

The Open Channel

Spring 2017 Vol. 28 / Issue 1

By Sarah Houghland, Program Coordinator and Robert Krehbiel, Conference Chair

2016 Annual CASFM Conference Recap

The longer drive to Crested Butte did not deter the membership since we once again had record overall attendance (over 350!). Everyone that made the trek to Crested Butte experienced fantastic speakers; outstanding workshops; informative presentations; and Stuart being on the winning the golf tournament team for once. To mix things up, morning yoga was included in the program as an alternative exercise for the non-mountain bikers! Another addition was the scholarship committee sponsored silent auction that raised funds for the CASFM Family scholarship. The conference committee plans to build on the success of these additions next year (along with a couple of other new surprises).

The conference survey results showed that a majority of the conference activities/events received high ratings, and the conference committee promises to improve on the areas where we may have missed the mark. But before we focus our attention to Breckenridge 2017, let's revisit the highlights from Crested Butte 2016.

The conference theme, ***Making a Difference***, was inspired by **Chad Pregracke** as the 2013 CNN Hero of the Year, founder and president of Living Lands & Waters (a nonprofit river cleanup organization) and author. Chad's energetic presentation was definitely memorable! He is proof that one person can make a difference! Best known for starting out as a young man in East Moline, Illinois wanting a cleaner waterway, Chad has become the champion for cleaning garbage from the Mississippi River. Chad and his Living Lands & Waters crew have organized and led over



Chad Pregracke

800 cleanups on 23 rivers in 20 states and removed an estimated eight million pounds of garbage. Ultimately, Chad's message was intended to inspire people to believe that they can make a difference.

UDFCD's own **Dave Skuodas** delivered an outstanding presentation to kick off the conference, ***The Remarkable Impact of Being an Effective Client***.

Dave conducted research to determine how effective clients attract teams, get better pricing, and build better projects. Participants that attended Dave's session were informed of the importance recognizing the value of being an effective client and of how to be able to differentiate themselves as a client of choice.

This year, the conference committee presented a ***Team Building Flash Talk*** session that included a succession of brief presentations that focused on one central theme. The Flash Talks focused on 4 main topics within the Team Building theme: Importance of Community Drivers, Design Approach, and Design Disciplines. The idea was to highlight specific topics within an over-arching category. Thank you to the following for making the Flash Talk a success!

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***Save the Date!* 2017 Annual Conference**
September 19-22, Beaver Run Resort & Conference Center, Breckenridge



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- » Mark Wilcox—The Social Engineering of Flood Recovery
- » Christin Shepherd—The Impact of “Why”: Improving Service, Teams, and Client Relationships
- » Mark Taylor—Design Should Be a Team Sport – Not a Relay Getting the Best Out of a Multi-Disciplinary Design Team
- » Paul Thomas—Civil Engineering + Landscape Architecture = Place Making: A process for creating infrastructure that enhances the public domain.
- » Brian Murphy—Emergency Moderator. Thanks for filling in at the last minute!

Three great workshops were offered last year:



>> Floodplain 101

The Floodplain 101 workshop covered 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. Colorado has around 500 CFMs and counting largely because of this workshops. This year's Certified Floodplain Manager Training led by Stephanie DiBetitto, Kevin Houck (CWCB), Craig Jacobson (ICON), and Chris Tagert (Michael Baker).

>> SRH-2D Workshop

Scott Hogan, Hydraulic Engineer for Federal Highway Administration led this 4 hour workshop that introduced hydraulic engineers to the US

Bureau of Reclamation's SRH-2D two-dimensional hydraulic modeling program, recommended by FHWA for modeling channel and floodplain hydraulics through bridges and structures. The course demonstrated data requirements, model capabilities, and application to hydraulic modeling of rivers at highway encroachments. Participants were introduced to the SMS SRH-2D interface and new FHWA sponsored features (culvert modeling, weir flow, gates/ diversions, bridge pressure flow, etc.). The session provided a hands-on opportunity to setup a model, run an analysis, and review results.

>> Community Rating System Showcase

The CRS Showcase highlighted the work that CASFM's CRS Committee has been conducting on local, state, and federal levels over the years. Some of the goals of the showcase included: debunking some of the myths about the CRS program, provided insight to help communities get started in the program, helped CRS communities move to the next level, and offered tips on public involvement and information dissemination. The series of presentations touched on different aspects of the program ranging from FEMA's suggestions for best practices as a result of the 2013 floods, CWCB's demonstration of the new CRS website, lessons learned from the City of Boulder's last CRS Verification Visit, and UDFCD's sponsorship of the Denver Metro Program for Public Information Process.

