



COMMUNICATION MEETS LEADERSHIP: THE FUTURE OF WATER



2017 Annual Conference
September 19-22, 2017
Beaver Run Resort & Conference Center
Breckenridge, CO



ABOUT THE 2017 CONFERENCE

The conference will be held at The Beaver Run Resort and Conference Center in Breckenridge, Colorado, September 19-22, 2017.

Named after the 14th Vice President of the United States, John. C. Breckinridge, the Town holds great culture and history. After the Civil War, the first i was changed to an e, and the Town's name has been spelled "Breckenridge" ever since. Breckenridge is a destination for skiing, fly-fishing, hiking, and many other outdoor activities. The Town holds many events throughout the year and is a popular location for music festivals.

KEYNOTE SPEAKER - CHRIS WARNER



Combining his passion for climbing with an entrepreneurial spirit, Chris founded Earth Treks, Inc. in 1990. With over 30 years of experience guiding people to the top, Chris has led teams up Everest, K2, and Kilimanjaro - nearly 200 international mountaineering expeditions. He's given keynote speeches to teams who are striving to ignite sales, overcome challenges, explore new ideas, heal from tragedy, and celebrate successes. His audiences have included CEOs, senior executives, sales teams, Fortune 500 companies, MBA classes, counter terrorism experts, military officers, NFL coaches, nurses, pilots, and entrepreneurs. Chris knows how to inspire, educate, and entertain.

THURSDAY FEATURED SPEAKER - ALAN GILBERT LESSONS & OBSERVATIONS FROM THE MIDDLE OF MAJOR STORMWATER PERMIT LITIGATION



Alan Gilbert is a shareholder in the Denver law office of Ryley, Carlock & Applewhite. He represents companies, municipalities and individuals facing government issues of various types. His practice focuses upon environmental, natural resources and government law. Intermixed with his past state and federal government service, Alan has worked for more than 25 years in private legal practice in Denver, Colorado. Throughout these years he has specialized in environmental and natural resources law generally, appellate and administrative law, trial litigation, and aspects of commercial practice.

RYLEY, CARLOCK & APPLEWHITE & TRAVIS EASTON, DIRECTOR OF PUBLIC WORKS, CITY OF COLORADO SPRINGS

The City of Colorado Springs is unfortunately in the midst of major, ongoing stormwater permit litigation in federal district court in Denver. Four other governments: the United States, the State of Colorado, Pueblo County, and a downstream water conservancy district, are suing the City to enforce its MS4 permit. They seek an array of penalties and other relief. Travis Easton and Alan Gilbert have been defending the City in this case for years. They will offer management and legal perspectives drawn from this ongoing matter. They will present observations that might benefit other permit holders, and even regulators. They will describe some hard program lessons learned in this difficult stormwater proceeding.



HOTEL ACCOMMODATIONS AND DETAILS

BEAVER RUN RESORT AND CONFERENCE CENTER

620 Village Road, Breckenridge, CO 80424 ● 970-453-6000 ● www.beaverrun.com

RESERVATION METHOD AND POLICIES:

Individual Attendees can make reservations by calling 1-800-525-2253 and identifying themselves as part of the Colorado Association of Stormwater and Floodplain Managers. The group discount will apply to all reservations made before the cut off date. These reservations will abide by our individual reservation deposit/cancellation policies contained herein.

Reservations can also be made by clicking this link:

<https://reservations.travelclick.com/97052?groupID=1757724&hotelID=97052#/guestsandrooms>

(The link above does not require a group code. If you make a reservation online without using the above link, the group code is 50L4MG)

CUT OFF DATE:

Individual Reservations or Rooming List Reservations received after August 28, 2017 will be provided at the group rate on a space available basis. Based on occupancy levels, the Resort cannot guarantee early check in or late check out. However, in the event accommodations are not immediately available, changing facilities and baggage storage will be provided.

CANCELLATIONS:

In the event that Group members cancel their Individual Lodging Reservation, a cancellation penalty will apply as follows: For cancellations made more than seventy-two (72) hours of scheduled arrival, the member will be charged a processing fee of Thirty-Five Dollars (\$35) per reservation. For cancellations made within seventy-two (72) hours of scheduled arrival, the member will be charged for one night's lodging (room and tax). No-shows, early departures and/or late arrivals are non-refundable.

