

The Open Channel

Winter 2016 Vol. 27 / Issue 1

2015 Annual Conference Recap

26th Annual CASFM Conference: Stormwater – Back to the Future!

September 22-25, 2015 in Vail, Colorado

By Sarah Houghland, Program Chair

Talk about beginner's luck! Thank you all for making me look like I knew what I was doing during my first year as the program master! This year we had record overall attendance (almost 350); fantastic keynote and featured speakers; outstanding workshops; informative presentations; delicious meals; the entertainment was...ALRIGHT so I didn't bat 1.000! The conference survey results showed that many of the conference activities/events received high ratings, and the conference committee will work to improve on the areas where we may have missed the mark.

While conference planning proved to be challenging in both expected and unexpected ways, it made me appreciate how much effort Robert, Stuart, Shea and the other committee members and officers have put into the conference to make it a success for all of these years. As our 2014 Chapter award proved, CASFM is one of the most successful local chapters in the country and our annual conference reflects that high standard. Moving forward, I hope to continue to meet these expectations and to maintain the professional values that make CASFM unique while looking to incorporate new ideas and approaches along the way. But before we focus our attention to Crested Butte 2016, let's revisit the highlights from Vail 2015.

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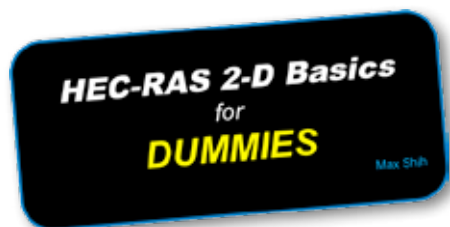
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Workshops

I am leading off the conference recap with workshops because I feel like they were really successful, and I want to reiterate that before you stop reading this section of the newsletter. The conference committee was afraid we might have added too many workshops to the itinerary, but our CASFM members proved to be a group of over-achievers because all of the workshops and the CFM training session were well attended and highly graded per the conference survey. Who would have guessed that a workshop on culvert hydraulics ranked as high as golf with our attendees? We have a tough act to follow next year!



- » **HEC-RAS 2-D Basics for Dummies** was led by Max Shih and Chris Shrimpton, both with AECOM. The HEC-RAS 2-D workshop focused on providing the basic knowledge and applications of two-dimensional (2-D) flood inundation modeling using the new version of the U.S. Army Corps of Engineers' HEC-RAS 5.0. Participants were led through the step-by-step process of running their first 2-D HEC-RAS model.

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- » Chris Olson, CSU and Holly Piza, UDFCD were the instructors for the **Bioretention Planning, Design and Maintenance** workshop. This workshop offered an overview to planning, design and long-term maintenance of bioretention (aka—rain garden/porous landscape detention) best management practices with the overall goal of providing participants with relevant information and knowledge to increase the successful application of these facilities. They provided new information on filter media specifications, forebay design and underdrain design that is not currently available in any design criteria manual.



- » Jimmy O'Brien led the FLO-2D workshop **An Integrated Two-Dimensional Flood Routing Model with a Storm Drain Component**. The FLO-2D demonstration showed how to incorporate modeling details such as buildings, walls, street flow, drainage channels, and storm drains that are required to accurately model urban flood hazards. FLO-2D now has a storm drain component that fully integrates the surface water and storm drain system exchange

including inlet control, return flow, outfall to channels and basins, manhole cover popping, street cross slope and curb heights.



- » The **Culvert Hydraulics** workshop conducted by John Hunt, Ayres Associates, was once again a huge hit. John is an experienced instructor and made hydraulics a captivating and interesting topic. His enthusiasm for teaching was a big hit for attendees. The conference committee usually recommends this fantastic workshop every four years, and everyone should attend at least once. The Culvert Hydraulics workshop included an interactive flume demonstration, and participants learned the essential elements of the hydraulic analysis and design of culverts. During the workshop, attendees received instruction on factors affecting culvert capacity; inlet control vs. outlet control; and effects of barrel roughness, size, shape, slope, and inlet treatment.
- » Considering Colorado has approximately 470 CFMs and the 4th highest number of CFMs in the country (only behind FL, IL, and TX), you think we would have run out of people who wanted to be CFMs. The attendance at this year's **Certified Floodplain Manager Training** led by Jamie Prochno, Kevin Houck (CWCB) and Craig Jacobson (ICON) proved that assumption to be incorrect because at least 60 people took the test this year. Let's keep up the momentum for 2016 and try to overtake the 3rd place spot.