As always, one of the highlights of the conference is the project award presentations and the awarding of the CASFM Engineering Excellence Award. This year did not disappoint! Our runner-up project, **Lower Westerly Creek Flood Control Improvements at Montview Boulevard,**

Aurora, CO, created safer conditions on the roadway at Montview Boulevard by replacing undersized culverts, lowering the channel profile, and increasing the channel capacity in order to decrease the changes of overtopping and to contain the 100-year storm event. To keep the project on track SHE facilitated close cooperation between the agencies throughout the design process. Project stakeholders include the City of Aurora Water Department, City of Aurora Parks, Recreation, and Open Space, UDFCD, City and County of Denver Public Works, City and County of Denver Parks and Metro Wastewater.



The 2016 CASFM Engineering Excellence Award winning project was the **South Platte River Vision Implementation Program: Grant-Frontier Park to Overland Pond Park Reach.** The River Vision Program delivers creative solutions for valuable enhancements to the River ecosystem, public health, safety, welfare, and enjoyment of the surrounding environment. Components of the program also serve as models for similar successful riverine corridor improvements nearby. CDM Smith along with landscape architects THK Associates and playground designers PKM developed and implemented River Vision. The completed work balanced the multiple objectives of many stakeholders (The Greenway Foundation, Denver Parks and Recreation Department, CWCB, UDFCD, Denver Public Works, Denver Water, Trout Unlimited, citizens, property owners, and other City and County Departments, and public and private organizations) to deliver creative, holistic solutions enhancing the river corridor for future generations.



Other Activities

- » Susan Pearson of Pitkin County led all interested CASFM yogis in 7:00 AM sessions each of the 3 days of the conference to help prepare us for a day of presentations.
- » This year's Mountain Bike Tour followed the Woods Walk Trail to Peanut Lake while taking in the fall foliage and scenic views of Gothic Mountain. Danielle Beamer from the Crested Butte Land Trust led a group discussion about the Land Trust's Peanut Lake restoration project.
- » The Slate River & Peanut Lake Restoration Field Trip also benefited from Danielle Beamer's group discussion about the Crested Butte Land Trust restoration project of the Slate River and Peanut Lake area. Peanut Lake is upstream from Crested Butte, and the Slate River feeds into the East River, providing drinking water for the City of Gunnison. his restoration project returned this ecosystem to a functional condition, while protecting environmental and public health.
- » The SNOTEL Field Trip served as a showcase for the Natural Resources Conservation Service (NRCS) operated and maintained automated monitoring system SNOTEL (Snow Telemetry) provides snowpack water content data and collects data on snow depth, all-season precipitation accumulation, and air temperature. Conference attendees saw a demonstration of an ice nucleus generator (cloud seeder) installed



near Irwin Lake, approximately 25 minutes west of Crested Butte on Kebler Pass, as well as an explanation of the SNOTEL program.

Golf Tournament

The team of Stuart Gardner, John Loranger, Susan Gardner, and "The Boy" were the winners of annual CASFM Conference Golf Tournament, that was held at The Club at Crested Butte. John, Susan, and Phillip must be excellent golfers to overcome Stuart's handicap.

Sponsors

Once again our corporate sponsors came through and provided amazing support. Your contributions allow the conference committee to plan great events and really help make the conference a special event! Be sure to secure your sponsorship early for the 2017 conference. Contact

Deb Ohlinger for sponsorship opportunities – visit the Annual Conference Page on the www.CASFM.org on the website for more information.

2017 Conference

Preparations for next year's conference are already underway! The Call for Presentations and the Call for Project Awards are posted to the CASFM website and the deadlines for both are April 28, 2017 and June 30, 2017, respectively. CASFM members will receive updates via email and/or you can periodically visit www.CASFM.org for the latest information regarding conference planning. ■

Save the Date
September 19-22, 2017

2017 CASFM Conference
Beaver Run Resort & Conference Center
Breckenridge, CO



A Word From the Chair



By Shea Thomas, CASFM Chair

Hello CASFM!

2017 has been a whirlwind of activity already which I hope is reflected in the articles in the rest of this newsletter. The committees are all very active right now, regional socials are happening, a workshop on the western slope is coming up, there's talk of an additional CFM exam date and location this year, the call for papers is about to go out and before you know it you'll be making your reservations for the annual conference. There's so much to write about, but I just chose a few things to highlight at this time.

Something on the rise: Floodplain Management Committee

This is one of our committees that hasn't been very active in the past, but I sense that changing under the leadership of the new committee chair, Christopher Hodyl. I've always felt this is one of our most important committees – it's in the organization's name, after all – and there is so much happening in the world of floodplain management with respect to regulation, insurance, mapping and new technologies that it's timely for this group to become more active. You can read Chris's report in this newsletter for recent activity from the committee, but in addition rest assured that Chris has been very responsive to individual requests and representing CASFM's interests where needed.