ROOM RATES

Room Type	Rate
Hotel Room	\$130
Studio	\$130
Breckenridge Studio	\$135
Colorado Suite	\$140
Summit Suite	\$145
One Bedroom Suite	\$150
One Bedroom Suite - Building 4	\$155
Two Bedroom Suite	\$200
Two Bedroom Suite - Building 4	\$210
Corporate Suite	\$305

* Rates are good for single or double occupancy, and do not include applicable state and local taxes. Please note that the number of each type of room available at the conference rates is limited. Make your reservations early to ensure you are able to book the type of room you want.



REGISTRATION INFORMATION

SEPTEMBER 19-22, 2017 - BRECKENRIDGE, CO

Visit www.casfm.org and select the Annual Conference link to register.

If you have any questions, contact our registration coordinator Alan Turner at (720)-286-0844.

BASIC CONFERENCE FEES

The basic registration fee includes all written materials, three continental breakfasts, two lunches, refreshment breaks, receptions, and the Thursday Banquet Dinner. Please note that all presenters are required to be registered and paid conference attendees.

- Early Discount (through August 22nd) | \$325
- Regulate Rate (through September 8th) | \$365
- Late or Onsite Registration (after September 8th) | \$405

CANCELLATION INFORMATION

Canceled registrations will be refunded in full, minus a \$25 fee, through August 25, 2017. Registrations canceled between August 25, 2017 and September 8, 2017 will receive a 50% refund. Cancellations made after September 8, 2017 will not be refunded. Cancellations must be made by contacting Alan Turner at (720) 286-0844.

ADDITIONAL MEALS

The Conference Fee includes all meals listed above in the Basic Conference Fees Section. Meal tickets do not need to be purchased for the registered conference attendee. If desired, extra meal tickets may be purchased for the attendee's guest (spouse, children, etc) by checking the appropriate boxes in this section of the online registration form.

- Wednesday Lunch | \$20
- Thursday Lunch | \$20
- Thursday Dinner | \$50

OPTIONAL WORKSHOPS/FIELD TRIPS

- Floodplain 101 (Tuesday 8am - 5pm) | \$70
- Bulletin 17C Training (Tuesday 1pm - 5pm) | No Charge
- Effective Community Communications (Tuesday 1pm - 5pm) | No Charge
- Code Camp for Engineers - A Crash Course in Python Programming (Tuesday 1pm - 5pm) | No Charge
- Mountain Bike Tour (Friday 9am - 12pm) | No Charge
- Dillion Reservoir Tour (Friday 9am - 12pm) | \$25
- Swan River Field Trip (Friday 9am - 12pm) | No Charge
- Golf Tournament (Friday 12pm - 4pm) | \$79



OPTIONAL WORKSHOPS

FLOODPLAIN 101 (TUESDAY)

The Floodplain 101 workshop will cover subjects including overall floodplain management, floodplain maps and Flood Insurance Studies, key National Flood Insurance Program (NFIP) regulatory and non-regulatory standards, flood insurance, and flood hazard mitigation, among other topics. If you need a refresher, this is a course you don't want to miss.

TECHNICAL BULLETIN 17C UPDATES WORKSHOP (TUESDAY)

David Sutley, FEMA Region VIII, will lead a workshop to highlight the effect Bulletin 17C, Guidelines for Determining Flood Flow Frequency, will have on future hydrologic analyses. The recommended draft of Bulletin 17C was released in April 2017, and CASFM is fortunate to have David, who served on the subcommittee tasked with the update, present at the annual conference. The workshop will lead participants through the changes in methodologies and analysis as a result of the update.

EFFECTIVE COMMUNITY COMMUNICATIONS WORKSHOP (TUESDAY)

As stormwater and floodplain managers assess and mitigate risks in their local community, effective communication is critical. This workshop will focus on the best practices and tools to effectively communicate with multiple stakeholders – from county council members to elected officials to individual property owners. In this fast-paced, interactive session, attendees will learn: Effective ways to make a complex message simple, how to build a bridge with contentious audience, and new techniques for addressing tough questions. This workshop will be led by Kellie Mullen with Ogilvy/Resilience Action Partners.

CODE CAMP FOR ENGINEERS - A CRASH COURSE IN PYTHON PROGRAMMING WORKSHOP (TUESDAY)

Led by David Delagarza and Mike Bannister, RESPEC, This workshop will cover the fundamentals of Python programming for water engineers. Topics will include python setup, coding basics, and interfacing with HECRAS, CUHP, and SWMM. Prior exposure to programming is recommended but not required. Laptop recommended. This workshop will be limited to the first 25 that are registered.



JOIN THE CONVERSATION
#CASFM2017



FIELD TRIPS

SWAN RIVER FIELD TRIP (FRIDAY)

Some of you may have participated in the Swan River field trip as part of the 2015 conference in Vail that showed the site before restoration work commenced. This field trip is a follow-up to the work completed as part of the restoration project.

