

**7:30–8:30AM REGISTRATION & BREAKFAST**

**8:30AM START**

## Welcome

**Bud Starker**, Mayor (City of Wheat Ridge) & MHFD Board Chair

## The Road Ahead

**Laura Kroeger**, Executive Director (MHFD)

MHFD has completed an industry engagement process to inform our 2023–2026 Strategic Plan. Hear what our partners had to say about what's working, what isn't working, and what the challenges are followed by what the roadmap looks like moving forward.

## Employer Training Series: Hiring New Americans

**Heidi Gordon**, Executive Director (ACEC Colorado)

ACEC Colorado will explain how it has worked with the Colorado Labor and Employment Office of New Americans to develop a three-part training series with workshop-style sessions focusing on how employers can hire from the workforce of New Americans in Colorado.

## MHFD's Urban Stream Management Framework — A Model for Planning and Design

**Mary Powell** (MHFD)

MHFD continues to expand and refine its Urban Stream Management Framework. Mary presents the latest advancements and how they are incorporated into MHFD Confluence.

## When More is Less

**Dave Skuodas** (MHFD)

We can feel helpless as our work gets bogged down by too much busy-ness, risk aversion, process, and technology. This presentation will share some ideas for what we CAN do about these issues to help us accomplish more and be happier while doing it.

**10:00–10:30AM BREAK**

## Waterway Resiliency Program Update

**Ashlee Grace** (Denver) & **David Bennetts** (MHFD)

A high-level update on available resources and status of Denver's Waterway Resiliency Program, which will deliver Denver's One Water Vision for the South Platte River, Weir Gulch, and Harvard Gulch and advance goals for enhanced mobility and equity.

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# Annual Symposium Agenda

APRIL 11, 2023



## Permeable Interlocking Concrete Pavement (PICP) Lessons Learned at INDUSTRY Denver

**Brik Zivkovich & Holly Piza** (MHFD)

Hear what we've learned from our seven-year study of a green alley located in the busy RINO Art District. The study includes monitoring two different PICP sections (with and without a sand filter), a creative design for pretreatment, and mitigating challenges associated by nearby construction.

## Our Water Quality Report Card — Looking at Long-Term Trends

**Holly Piza** (MHFD) & **Craig Wolf** (GEI)

This presentation explores trends in water quality and volume of storm flows in the South Platte River and Tollgate Creek over a 20+ year period.

## Beaver Adaptive Management Plan for Denver Parks and the District

**Mary Powell** (MHFD)

As part of supporting the City of Denver with developing a Beaver Adaptive Management Plan, MHFD applied a beaver suitability and risk model to our stream system to identify reaches in which beavers may be suitable, reaches at high risk of beaver damage, and reaches to monitor for adverse effects. MHFD hopes the model can support other local governments in transparent, data-driven decision making when dealing with beavers.



## See Development Services in Action!

**Bao Chongtoua** (MHFD)

It's been five years since the inception of Development Improvement Projects. We will share a behind the scenes peek at what we have accomplished, what's working, and what's not. We also embarked on a MEP SWOT in 2022. Learn what we are employing based on your feedback.

## Friend of the District Award

**Scott Tucker**, MHFD Executive Director 1972–2004

**12:00–1:00PM LUNCH**

## The Latest Research in Imperviousness Values and Updates to the USDCM Runoff Chapter

**Andrew Earles** (Wright Water Engineers)  
& **Brik Zivkovich** (MHFD)

Imperviousness drives runoff in urban areas and is a fundamental parameter for calculating runoff rates and storage volumes. This presentation will discuss recent and ongoing research to update guidance on imperviousness to represent current development practices as well as for non-traditional surfaces such as different types of xeriscaping, solar installations, and artificial turf.

## When Molehills Turn into a Mountain

**Andy Stewart** (MHFD)

What can we learn from a construction project that keeps giving us dirt after we leave the site? Insights gained from the handling of a 6000-cubic yard molehill.

## How to Reduce Project Costs Through Relationships

**Jerry Naranjo** (Naranjo Civil), **Deb Ohlinger** (Olsson),  
& **Bao Chongtoua** (MHFD)

Controlling some of today's escalating costs is within our power.

## Taking a Toll on Tollgate

**Colin Haggerty** (MHFD)

This project utilized a Higher-Functioning Lower-Maintenance Stream Solutions (HFLMS) approach to rehabilitate over a mile of the creek. Less than two growing seasons after construction, a flood tested the newly established vegetation and armoring. We will look at what worked well, what we might have done differently, what new work is needed, and how we will monitor other areas within the project limits.

## America's Next Top (Living Hydrology) Model

**Jen Winters & Teresa Patterson** (MHFD)

Managing peak flows in an actively developing watershed can be challenging. This presentation will describe how MHFD is using "living" CUHP and SWMM modeling to manage peak flows within the First Creek watershed.

## Using Rain and Stream Gage Data to Validate Models

**Bruce Rindahl** (MHFD)

MHFD is using measured rainfall and runoff data from recent events to evaluate some historic hydrology models. This presentation includes methodology and results of this effort.

**2:45–3:15PM BREAK**

## Partners in Cybersecurity— a Quick PSA

**Chad Kudym** (MHFD)

Sharing real stories from within our partnership community that demonstrate the need to work together to keep us all safe. Put yourself in the shoes of four different individuals as they assess cyber security risk and the steps to recover from incidents.

## Public Outreach ... but BETTER. Exploring Community Engagement with the No Name Youth Ambassadors

**Charlie Pajares** (MHFD)

Finding ways to engage Communities in our projects and uphold community values is at the heart of MHFD's Urban Stream Management Framework. Join us in this presentation as we continue to share our incredible experiences with youth ambassador groups and engaging communities, enhancing project outcomes, and developing long-lasting partnerships.

## Quantitative Analysis of Runoff in Green Roof Structures in the Colorado Front Range

**Jennifer Boussetot & Amanda Salerno** (CSU)

This study analyzes volume reduction, peak flow, retention, and plant health impacts for three different green roof systems in Colorado's high-elevation, semi-arid climate and compares them to a control roof.

## Reflecting on the 10-Year Anniversary of the 2013 Floods

**Dave Skuodas** (MHFD)

A look back at some of the interesting stories and lessons learned from 2013 floods.

**4:30PM CLOSE**