Something to anticipate: Keynote Speaker

I actually don't know who the keynote speaker for the upcoming conference in September will be yet, but looking at the short list of potential speakers I know any of them will



Not a Floodplain Management Committee project.

have a great, unique message to set the tone for the rest of the conference. Whether we hear about leadership and teamwork through mountain adventures, interaction with nature through natural play, strategic communication for scientists or an inspirational message from a CNN Hero, we'll be getting a great message from an experienced speaker that will help us all grow as individuals in our workplace and as an industry. Though Sarah Houghland has been working hard to make connections with these different speakers, most of the recommendations came from other CASFM members, so if you know of someone that would be great for future conferences be sure to let Sarah know.

Something new and fresh: CASFM Website

The team working on the development of the new website, led by Emily Murphy, has been very actively engaged with the marketing firm Small Giants. After an RFP process, we knew they were the right firm for us primarily due to their experience working with other engineering organizations. Admit it, we're an acquired taste. Development of the new site is progressing nicely thanks to the responsiveness of all members of the team and we're really excited to see a draft site layout very soon. The new website will be active in time for conference registration and I'll go over some of the highlights in my opening address at the conference.



Something you may have missed: We have an official CASFM gavel!

If you've come to any of the general membership meetings, you know there are usually between fifteen and thirty people in attendance (with more on the phone). Many people haven't seen each other since the previous meeting so there's a lot of catching up and socializing at the start...which makes it really hard to get everyone's attention to begin the meeting. I usually smack my hand against the table and mutter some comment about how I need a gavel. Well, Brian Murphy heard and bought me this official CASFM gavel! I used it at the January meeting and it worked just as I'd imagined. Thanks Brian!

Something unknown: New officers

This year is flying by and in no time we'll be sending out an email requesting nominations for the upcoming elections in August. There are several positions for which the current officers are termed out, including Chair, Vice Chair,

Secretary and Northeast Region Representative. As far as I know right now, all other incumbents are willing to serve a second term. If you're interested or even curious about what level of involvement and time commitment any of these open positions requires, feel free to contact me or any of the other officers. We're a very fun and casual Board and it's a great opportunity to get to know other people in our industry a little better and help shape the future of this organization.

Something even more unknown: Trump administration

Don't worry, I'm not getting into politics in this newsletter (although politics and religion are my favorite things to discuss other than hiking 14ers so feel free to bring either up with me at any time!), but with a change in administration there's always some level of change in the federal organizations that affect our day-to-day work. I'm fortunate to be a member of the National Association of Flood & Stormwater Management Agencies, a group that has direct ties to the highest levels of FEMA, the EPA and the USACE, and they are on the edge of their seats waiting to see what comes from this most recent transfer of power. I'll be sure to pass along any information to the CASFM membership as soon as we know.



"Time is free, but it's priceless."

Something shocking: My daughter is turning 20

That's the age I was when I had my first job in engineering, working as a student intern for Sellards & Grigg. I know it's cliché, but it really does seem like just yesterday – I can even remember what I was

wearing for the interview, where I sat and how nervous I was trying to enter this field I knew nothing about. And now I have a daughter who is at that same point in her life, it's really hard to believe!

