, environmental racism, and disinvestment. This project meaningfully involved communities that historically would not be able to participate in the decision-making process to co-create a shared vision.

STORMWATER

Discovery Hall

Hansen Park Comprehensive Water Management Project

Beth Carreño, *Communications and Outreach Coordinator, Rice Creek Watershed District*

Dennis McAlpine, *CE, Project Manager, Houston Engineering, Inc.*

The pond in New Brighton's Hansen Park was constructed in 1969. By 2014 the pond had filled with contaminated sediment and was surrounded by invasive hybrid cattail and reed canary grass, losing its ability to provide meaningful water quality treatment, provide aquatic wildlife habitat, and limit flows and flooding in the region. Rice Creek Watershed District and partners initiated an ambitious project at Hansen Park to provide flood control and water quality improvement for Long and Pike Lakes. This presentation will review the project components, including outreach efforts, and discuss the neighborhood's mixed responses to a water quality success story.

GROUNDWATER

Xenon Room

Sustainability of Source-Water Supply – City of Rochester

John Greer, *Senior Hydrogeologist, Barr Engineering Company*

Todd Osweiler, *Environmental and Regulatory Affairs Coordinator, Rochester Public Utilities*

Rochester Public Utilities (RPU) provides water to the residents of Rochester via 31 wells pumping from a total of five aquifers. An expected significant population increase in the Rochester area in the next 20 years will require installing as many as 18 new wells. RPU, with assistance from Barr Engineering Co., is evaluating the sustainability of pumping groundwater. To determine if future water demand will meet the four pillars of sustainability outlined in the groundwater sustainability statute, a groundwater model is being used to compare the impacts of additional future withdrawals on the aquifers and ecosystem as compared to existing conditions. RPU has engaged stakeholders in the water source sustainability evaluation.

Lunch and Design Lab | 12:25-1:30pm

Discovery Hall

Get lunch. View marketplace. Choose a table. Table conversations focused through a 'design lab' discussion guide.
See blue insert for instructions.

SESSION DESCRIPTIONS

Breakout Session 3 | 1:30-2:00pm

LAKES, RIVERS, & HABITAT RESTORATION

Argon Room

Normandale Lake Water Quality Improvement Project: Public Outreach for a Technical (and Highly Visible) Project

Erica Sniegowski, *Projects and Program Coordinator, Nine Mile Creek Watershed District*

Steve Gurney, *Water Resources Specialist, City of Bloomington*

Normandale Lake is a shallow man-made lake created by the Nine Mile Creek Watershed District as a flood control project in the City of Bloomington. Since the lake was built in the late 1970s, it has become a popular citywide amenity. However, decreasing water quality over the years led to the need for a project to improve the health of the lake. Based on an in-depth study of the lake, stakeholder input, and discussions with regulatory agencies, we developed a project focusing on two main goals: reducing internal phosphorus loads and improving the native aquatic plant community. One of the strategies selected was a drawdown of the lake to control curly-leaf pondweed. This presentation will discuss the drawdown, while focusing on the role the community played in the project and strategies used for engagement.

STORMWATER

Discovery Hall

Waste to Utility: Harnessing Stormwater in Waconia

Tim Sundby, *Water Resource Program Analyst, Carver County*

Craig Eldred, *Public Services Director, City of Waconia*

The City of Waconia had a unique opportunity to utilize a new regional pond that was constructed as part of a highway project that occurred in 2015. Working with Carver County Water Management Organization (CCWMO), a reuse system was installed to provide irrigation to developing business parcels. This also reduced the need for drinking water use, helping CCWMO meet volume reduction requirements for new construction on these sites. A large filtration basin added to the site connected to the regional pond so that water quality reduction requirements for lots receiving irrigation meet all stormwater requirements for the CCWMO. Each site can now fully utilize their lot without having to install separate water quality and volume Reduction BMPs to treat stormwater before it discharges from the site.

GROUNDWATER

Xenon Room

Irrigation Efficiency in Woodbury – Efforts to Conserve Groundwater

Kristin Seaman, *Environmental Resources Specialist, City of Woodbury*

How do you reduce water use in a community where green grass is a status symbol, even though it costs money, time, and resources? The City of Woodbury has answered this question with smart, responsible, money-saving lawns. In the last three years, the City has helped 1,500 homes transition from clock-based irrigation controllers to WaterSense certified smart controllers, with another 1,000 to be distributed in 2019. Through partnership with the Minnesota Technical Assistance Program, each controller will reduce water use by an estmated average of 30,000 gallons per household per year. The City has also encouraged 44 associations and commercial properties to make efficiency investments in large-scale irrigation systems, which are more unique and cover more acres of turf.