In 2016, the first phase of restoration work was completed on the Swan River near Breckenridge, CO. The work was a demonstration project showing a riverine system that had been lost due to placer mining and subsequently impacted by tailings deposition could be restored to approximate near pre-mining conditions.

Troy Thompson, Ecological Resource Consultants, Inc. (with Jason Lederer, Summit County) will present "Swan River - Reclaiming a River After a Century of Mining Impacts" at the Beaver Run Resort prior to meeting with everyone on-site.



DILLON RESERVOIR FIELD TRIP (FRIDAY)

Join us in a tour of the Dillon Reservoir Dam owned and operated by Denver Water. The reservoir has an earth-filled dam approximately 5,600 feet long and roughly 230 feet above the Blue River streambed. The reservoir has a capacity of approximately 260,000 acre-feet of water and is the 7th largest reservoir in Colorado. Dillon Reservoir water is diverted from the Blue River Basin through an almost 25-mile tunnel under the Continental Divide into the South Platte River Basin.

The tour will start at the power plant entrance below Dillon Dam and move to the west scenic overlook. Then the tour will walk down to the glory hole where the dam caretakers will give a detailed explanation and Q&A about how Denver Water operates the facility. Be prepared to fill out a waiver for a background check. Registration is limited to 25 people – first come, first serve.





GOLF TOURNAMENT

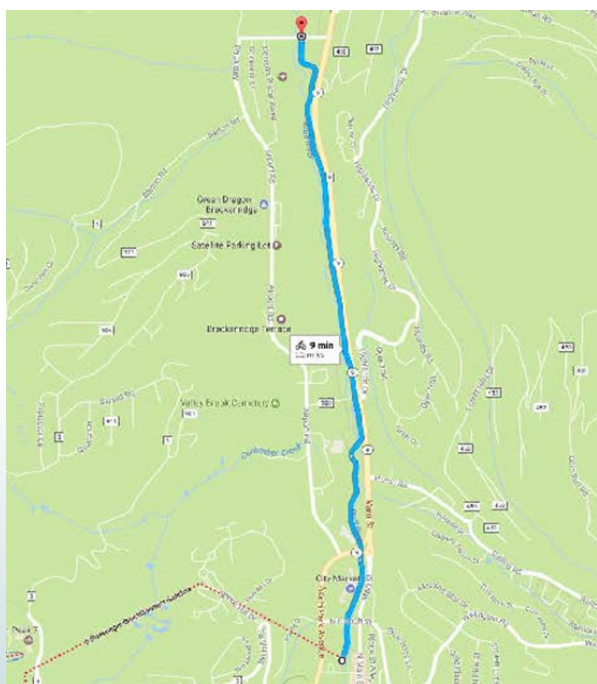
This year's golf tournament will be held at Breckenridge Golf Club. All three nines are Jack Nicklaus Signature courses. There will be give away pin prizes and a raffle to benefit the Scholarship Fund. This is an incredible opportunity to play a magnificent and challenging course while bonding with fellow conference participants. Here's what you need to know:

Who: All conference participants, family members, sponsors & exhibitors
Where: Breckenridge Golf Club, 200 Clubhouse Drive
When: Friday, September 22, 2017 at 9:00am - 3:00pm
Cost: \$79 entry fee per person
Format: 4-person scramble
Lead By: John Loranger, AMEC Foster Wheeler



MOUNTAIN BIKE RIDE

Date: Friday, September 22, 2017
Time: 9:00am - 12:00pm
Lead By: Rich Ommert, RESPEC



Join us on a morning bike tour through Breckenridge to learn more about on-going improvements being made to Blue River. We will meet as a group in front of the BreckConnect Gondola and then head north along the Blue River via the Blue River Bikeway. Along the way we will stop to look at some key points of interest including a point at the end of the trail where ESCO Construction recently did restoration on the river last year. We will walk along the river a bit as the contractor for this development explains some key points of the project.

This will be an out-and-back trip, with approximately 200ft of elevation gain and loss over the course of 4.5 miles. Bikers of all abilities are welcome to join. Please be sure to bring water, sun protection, and a small snack with you – we will be out from 9am to noon.

Bike rentals will be available at Christy Sports down the street from our starting point for those who do not have a bike. Please email Rich at Richard.ommert@respec.com by July 31st if you will be needing a rental bike. If we have 4 or more bike rentals we will get a 20% discount, if not rentals will be \$21 per bike.