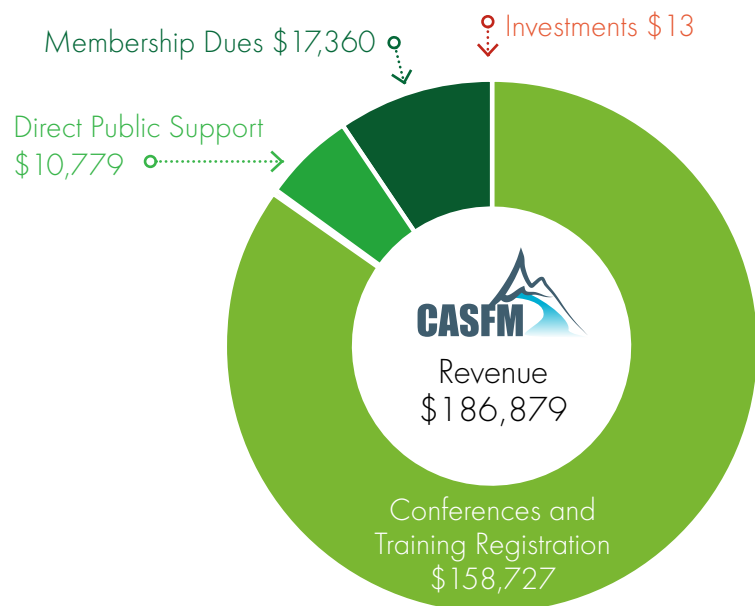
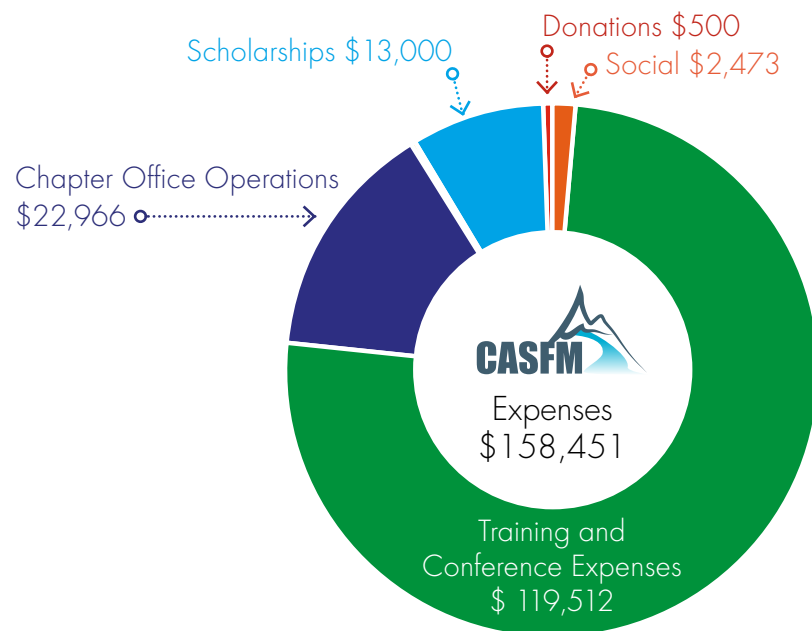
This is likely my last newsletter as Chair, so I want to thank you for indulging me and giving me a platform from which to memorialize my streams of consciousness. I love this organization and have thoroughly enjoyed being a part of its leadership. I look forward to seeing you all in Breckenridge in September, if not before!

Shea Thomas
CASFM Chair

2016 – Year in Review



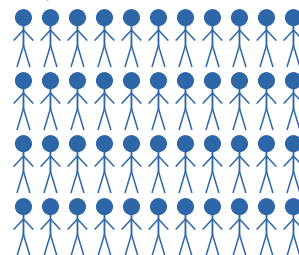
Budget



Education



44 People Passed the CFM Exam



356
CASFM Conference Attendees

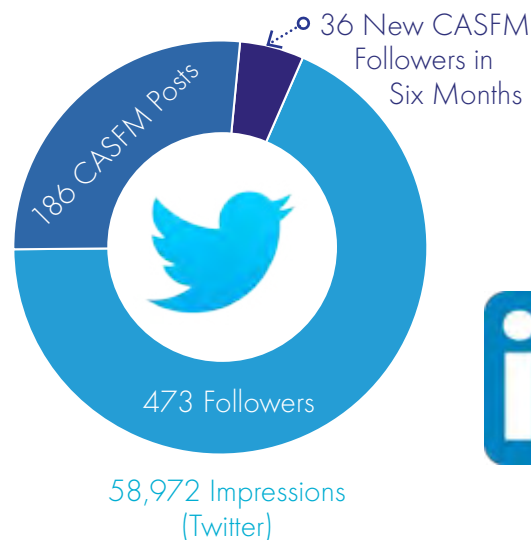
955
Registrations
for **22** CASFM
Education Events

910
CASFM
Members

CASFM
Scholarships

4

Social Media



CASFM issued a social media poll to gauge interest in enhanced social media presence.

138 responses were catalogued and analyzed



LinkedIn
> 100 CASFM posts
> 520 CASFM Members

Scholarship Committee

By Jacob James

The CASFM Scholarship Committee interviewed students for all three scholarships in November 2016 and awarded scholarships in each category. There were two applicants for the CASFM Family Endowment and the committee decided to award both students the scholarship since it was not awarded in 2015. The following students are the CASFM 2016-2017 scholarship recipients:



CASFM Undergraduate Scholarship recipient

Daniel Sanchez

Daniel is an undergraduate in Civil Engineering at Colorado State University and anticipates graduating in the Spring of 2020.

Daniel is looking to serve with Engineering Ministries International designing infrastructure in developing countries.



CASFM Ben Urbonas Scholarship recipient

Brik Zivkovich

Mr. Zivkovich is a currently enrolled as a Doctoral Student of Civil Engineering at the University of Colorado Denver within the coordinated joint PhD program at the Boulder

campus. He will begin his dissertation in the upcoming Spring 2017 semester that will focus on improving links and developing software to aid stormwater professionals, city governments, and other municipalities in understanding vegetative management impacts on floodplains and flood hydraulics as well as involvement with a new educational research committee focusing on acid mine drainage remediation.