SESSION DESCRIPTIONS

Breakout Session 4 | 2:10-2:40pm

LAKES, RIVERS, & HABITAT RESTORATION

Argon Room

Campus Greening through Alternative Stormwater Compliance and School Community Engagement

Diana Preisen, *Community Forestry Specialist, Tree Trust*

Andy Schilling, *South Washington Watershed District*

In 2018, the South Washington Watershed District partnered with South Washington County Schools and the City of Woodbury using an alternative stormwater compliance approach for site improvements, to implement a Campus Greening Project on the shared campus of Lake Middle and Middleton Elementary schools. The result: conversion of 15 acres of turf areas to prairie, planting of more than 200 trees, and school staff and student body engaged in the process. To gain interest and support for the project, Tree Trust and the US Forest Service engaged students and staff through environmental learning in the classroom and planting of trees. The diversified landscape and other coordinated improvements (new trail construction and outdoor classrooms) will become a living laboratory and hopefully a model for other District schools.

STORMWATER

Discovery Hall

Towerside District Stormwater System: How a Minneapolis neighborhood set the stage for stormwater innovation

Richard Gilyard, *Architect; President, Prospect Park 2020 Inc.*

Marcy Bean, *Capital Project and Stewardship Specialist, Mississippi Watershed Management Organization*

Years of work by Prospect Park Neighborhood on Prospect Park 2020 has guided a vision of accessibility and sustainability, and planning of a light rail train line brought with it unprecedented opportunity to guide rapid neighborhood redevelopment. With this framework in place, the Mississippi Watershed Management Organization facilitated numerous stakeholder conversations with a central goal: to build a cost-effective district-scale stormwater system. In 2016-2017, the Towerside District Stormwater System (TDSS) was constructed in advance of development, treating water from nearly eight acres of private lands, providing habitat in an urban core, and storing water for the future developments to reuse. Not only does TDSS treat stormwater from the adjacent developments, it is a playground to neighbors and pollinators alike, setting the stage for a larger network of green infrastructure and district-scale thinking.

GROUNDWATER

Xenon Room

Reuse of Stormwater – Conserving Surface and Groundwater in the Rice Creek Watershed

Tim Olson, *Water Resources Project Manager, Bolton & Menk, Inc.*

Beth Carreño, *Communications and Outreach Coordinator, Rice Creek Watershed District*

Data collected over the last several decades indicates that rain fall is occurring at higher intensities over shorter durations, which increases the amount of stormwater that runs off the surface and restricts the amount that naturally permeates into the soil. Watershed districts, engineers, and scientists have developed tools to assess a watershed for its viability to support stormwater capture for irrigation use and identify locations for stormwater reuse projects that have solid stakeholder partnerships. This presentation will discuss an important partnership between Forest Lake Area Schools, the City of Forest Lake, and Rice Creek Watershed District that included effective funding that resulted in savings of approximately four million gallons of groundwater annually plus unique environmental science, biology, and agriculture curriculum at Forest Lake High School.

SESSION DESCRIPTIONS

Breakout Session 5 | 2:50-3:20pm

LAKES, RIVERS, & HABITAT RESTORATION

Argon Room

Thompson Lake Contaminated Sediment Removal and Stormwater Improvement

Joe Barten, *Administrator, Lower Mississippi River Watershed Management Organization*

Cathy Undem, *Environmental Assessment and Remediation Program, Dakota County*

Josh Peterson, *Senior Water Resources Engineer, Dakota County*

This project's sole purpose was to improve the water quality of Thompson Lake in West St. Paul, the victim of decades of developmental degradation and zero water quality treatment. Water quality was improved via removal of contaminated sediments at the lake inlet and installation of a three-level treatment train of stormwater BMPs. This project is the result of multiple partners, years of studies, and the combination of different objectives and funding sources into one large construction project.

STORMWATER

Discovery Hall

Pretreatment Practices for Bioretention: Capture of Sediment and Gross Solids

Andy Erickson, *Research Associate, Saint Anthony Falls Laboratory at the University of Minnesota*

Bioretention (a rain garden) has become an increasingly common low-impact development option for treating stormwater runoff. Pretreatment prior to bioretention is critical for minimizing the potential clogging that occurs with the accumulation of sediment and large solids. This study conducted field-based performance testing of several pretreatment practices. The study's data will help project designers, local government maintenance staff, and others by providing a quantitative measurement of effectiveness of several practices and informing assumptions about maintenance frequency. Simple practices provide an opportunity for homeowners and business owners to take part in protecting water resources.

GROUNDWATER

Xenon Room

Nudging Minnesota Citizens Toward Water Conservation

Carmelita Nelson, *Water Conservation Coordinator, Minnesota Department of Natural Resources*

Britt Gangeness, *Senior State Program Administrator, MPCA*

Minnesota is water-rich, but as groundwater supplies in some areas are challenged or are facing increased demand, conserving our source waters becomes critical. Promoting water conservation is not a single initiative, but a portfolio of interrelated programs that target specific behaviors and lead people from thought to action. This session will present two examples of programs that effectively promote water conservation: 1) the Partnership for Promoting Water Conservation, which uses the Community-Based Social Marketing (CBSM) method and 2) We Are Water MN, a traveling exhibit and community engagement initiative that focuses on the human dimension of water.

Lightning Round | 3:35-4:35pm

Discovery Hall

One Powerful Idea: "What Becomes Possible If... ?" | Moderator, Beth Carreño