TUESDAY, SEPTEMBER 19, 2017

8:00AM TO 5:00PM

Floodplain 101

1:00PM TO 5:00PM

Workshop: Technical Bulletin 17C Updates | David Sutley - FEMA Region VIII

1:00PM TO 5:00PM

Workshop: Effective Community Communication | Kellie Mullen - Ogilvy

1:00PM TO 5:00PM

Workshop: Code Camp for Engineers - A Crash Course in Python Programming | David Delagarza & Mike Bannister - RESPEC

5:00PM

Dinner on your own

8:00PM TO 9:00PM

Ice Breaker Social

Sponsored By: Contech



WEDNESDAY, SEPTEMBER 20, 2017

7:00AM TO 8:00AM

Yoga

7:00AM TO 10:00AM

Certified Floodplain Manager Exam

8:00AM TO 9:00AM

Registration and Breakfast

9:00AM TO 9:30AM

CASFM Chair Welcome Address | Shea Thomas - UDFCD

9:30AM TO 10:15AM

Asset or Liability | Penn Gildersleeve and Invited Guests

10:15AM TO 11:30AM

Keynote Address | Chris Warner - Brooks Institute

11:30AM TO 1:30PM

Board Member Meeting

1:30PM TO 5:00PM

Technical Sessions

EMERGENCY PREPARATION & RISK MGMT.

DEVELOPING A HOLISTIC FLOOD RISK INFORMATION SYSTEM (FRIS) FOR COLORADO 1:30PM

Thuy Patton - CWCB; Maddy Kelley - UDFCD Student

A more holistic flood risk platform may help provide homeowners and local governments with a better understanding of individual flood risk so that they can take proper action. A pilot Flood Risk Information System has been developed in Boulder County.

RISK EVALUATION OF SMALLER LEVEE SYSTEMS – A PROTOTYPE 2:00PM

Kayla Ranney - HDR; Mark Barker - NPS

The National Park Service (NPS) has inherited or constructed smaller levee systems. Based on their risk-based dam safety program, NPS

is prototyping a levee risk management program to evaluate levee conditions and determine action based on risk of levee failure.

FLOOD RISKS FROM SPILLWAYS: MODELING AND COMMUNICATING NON-DAM-FAILURE IMPACTS TO NATIVE AMERICAN TRIBES 2:30PM

Rinda Tisdale - US Bureau of Indian Affairs; Matt Young - US BIA

The Bureau of Indian Affairs' Dam Safety Branch has recently produced a number of innovative methods of communicating flood risks below dams to Native American Tribes. This presentation explains each of these methods and their utilization during emergency preparedness.

ASPEN MUD AND DEBRIS FLOW ASSESSMENT 3:30PM

Catherine Berg - Pitkin County Floodplain Administration; Andrew Earles-Wright Water Engineering; April Long - Aspen

This presentation summarizes the Aspen mud and debris flow assessment. A team of engineers, geomorphologists, and a geologist began work in 2016 to update mudflow and mudflood hazard mapping. The study included evaluation of risks, economic impacts and mitigation strategies.

MONUMENT CREEK WATERSHED RESTORATION MASTER PLAN 4:00PM

Jason Messamer

Matrix Design Group partnered with FCWFCGD, Colorado Springs, El Paso County, Colorado Springs Utilities, and USAFA to create the Monument Creek Watershed Restoration Master Plan which identified strategies to mitigate post-fire effects and reduce flood damage within the watershed.

SUMMARY OF 2013 FLOODING NEAR ARBOLES, COLORADO, WITH A COMPARISON TO MAXIMUM FLOODING FOR SMALL BASINS IN SOUTHWESTERN COLORADO 4:30PM

Robert D. Jarrett

This presentation provides floodplain managers with a methodology to cost-effectively document the magnitude and estimate the frequency of unaged 2013 flooding near Arboles, Colorado, using paleoflood hydrology, thereby improving the understanding of flood hazards.

STREAM RESTORATION

GRAND COUNTY, STREAM MANAGEMENT PLAN AND LEARNING BY DOING 1:30PM

Peggy Bailey - Tetra Tech

Colorado's Water Plan identifies stream management planning as a critical element for the protection and restoration of Colorado rivers and streams, with a goal of a Stream Management Plan being developed for 80% of Colorado's important rivers and streams. The Colorado Water Plan suggest these stream management plans include the identification of metrics for assessing river health and resiliency, and develop a clear path of implementation to meet the plan objectives.