CASFM Family Endowment Scholarship recipient

Brittany Bender

Ever since she was a little kid, she has dreamt of being an engineer one day. Throughout her childhood and high school years, she has seen incredible engineering feats that helped

formed a desire to be part of something bigger than herself that would inspire other to do the same. This hunger to pursue a passion that she would not only love, but would challenge her every day, led her to study Civil Engineering at Colorado School of Mines. After graduation, Brittany plans to stay in Colorado and help improve the living conditions and communities of the state she knows and loves.



CASFM Family Endowment Scholarship recipient

Emma Gardner

Emma is attending Colorado Mesa University in Grand Junction where she will be among the first Civil Engineering graduates in CMU's cooperative program

with CU in 2020. She has been exposed to engineering discussions and field trips her entire life, and is excited about moving into the field and using her education to make Colorado a better place to live.

Crystal Mill, Crystal, Colorado



CASFM is officially recognized as a 501(c)(3) with the IRS and all donations to the CASFM are tax free. If you have any interest in donating to the CASFM Scholarships please contact me or Myles Gardner, our current Treasurer. ■

Stormwater Quality Committee

By Holly Piza

The Stormwater Quality Committee organizes and promotes stormwater-related education opportunities including conference sessions, lunch-time speakers, short courses and an annual full-day field trip to local stormwater quality facilities. Here's what's coming soon: We're starting to plan the next annual field trip. Each year we charter a 55-passenger bus and visit a number of stormwater facilities. The only requirement is that they be good examples of facilities for stormwater reduction or treatment. Typically, we have someone involved with the design, construction, or maintenance present the site to the group. We have yet to

pick a theme this year so all ideas and suggestions are welcome. The date for the field trip is June 22. If you have a site that you would like to highlight or want to get more involved, please contact Holly Piza at hpiza@udfcd.org.

CASFM is also a cooperating organization for the ASCE-EWRI Operations and Maintenance of Stormwater Control Measures Conference which will take place in Denver November 6th through the 9th. Some of our Stormwater Quality Committee members are also involved in planning this event. Look for the call for presentations soon for this exciting new conference. ■



Floodplain Committee

By Chris Hodyl, PE, CFM

After a bit of inactivity, the Floodplain Committee is up and running again. We have been organizing an opportunity for members (and potential members) to take the CFM test. Our community is awesome and we've had several communities and companies volunteer their facilities to host the exam and Floodplain 101 refresher course. Thank you all who volunteered to host the exam and help teach the refresher course. The test will be held on April 21, 2017 at the Jefferson County Administration Building. Further details will be provided in a separate announcement.

If you are a member of this committee, please make sure contact information is current. Several emails were returned as undeliverable. You can check your contact information (emails, phone) through CASFM's website directory (<https://casfm.wildapricot.org/Member-Directory>).

One of the main functions of this committee is to advise and provide recommendations to CASFM leadership and members on how to respond to state and national agencies when solicited on new regulations, procedures, guidance, etc. Recent examples include implementation of executive Order 13690 (Federal Flood Risk Manage-

ment Standard), updates to the Flood Risk Analysis and Mapping Standards, and the Colorado Water Plan. If there are topics that you are interested in, please volunteer and become more active in the committee and in CASFM in general to provide your expertise on topics that come up. Committee members will receive email requests from me on specific topics, but the communication should be both ways. If you become aware of a topic that will impact CASFM membership, please make me aware of it. I can be reached at chodyl@j3engineering.net. ■



CRS Committee

By Marsha Hilmes-Robinson

The CRS Committee has hosted several meetings over the past several months. Guest speakers have included representatives that discussed the Building Code Effectiveness Grade (BCEGs) and Flood Insurance. Both of these talks were very well received by members and helped clarify many issues. A special thanks to Matt Buddie of FEMA Region VIII for arranging for these speakers. The Committee also received a response from the comment letter that was sent by CASFM to the CRS Task Force. The individual responses were discussed at the January committee meeting. The Task Force is considering many of our suggestions in future CRS Manual updates. This was a great way for our CASFM membership to have a voice in this important national program. ■

Outreach and Training Committee

By Craig Jacobson and Emily Murphy

The CASFM Outreach and Training Committee supports the CASFM Board and Membership by disseminating information throughout the organization; providing training opportunities for members; and offering external outreach and support to associated professional organizations and regional communities. Here's a look at what we've been up to since the summer newsletter:

- » The **Social Media Subcommittee** continues to provide internal and external outreach utilizing both Twitter and LinkedIn. A focus of this subcommittee is also to outreach to CASFM's other committees to help share content relevant to the membership and outside organizations.
- » CASFM recently contracted with a website design firm called Small Giants to help CASFM modernize the look and functionality of our current website. The **Website Subcommittee** has been working closely with Small Giants to review design options and to provide guidance regarding website presentation and content. The plan is to have a new website rolled out this summer!
- » The **Training Subcommittee** continues to pursue new training opportunities for our membership through support of Lunch & Learns and direct training sponsorships. This subcommittee, in conjunction with the YMG subcommittee, recently sent a questionnaire to the CASFM membership to gauge training needs and focal points, and we have worked with the Conference Committee to determine CEU/PDH opportunities at the Annual Conference. Currently, CASFM is promoting three new training seminars or workshops, including:
 - » Current Water Issues on the Western Slope – February 24, Glenwood Springs
 - » SRH-2D – March 28-30, Lakewood; April 24-26, Fort Collins – Registration through NHI
 - » Floodplain 101 & CFM Examination; April 24-26, Jefferson County

More events will follow as the year progresses, so keep an eye out for emails and updates to the CASFM website.