Featured Speakers

To commemorate the 50th anniversary of the 1965 South Platte River flood that devastated Denver, Dave Bennetts, UDFCD presented **Revisiting the '65 South Platte River Flood 50 Years Later**. The presentation provided information regarding the South Platte River's history, the 1965 flood, and the mitigation projects that have been completed in the years since that devastating event. It was a great way to kick-off the conference presentations by reminding us all of how far we've come since 1965.

CASFM's Keynote Speaker this year was Andrew Reese, Vice President at AMEC Foster Wheeler. Andy was CASFM's keynote speaker in 2002 on **Stormwater Paradigms**, which was one of the most memorable presentations on how the industry has come full circle from engineered systems back to restoring natural systems. For the 2015 conference, Andy explored how we have recently arrived full circle; we have gone **Back to the Future** realizing that natural systems can teach us a few things about stormwater management. Each approach, or stormwater paradigm, seemed to solve an immediate problem, but also seemed to create a more difficult problem in its place.

Our Featured Speakers were Glenn Johnson from the Lower South Platte Natural Resources District and Carter Hubbard from Olsson Associates. They presented **Antelope Creek Daylighting for Flood Reduction**, which is a \$72 million project in Lincoln, Nebraska, designed by the US Army Corps of Engineers and completed in

2010, that reduces average annual flood damages and removed 835 buildings and 1,200 residents from the 100-year floodplain. The project included construction of a new vegetated open channel parallel to a 4,000-foot section of Antelope Creek, along with enlargement of the upstream and downstream existing channel. The scope of and technical expertise involved in all phases of project inception, design, and construction was truly an impressive feat.

Technical Presentations

We had 35 technical presentations at the conference which provided something for everyone. Running three tracks makes it difficult to see all of the great presentations so check the CASFM website for all of the PowerPoint presentations if you missed something. They are all posted for your reference. Thanks to all the great speakers for their willingness to present and all of the preparation for the conference! Standout presentations were Saeed Farahmandi with the City & County of Denver and his fun drone videos—not really stormwater or floodplain management, but close! Kallie Bauer with the Colorado Dam Safety captivated the audience on the difference between the design capacity of a spillway and floodplain management, and noted that just because a spillway is activated does not mean the dam is failing.

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CASFM Engineering Excellence Award

As always, one of the highlights of the conference is the project award presentations and awarding of the CASFM Engineering Excellence Award. This year did not disappoint! Our runner-up projects were:

- » Roaring Fork River Restoration at Basalt, Colorado
Project Team: Town of Basalt, Matrix Design Group, Inc., DHM Design
- » Johnson Habitat Park at the South Platte River, Denver, CO
Project Team: City and County of Denver, Urban Drainage and Flood Control District, ICON Engineering, Inc., DHM Design

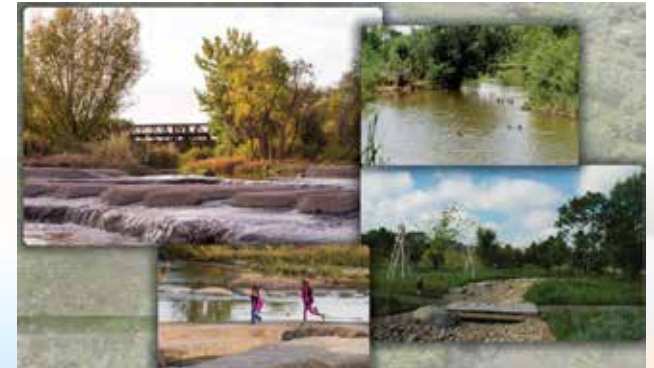
And the 2015 CASFM Engineering Excellence Award winning project was the Cherry Creek Valley Ecological Park project! The project stakeholders included:

Arapahoe County Open Space, Southeast Metro Stormwater Authority, Urban Drainage and Flood Control District, Cherry Creek Basin Water Quality Authority, Muller Engineering Company, and Valerian.