NORTH DOUGLAS CREEK RESTORATION AND POST-FIRE MITIGATION 2:00PM

Thomas Donahue - Matrix Design; Jason Messamer - Matrix; Adam Cooper - Colorado Springs

Through applying creative natural channel restoration techniques along North Douglas Creek, massive sediment flows resulting from the Waldo Canyon Fire were minimized while reducing downstream erosion and potential inundation risks to hundreds of Colorado Springs residents in this multi-phased project.

THE GOOD, THE BAD, AND THE UGLY OF CREATING AND IMPLEMENTING A SHORT TIME-FRAME PLANT MATERIALS PROGRAM FOR COLORADO FLOOD RECOVERY 2:30PM

Randel Mandel & Sara Copp Franz - Great Ecology

This talk will discuss the specifics of creating a technically sound plant materials program on a such short time-period, focusing on successes, challenges, and necessary compromises to meet the needs of approximately 134 recovery projects over a two-year period. Propagule collection and increase, as well as the storage, provision, and implementation of seed, containerized stock, and cuttings will be discussed in detail.

USING ECOLOGICAL FUNCTIONS APPROACH TO MEASURE STREAM RESTORATION GOALS 3:30PM

Moneka Worah - ERO Resources Corporation

ERO created the Ecological Functions Approach as a method in determining ecological impacts and ecological lift from project activities where several sensitive resources occur. ERO believes this method is a valuable tool for designing and monitoring stream restoration projects.

ENCOURAGING ST. VRAIN RESILIENCY THROUGH THE USACE SECTION 205 PROGRAM IN LONGMONT 4:00PM

Jordan Williams - CDM Smith; Monica Bortolini - City of Longmont

This presentation will cover the USACE Section 205 feasibility study on the St. Vrain Creek through the City of Longmont. We will cover key components of the process including: existing conditions evaluation, alternatives analyses, and selection of a recommended plan.

REBUILDING ROADS AND CREEKS TOGETHER: OVERCOMING BARRIERS TO SUCCESSFUL INTEGRATION OF NATURAL ENVIRONMENT REHABILITATION WITH RECONSTRUCTION OF THE BUILT ENVIRONMENT 4:30PM

Clarissa Hageman - Boulder County; Stacey Proctor - Boulder County

Boulder County Transportation Department will draw on their experiences with stream/road construction projects in five major drainages to describe how barriers to integration of transportation, flood risk reduction, and stream restoration practices can be successfully managed and overcome.

GREEN INFRASTRUCTURE & LID

DESIGN VERIFICATION OF MICROPOOL AT EDB 502L 1:30PM

Saman Mehdi - Jacobs; Jeremy Deischer - ICON

The current design process doesn't consider the effect that particle size and density of organic matter have on the design of a micropool. By collecting soil samples, the Engineer can use the data to design a more effective micropool.

SMELL THIS! 2:00pm

Saeed Farahmandi Fard & Darren Mollendor - City and County of Denver

Denver has gotten creative when it comes to infrastructure management and reducing E.coli in the South Platte River. As compliance deadlines loom their remediation team has had to innovate and think outside of the box. Now they present "Smell This" the newest tool in IDDE.

STORMWATER QUALITY VS. SPACE 2:30PM

Chad Cantrell - JVA, Inc.; Cody Gratny, JVA, Inc.

Incorporating water quality systems into building and campus designs without sacrificing aesthetics.

IMPACT OF DEICERS ON CHLORIDE CONCENTRATIONS IN AN URBAN STREAM - A CASE STUDY IN FORT COLLINS 3:30PM

Tyler Dell - Colorado Storm Water Center; Basil Hamdan - City of Fort Collins; Chris Olson, Innovyze

A study evaluating the amount of chlorides from roadway deicing operations (RDO) delivered to an urban stream within Fort Collins and the potential impacts on water quality.

LOW IMPACT DEVELOPMENT RETROFIT AFTER 20 YEARS AT BOULDER, CO OFFICE BUILDING 4:00PM

William Wenk - Wenk Associates; Natalie Phares and Jon Jones -WWE

Presentation of paper on long-term study of low impact development techniques for stormwater management, including advancement in technologies, durability, operation and maintenance, and effectiveness.

INFRASTRUCTURE IMPROVEMENTS USING LOW IMPACT DEVELOPMENT BEST MANAGEMENT PRACTICES 4:30PM

Ajay Jain, P.E, CFM - HR Green, Inc.

The application of Low Impact Development (LID) techniques in site development has matured over the last decade. The LID techniques used by HR Green in multiple types of projects in multiple geographies will be presented via three separate case studies.