- » Our **Graphics Subcommittee** has been working on a flyer for the SRH-2D training sessions, a flyer for the CASFM Research Grant, and various graphic materials for the Conference Committee, including the Call for Presentations, Call for Awards, and Conference Program. This committee is looking for more help, so if you have an interest in graphic design, let us know!
- » For more information from the **YMG Committee**, see their content separately in this newsletter.

We are excited with the progress that our committee has made this year, and we are looking forward to continuing this growth through 2017. Thank you to all of our volunteers who help move the goals of the group forward — we couldn't do it without you!

If you are interested in joining our committee, please feel free to reach out to one of us.

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Picketwire Canyon, Comanche National Grassland

Metro Region By Debbie Fisher

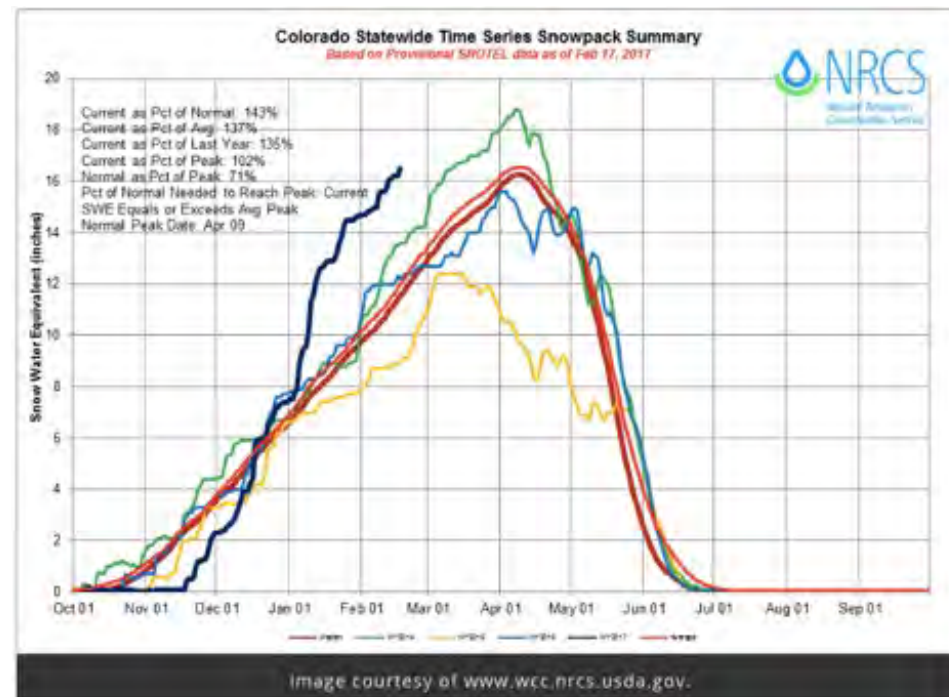
We deviated from our normal happy hour style socials during the week to hold a CASFM summer picnic along the banks of the South Platte River. The event included a short bike ride (5.2 miles round-trip) along the South Platte River to view several of the restoration and park projects in various stages including completed projects (Johnson Habitat Park and the Overland River Improvements) as well as those still under construction (Pasquinel's Landing Park and Grant Frontier Park). Design engineers, landscape architects, ecologists, owners, and contractors talked about their respective duties/perspectives. The collection of projects has been a major step forward in implementing Denver Park's and the Greenway Foundation's River Vision Plan. After the bike tour members and their families enjoyed an old fashion barbeque at Johnson Habitat Park. Enthusiasm was high for the summer picnic so we hope to hold another one in 2017.

Much of Colorado has received more than normal snowpack this winter, alleviating the Front Range from draught concerns for this coming summer. (See the snowpack graph from the NRCS).

However, according to a study by a team of University of Utah Scientists, an article published online in the journal of Geophysical Research, our reprieve may be short-lived. Unabated global warming may result in low-elevation snowpack disappearing in the coming decades. Their study indicated that the snow line would rise as much as 800 feet in the Colorado Rockies. This could mean less spring runoff, the potential for earlier fire seasons, and effects on the ski resorts.