Eco Park is a 75 acre open space located along a 5,100-foot reach of Cherry Creek upstream of Cherry Creek Reservoir in Centennial, Colorado. Urbanization and the resulting increase in storm runoff took a toll on the area's natural systems, leading to stream erosion, loss of vegetation, degraded water quality, and infrastructure damage. To correct these issues, the project partners embarked on a multi-phase project to address these issues and to turn



the park back into its natural setting that illustrates the different ecosystems working together to create habitat for animals as well as a system of pathways and opportunities for human recreation. The project was completed in the spring of 2014, and the overall cost was \$5,025,000. In the end, this project is evidence that preserving drainageways within urban settings and complementing them with educational and recreational facilities provides value to both the public and surrounding environment.





Mountain Bike Tour

The **Mountain Bike Tour** has become an annual conference event, and this year the tour took cyclists on a 6 mile morning bike ride through Vail to learn more about the causes of water quality impairment on Gore Creek and the current efforts underway to address these issues. Rich Ommert, RESPEC, lead the group east from the Vail Cascade along Gore Creek via a network of bike trails and low-traffic roads. Along the way, the group stopped to look at some key points of interest on the creek to exercise both mind and body!

Field Trip

Doug Trieste, Flow Technologies, organized the field trip with Justin Lederer, Summit County Open Space and Trails Department, for a guided field trip along the Swan River near Breckenridge which is the site of the **Swan River Stream Restoration** Design-Build project. The field trip highlighted the “before” conditions along the Swan River prior to the initiation of the Swan River restoration project. When the project is finished (and when the conference is back in Breckenridge in 2017 near the project’s vicinity), CASFM plans to offer a follow-up field trip to show the “after” conditions. Who wants to volunteer to remind me this was the plan? Send me an email if you are interested.

Golf Tournament

I personally have not participated in the annual **CASFM Conference Golf Tournament**, but I hear it can turn into a highly contested battle for prizes and, more importantly, bragging rights. People tell me that the EagleVail Golf course has many elevation changes and is 6,836 yards long. All indicators that I would shoot 200. Apparently Brad Anderson, Mark Glidden, Brian Smith, and Doug Williams were not intimidated and are much better golfers than the rest of the CASFM members and me because that’s the 2015 winning foursome. Thank you Dave Center, AECOM, for planning this event year after year!



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!

Looking Forward

See you in Whatever, USA in 2016! If you got that joke, you drink too much Bud Light. Preparations for next year’s conference are already underway! Over the next few months, the conference committee will vet potential keynote speakers, featured speakers and workshop ideas so let us know if you have suggestions before the end of February. Also, the Call for Papers will go out in February. CASFM members will be notified via email and you can periodically visit www.CASFM.org for conference updates.



Save the Date...
2016 CASFM Conference
Crested Butte Mountain Resort
September 13-16

A Word From the Chair



By Shea Thomas, CASFM Chair

Hello CASFM!

I am so excited to be writing my first newsletter article as Chair of this great organization.

For those of you who don't know me, I thought I'd start with a little self-introduction. First and foremost I am a wife and mother of three children. Palmer (20) is an intern at Red Rocks Church in the youth ministry program. Erin (18) is a freshman at UNC in Greeley studying Exercise Science and running on the Cross County and Track teams. Eli (9) is the only one still at home and loves tackle football and anything humorous. I'm obsessed with hiking 14ers with my daughter – we've hiked 27 so far – and you'll probably be inundated with hiking photos like these throughout the next year.

I am a Project Manager for the Urban Drainage and Flood Control District in the Master Planning program. In this role, I manage all of the master plans throughout the District which gives me the opportunity to work with a plethora of consultants and local government representatives. Because of the varying personalities on the project teams and the differing conditions in each watershed, no two studies are alike and that provides constant variety in my job. I actually think I have the best job in our industry in the State.

CASFM has played a very instrumental role in my career. As a consultant, particularly a young engineer learning the ropes of the industry, it can be difficult to get to know people outside your own office. I attended my first CASFM conference in 2001 where I met people during



some of the social events that I would eventually work with on projects and am still friends with today. This helped open doors for me by providing insight into this tight-knit engineering community and eventually some of those re-

lationships I formed at my very first CASFM event helped elevate my career and lead me to the place I am today.