5:00PM TO 6:30PM

Happy Hour

Sponsored by: RESPEC

RESPEC

THURSDAY, SEPTEMBER 21, 2017

7:00AM TO 8:00AM

Yoga

7:30AM TO 9:00AM

Breakfast and Committee Meetings

Sponsored By: Triton Environmental

TRITON
ENVIRONMENTAL

9:00AM TO 10:30AM

2017 CASFM Award Finalists | Moderated By: Colin Wagoner - Calibre Systems

10:30AM TO 11:30AM

Lessons and Observations from the Middle of Major Stormwater Permit Litigation | Travis Easton and Alan Gilbert

11:30AM TO 1:30PM

Lunch - Grant Award Winner Presentation & ASFP Foundation Video

1:30PM TO 5:00PM

Workshops and Sessions

FLOODPLAIN MANAGEMENT

LOCAL ADOPTION AND USE OF BEST AVAILABLE FLOODPLAIN INFORMATION: BOULDER COUNTY LESSONS LEARNED 1:30PM

Harry Katz; Stephanie DiBetitto - CWCB

Boulder County has locally adopted CWCB/CHAMP floodplain mapping before publication on effective FEMA FIRMs. Boulder County now has more accurate representation of where flooding will likely occur and can more effectively manage floodplains to protect health, safety and welfare, while increasing resiliency.

LARGE SCALE AUTOMATED ENGINEERING IN FEMA REGION VIII 2:00PM

Brian Murphy - CDM Smith

Recent innovations and efficiencies in hydraulic modeling and floodplain mapping have allowed FEMA to improve the First Order Approximation processes, now known as Large Scale Automated Engineering (LSAE). 2-D modeling allows large areas to be modeled with increased accuracy and shorter durations to address current Risk MAP program challenges, including the validation of Zone A studies and the availability of flood risk data in the early stages of a Flood Risk Project.

THE CHALLENGES OF UPDATING REGULATORY HYDROLOGY AND FLOODPLAIN MAPPING – A CASE STUDY OF ESTES PARK, COLORADO 2:30PM

Andrew Earles - Wright Water; Shannon Tillack - WWE; Rigel Rucker - AECOM

This presentation will include an overview of the technical aspects of updating the Town of Estes park regulatory hydrology, hydraulics and floodplain mapping, as well as non-engineering aspects related to public involvement, public messaging, outreach, and working with multiple stakeholders.

PROFESSIONAL DEVELOPMENT

INCREASE PUBLIC ENGAGEMENT: VIRTUAL REALITY TO RELAY RACES 3:30PM

Sandra Bratile and Heidi Hansen - City of Fort Collins

From virtual reality to relay races, new technology and techniques are used to help educate and engage the public in the City of Fort Collins floodplain and stormwater outreach events.

ENGINEERING MEETS SALES: THE PROCESS OF CULTIVATING LIKEABILITY 4:00PM

Emily Murphy, CPSM, MA - Calibre Engineering

In addition to your design role, you've been asked to meet with clients, find work, and represent the firm. Welcome to the Seller-Doer Model. People do business with people they like, and this session will focus on cultivating likeability.

EVERYTHING IS AWESOME WHEN YOU'RE PART OF A DESIGN BUILD TEAM 4:30PM

Amy Foreman, Ryan Crum, and Sam Stevens - CCD

Overview of the City & County of Denver's Platte to Park Hill Stormwater Systems Program. We will highlight the Design-Build process and discuss how teamwork and collaboration were keys to a successful project procurement.

TECHNICAL MODELING

ATYPICAL APPLICATIONS OF 2-D HYDRAULIC MODELS ON TRANSPORTATION PROJECTS 1:30PM

Brian Varrella, Gina Fox, and Thu Tran - Colorado Dept. of Transportation

The Colorado Department of Transportation applying 2-D hydraulic modeling techniques to projects in the northeastern corner of Colorado. This presentation will show how SRH-2D is being applied to bridge and non-bridge projects in CDOT Region 4..

SMOOTH TRANSITION - HOW TO ADJUST MANNING'S N VALUES FOR 2D MODELING 2:00PM

Andrew Friend and Mark McBroom - Michael Baker, Intl.

Manning's n values should be different for 2D models than for 1D models. But by how much? This presentation will highlight our research on several case studies and discuss Manning's n selection for 2D models.

TOOL OF CHOICE 2:30PM

Dusty Robinson - Ayres Associates

What if you could predict where erosion will occur during a flood? What if you could have greater insight into the hydraulic conditions for your project? If you're a hydraulic geek, this session is for you.