After much debate, the Colorado legislature has passed two laws (HB16-1005 and SB09-080) that have allowed for the collection of rainwater from rooftops in residential dwellings. A maximum of two rain barrels can be used at each household, with a combined storage volume of 110 gallons. The amount that can be irrigated with this volume is estimated to be smaller than a 15 by 15 foot area. In order to prevent mosquito breeding, each rain barrel must have a lid, and it is recommended that they be emptied every month. More information can be found at the following location: <http://extension.colostate.edu/publications-2/>

The first Denver Metro Region social was held January 31st, at CB&Potts Restaurant and Brewery, Westminster. Dr. Andrew Earles, P.E., of Wright Water Engineers highlighted the challenges of preserving some of the world's most valued ancient heritage sites, integrating modern engineering techniques with those of the past. CASFM took a look at the value of stormwater management on an international level, as we traveled to Iraq, Thailand, and Myanmar. The Ishtar Gate, was a key feature of Ancient Babylon for 2,500 years, and was constructed by the Babylonian King Nebuchadnezzar III around 575 BC. Ancient Babylon is now located in Iraq. Over the last several millennia, time, groundwater and the desert have combined to jeopardize the remaining ruins of the site and WWE is working with the World



Monument Fund to better handle the shallow groundwater and improve stormwater runoff. Wat Chaiwatthanaram is a 17th Century Buddhist temple located in the ancient city of Ayutthaya, Thailand. The temple is located on the banks of the Chao Phraya River, the largest river in Thailand. In 2011 the site experienced severe flooding, and WWE has been working with the World Heritage Fund to restore the site, improve drainage, and provide flood protection. Shwe-nandaw Kyaung is an elaborately hand-carved five-story teakwood structure, dating to the 19th century. Located in Mandalay, Myanmar, which used to be referred to as Burma, it was once the northern chamber of Mandalay's Glass Palace. The structure is under siege from termites that thrive on the moist conditions, and WWE is working with the World Monument fund to help redirect and manage stormwater runoff.

The next Metro Region Social will be coming in Mid-April, continuing our international tour, with a presentation by Brian Murphy on a floodplain restoration project in Bogota, Colombia. As always, if you have a suggestion for a great location to hold a social, or would like to do a presentation, please let me know. I am looking forward to a fun first year as the Metro Region representative. ■

CASFM Southeast Region Update By Kevin Binkley

2016 has proved to be a very busy and active year in the SE Region. The following are just a few of the highlights:

City of Colorado Springs

- » At the beginning of 2016, the City of Colorado Springs created a separate dedicated Stormwater Engineering Division within its Public Works Department. As part of this effort, City staff dedicated to stormwater work increased from approximately 28 full-time employees present at the end of 2015 to over 50 full-time staff at the end of 2016, and are planned to increase further to a total of 66 full-time staff by the end of 2017. Most significantly, included in the additional staff are a dedicated Stormwater Division Manager (Mr. Richard Mulledy, P.E.), three senior section leaders, a dedicated drainage-related development and erosion control review group, a stormwater projects delivery team, and a substantial number of inspectors and engineers. Some positions have been filled by re-purposing current staff, while most continue to be new hires.
- » In April 2016, the City of Colorado Springs, Colorado Springs Utilities and Pueblo County entered into an Inter-Governmental Agreement (IGA) which

committed spending for stormwater infrastructure, maintenance and education programs in the amount of \$460 million dollars over the next two decades. As part of the IGA negotiations, a comprehensive list of stormwater capital projects was developed for implementation by the City over the next 20 years. The projects were prioritized based on benefits provided within the City and to downstream neighbors of Colorado Springs. The City worked closely with Wright Water Engineers (WWE), representing Pueblo County, in prioritizing the project list. Over 70 projects were considered in detail, with 9 projects included in the 2016 Capital Improvements Project List, 25 projects included in the 5-year project list (2016-2020), and a total of 71 projects included in the overall 20-year IGA project list (2016-2035).

- » On November 2, 2016, the City of Colorado Springs published its Stormwater Program Implementation Plan (SPIP) on its website. The City's SPIP serves as a planning document that provides a roadmap for revitalizing the City's stormwater infrastructure and operations.
- » On November 9, 2016, the U.S. Department of Justice (at the request of U.S. EPA) and the State of Colorado (acting at the request and on behalf of the Colorado Department of Public Health and Environment and State EPA) filed a civil action in U.S.

District Court for injunctive relief and civil penalties brought against the City of Colorado Springs pursuant to Sections 309(b) and (d) of the Federal Water Pollution Control Act and the Colorado Water Quality Control Act.

- » In January 2017, to more accurately reflect its role and purpose, the Colorado Springs Stormwater Division changed its name to the Water Resources Engineering Division. Stormwater infrastructure projects and programs remain a significant part of the Water Resources Engineering Division to control flooding and comply with federal clean water regulations. According to City Water Resources Engineering Division Manager, Mr. Richard Mulledy, "Ultimately, the purpose of Water Resources Engineering is for clean waterways. Because the majority of stormwater (precipitation or snow melt) eventually makes its way into our waterways and to downstream communities, managing our water resources at the source with a comprehensive approach, including the planning and management of constructed facilities, community education, and the adopt-a-waterway program, is key to maintaining clean waterways for our community and our downstream neighbors."

Continued on page 12

Fountain Creek Watershed, Flood Control and Greenway District (FCWFCGD)

- » The Fountain Creek Watershed, Flood Control and Greenway District (FCWFCGD) completed the Monument Creek Restoration Master Plan in 2016 in cooperation with the City of Colorado Springs and the US Air Force Academy. The master planning effort was in response to heavy storm events in 2013 and the Black Forest fire. A total of 250 projects were identified in the master plan to be developed within the main Monument Creek corridor and its tributaries.

This effort completes the District's Fountain Creek Watershed master planning efforts. Recent updates to the 2011 Fountain Creek Corridor Master Plan (extending from the southern boundary of Colorado Springs to the confluence with the Arkansas River) identified an additional 215 issues since completion of the 2011 plan.

- » The FCWFCGD is currently in the process of developing a District-specific Drainage Criteria Manual (DCM) that is modeled after the Colorado Springs DCM and the Urban Drainage and Flood Control District's DCM. The District DCM is scheduled to be completed Spring 2017.

- » The City of Colorado Springs has supported the FCWFCGD in the development of an area specific 24-hour storm distribution to be used in hydrologic design criteria and replace the current NRCS 24-Hour Type II Design Storm Distribution outlined in the current City of Colorado Springs DCM. This is scheduled to be completed by the end of the first quarter of 2017.
- » A Watershed Assessment for River Stability and Sediment Supply (WARSSS) of the Fountain Creek Corridor is scheduled to be completed by the FCWFCGD during the first quarter of 2017.
- » The FCWFCGD recently completed an Evaluation of Flood Control Alternatives for the Fountain Creek Corridor, which evaluated four alternatives. A needs assessment of the four alternatives is currently being developed which is scheduled to be completed by the end of 2017.

2017 is proving to be shaping up to be an equally busy and active year. During this time, the Southeast Region is aiming to host speakers at quarterly networking events to keep the region apprised of activities happening in the region. ■



Fountain Creek, circa 1865

Rainbow Falls, Manitou Springs

CASFM Younger Members Group

The CASFM Younger Members Group is dedicated to creating a welcoming social environment that promotes the professional development and leadership of younger professionals through networking and collaboration within the stormwater community by providing opportunities and information related to technical training, educational outreach and community service.

2016 was an amazing year for the CASFM YMG. The inaugural year for the group featured eight events with over 38 different young professionals from 21 different firms attending at least one event. 2016 included a variety of events including Dave and Busters, Geeks Who Drink Trivia, Greenway Foundation's Great Divide Brewery Tour, volunteering at Stem Cider Run, and a booth and dinner at the CASFM Conference.

2017 started off with a bang with the January event being the most attended YMG event to date. The January event was hosted at unWined and proved engineers can also use the right side of their brain with a night of painting. The YMG has big plans for 2017 and hopes to get many more young professionals in the stormwater industry involved in the group.

2017 A Look Ahead:

- » Trivia Events Every Other Month
- » P.E. Exam Study Group
- » Program User Groups
- » Greenway Foundation River Sweep
- » Community Outreach Using Floodplain Simulation System
- » CU / CSU Football Game Tailgate Event
- » Outreach to Local Universities

YMG Chair: Jeremy Deischer

YMG Co-Chairs: Ryan Taylor, Saman Medhi, Andrew Espinosa, Tyler Rosburg



To stay up to date on all future YMG Events follow the YMG on Twitter, become a member of the CASFM Facebook Page, Slack and the website:

- » Mailing list / Slack Channel: Email jdeischer@iconeng.com
- » Website: <https://casfm.wildapricot.org/YMG>
- » Facebook: <https://www.facebook.com/groups/casfm/>
- » Twitter: https://twitter.com/casfm_ymg



THE COLORADO ASSOCIATION OF STORMWATER AND FLOODPLAIN MANAGERS

The Open Channel

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Committee Chairs



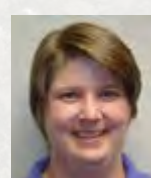
Conference

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Matrix Design Group



Floodplain Management

Christopher Hodyl, PE
CFM
J3 Engineering



Community Rating System

Marsha Hilmes-
Robinson, CFM
City of Fort Collins



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Website, Membership

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