HIGH RESOLUTION DISTRIBUTED MODELING FOR WATER QUALITY IN AN URBANIZED WATERSHED 3:30PM

Timothy J. Fry - Enginuity Engineering Solutions

A proof-of-concept water quality study that evaluates distributed BMPs effectiveness to remove the target contaminant of concern using a hyper-resolution, physically-based hydrologic model of the urban hydrologic cycle with explicit inclusion of the built environment.

EDUCATING A 1D DYNAMIC SWMM MODEL USING FLO-2D: A CASE STUDY OF THE OLD TOWN DRAINAGE BASIN IN FT. COLLINS 4:00PM

Jeremy Deischer and Tyler Rosburg - ICON; Beck Anderson - FOCO

The Old Town Drainage Basin in Ft. Collins was recently converted from MODSWMM to EPA SWMM. To more accurately model flow diversions at individual intersections, FLO-2D was utilized to develop rating curves to calibrate the EPA SWMM model.

SELECTING THE RIGHT MODEL 4:30PM

Josh Hollon and Brinto Swift - HDR

With the wide range of hydraulic modeling software available, ranging from overly simplistic to unsteady and complex 3-dimensional, this presentation walks through a basic flow chart to support selection of an appropriate hydraulic model for various project conditions.

STORMWATER MGMT. & MASTER PLANNING

THE REDEVELOPMENT OF ORIGINAL AURORA: WHERE STORMWATER AND URBAN PLANNING MEET 1:30PM

Jon Villines - City of Aurora

From the wildly popular Stanley Marketplace to the bustling Fitzsimons Medical Campus and the brand new RTD R-Line Light Rail, Original Aurora (the oldest part of Aurora) is the City's next frontier for urban redevelopment. The location, age, and density of this area has required drainage engineers and planners to work side-by-side as the area redevelops. This presentation will discuss the unique challenges of urban redevelopment, including widespread use of LID BMPs, applying modern MS4 and floodplain regulations to redevelopment areas, multi-use stormwater, parking, and parks facilities.

DEVELOPING A PRIORITY MATRIX FOR CAPITAL PLANNING 2:00PM

David Van Dellen - Castle Rock Water

Castle Rock has over 70 miles of drainageways and \$88 million in planned improvements. Setting priorities is challenging given our highly erosive soils, steep terrain and rapid growth. Presented is a decision making tool to objectively rank improvements based on seven guiding principles.

A NEW ERA OF STORMWATER MANAGEMENT 2:30PM

Richard Mulledy, P.E. - City of Colorado Springs

In April of 2016 Colorado Springs entered into a historic intergovernmental agreement committing to invest \$460 million dollars over two decades on stormwater management activities. This presentation will explore the future of stormwater management in the City and Southern Colorado.

DO YOU KNOW YOUR OUTFALL FROM A HOLE IN THE GROUND? PLACE-MAKING CONSIDERATIONS FOR URBAN DRAINAGE INFRASTRUCTURE THAT CONNECTS TO NATURAL WATERWAYS AND PONDS

3:30PM

*Paul Thomas and Jess Clark - Stream Design Landscape Architecture;
Chris Kroeger - Muller*

As city stream corridors continue to be restored and developed into important amenities for urban dwellers, drainage infrastructure—especially culvert outfalls—are popping up in some very high-profile places. Standard flared wingwalls and riprap solutions in these locations are probably not going to be what city leaders are envisioning. This presentation discusses approaches and case studies of how major drainage outfalls can be designed to be attractive and functional features that fit their sensitive contexts.

PUTTING "ONE WATER" INTO STORMWATER EDUCATION **4:00PM**

Donny Roush and Darren Mollendor - Denver Public Works

"One Water" continues to drive integration across water sectors professionally. Not much has been done to introduce this concept to wider audiences. But, within Denver's MS4, we are trying. Come hear how.

GEOSPATIAL TECHNOLOGY: A PLATFORM FOR SUCCESSFUL STORMWATER MANAGEMENT **4:30PM**

Jim Kelly - Ayres Associates

Geospatial data and technology is a critical tool for effective stormwater and floodplain managers. We'll not only discuss the LiDAR and mapping technology essential to stormwater management, but also ways promote regional cooperation and cost sharing initiatives."

5:00PM TO 6:30PM

Happy Hour

Sponsored By: ERO Resources Corporation



7:00PM TO 9:00PM

CASFM Dinner & Awards Ceremony

Sponsored By: Stream Design



9:00PM TO 11:30PM

Entertainment - Casino Night!

Sponsored By: Muller Engineering



FRIDAY, SEPTEMBER 22, 2017

7:00AM TO 8:00AM

Yoga

7:30AM TO 8:30AM

Breakfast

8:30AM TO 9:00AM

CASFM Chair Closing

9:00AM TO 12:00PM

Field Trips

MOUNTAIN BIKE TOUR

DILLON RESERVOIR

SWAN RIVER RESTORATION

GOLF TOURNAMENT

Location: Breckenridge Golf Club

9:00AM - 3:00PM



SCHEDULE AT A GLANCE

TUESDAY, SEPTEMBER 19, 2017		
8:00	Floodplain 101	
9:00		
10:00		
11:00		
12:00		
1:00		Bulletin 17C Training
2:00		Effective Community Communications Workshop
3:00		Code Camp for Engineers - A Crash Course in Python Programming
4:00		
5:00	Dinner On Your Own	
6:00		
7:00		
8:00	Ice Breaker Social Hour	

WEDNESDAY, SEPTEMBER 20, 2017			
7:00	Registration and Breakfast		Certified Floodplain Manager (CFM) Exam
8:00			
9:00	Welcoming Remarks		
	Featured Speaker - "Asset or Liability" by Penn Gildersleeve and Invited Guests		
10:00			
	Keynote Address by Chris Warner, Brooks Institute		
11:00			
	Lunch Board Member Meeting		
12:00			
1:00			
	Emergency Prep & Risk Management	Stream Restoration	Green Infrastructure & LID / Stormwater Quality Treatment
2:00			
3:00	Break		
	Emergency Prep & Risk Management	Stream Restoration	Green Infrastructure & LID / Stormwater Quality Treatment
4:00			
5:00	Happy Hour		
6:00			

Color Key

	Workshops & Sessions
	Social Events
	Meals & Food
	Break
	CFM Exam
	Field Trips & Tours



SCHEDULE AT A GLANCE

THURSDAY, SEPTEMBER 21, 2017					
7:00					
	Breakfast / Committee Meetings				
8:00					
	2017 Project Award Finalist Presentations				
9:00					
10:00	Featured Session: Lessons & Observations from the Middle of the Major Stormwater Permit Litigation				
11:00	Lunch General Membership Meeting				
12:00					
	Committee Meetings				
1:00					
	Floodplain Management	Technical Modeling	Stormwater Management & Master Planning		
2:00					
	Break				
3:00	Professional Development	Technical Modeling	Stormwater Management & Master Planning		
4:00	Happy Hour				
5:00					
6:00	Break				
7:00	CASFM Association Dinner and Awards				
8:00					
	Entertainment - Casino Night!				
9:00					
10:00					
11:00					

FRIDAY, SEPTEMBER 22, 2017				
7:00				
	Breakfast			
8:00				
	Closing Remarks			
9:00	Field Trip - Dillon Reservoir	Mountain Bike Tour	Field Trip - Swan River	Golf Tournament
10:00				
11:00				
12:00				
1:00				
2:00				
3:00				

Color Key

	Workshops & Sessions
	Social Events
	Meals & Food
	Break
	CFM Exam
	Field Trips & Tours



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CONFERENCE TEAM

Conference Chair Robert Krehbiel, PE Matrix Design Group 1601 Blake St, Suite 200 Denver, CO 80202 (303) 572-0200	Mountain Bike Tour Rich Ommert, PE, CFM RESPEC Consulting & Services 720 South Colorado Blvd. Suite 410S Denver, CO 80246 (720) 775-6403	Field Trip Coordinator Julia Traylor Wright Water Engineers 2490 W. 26th Avenue, #100A Denver, CO 80211 (303) 480-1700
Program Sarah Houghland, PE, CFM Enginuity Engineering Solutions 10106 W San Juan Way, Suite 215 Littleton, CO 80127 (303) 532-4906	Facilities Stuart Gardner, PE Colorado Dept. of Transportation 606 S. 9th St. Grand Junction, CO 81501 (970) 683-6354	Golf Tournament John Loranger, PE, CFM AMEC Foster Wheeler 2000 S. Colorado Blvd, Suite 2-1000 Denver, CO 80202 (303) 975-2182
Registration Alan Turner, PE, CFM CH2M Hill 9193 S Jamaica St Englewood, CO 80112 (720) 286-4510	Awards Colin Wagoner, PE, LHG CALIBRE Systems PO Box 1691 Fraser, CO 80442 (206) 390-9303	Vendors Deb Ohlinger, PE, CFM Olsson Associates 4690 Table Mountain Drive, Suite 200 Golden, CO 80403 (303) 237-2072
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