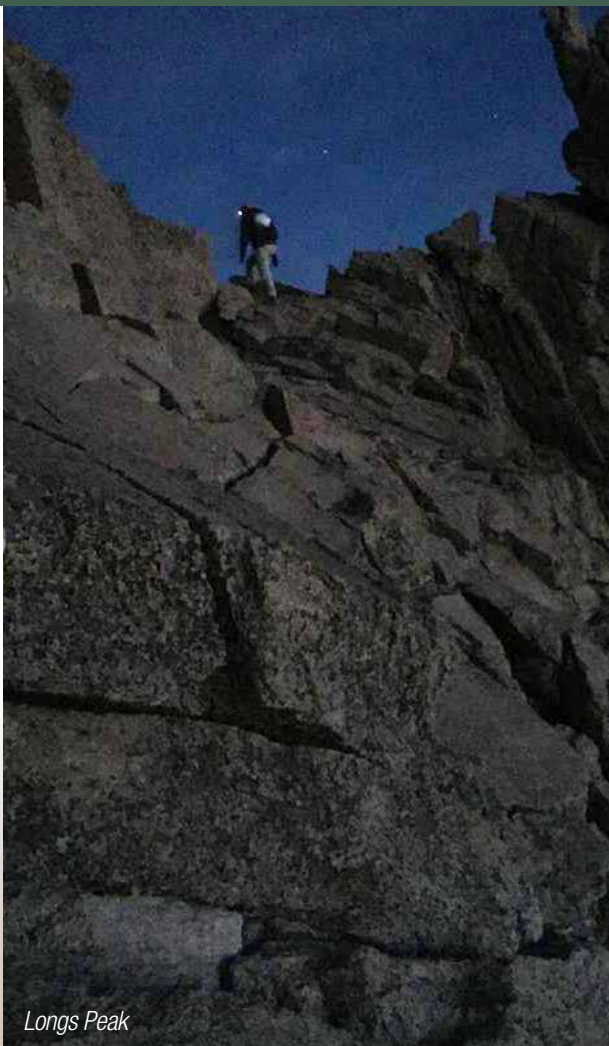
My predecessor, Brian Varrella, did a great job focusing the efforts of our organization on reaching outward. He successfully forged alliances with other organizations like the American Planning Association, Natural Hazards Center, Colorado Riparian Association and the Colorado Foundation for Water Education. He even pushed us into the political realm, ending up on a first name basis with then Senator Udall's staff. Fortunately for us, Brian has agreed to continue to build these relationships through his involvement on the Outreach and Training Committee. That gives me time to focus on my priority: fostering organizational growth through volunteering. As an all-volunteer organization, it's the members of the past that have shaped and formed the CASFM community into what it is today; and it's the members of today that will determine how we grow in the future. I want everyone to have the op-

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portunity to reap the rewards that involvement in CASFM can offer just like I did. So you'll hear me talking a lot about our great committees and Board positions, networking opportunities and encouraging you to put more into CASFM so you can get more out of it.

I want to take a moment to thank Jason Messamer for two great years serving in the role of Secretary, adding just the right amount of humor and sarcasm to the draft meeting minutes. Jason is a prime example of how CASFM can



Brian Murphy

help spark someone's career—if you're new to CASFM and don't know his story, be sure to seek him out at the next social and ask. Beck Anderson did a great job coordinating social events for the highly active Northeast Region over the last couple years, and for that we thank him for his time and commitment to the organization. I'd also like to thank Vice Chair Brian Murphy for assembling his very first CASFM newsletter; I know how much time it takes and how difficult it is to wrangle up articles around the holidays. For those of you who don't know Brian, in addition to his creative ideas and passion for

perfection, he is quite the snappy dresser:

I look forward to a great 2016 and hope to see you at the numerous CASFM events over the year!

Shea Thomas
CASFM Chair



Stormwater Quality Committee

By Holly Piza

The Stormwater Quality Committee organizes and promotes stormwater-related education opportunities with the goal of maintaining and improving the health of lakes, rivers and streams through proper stormwater management. Opportunities include 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. If you have a site that you would like to highlight, please contact Holly Piza at hpiza@udfcd.org.

Due to the popularity of the stormwater chemistry class held last year, we are happy to announce that Erick McWayne will be coming back this May to provide this class again. This is a two-day course that will be held May 4 and 5th at Urban Drainage and Flood Control District offices in Denver. Watch your emails and the CASFM website for the class announcement and Call for Registration.

Scholarship Committee

By Jacob James

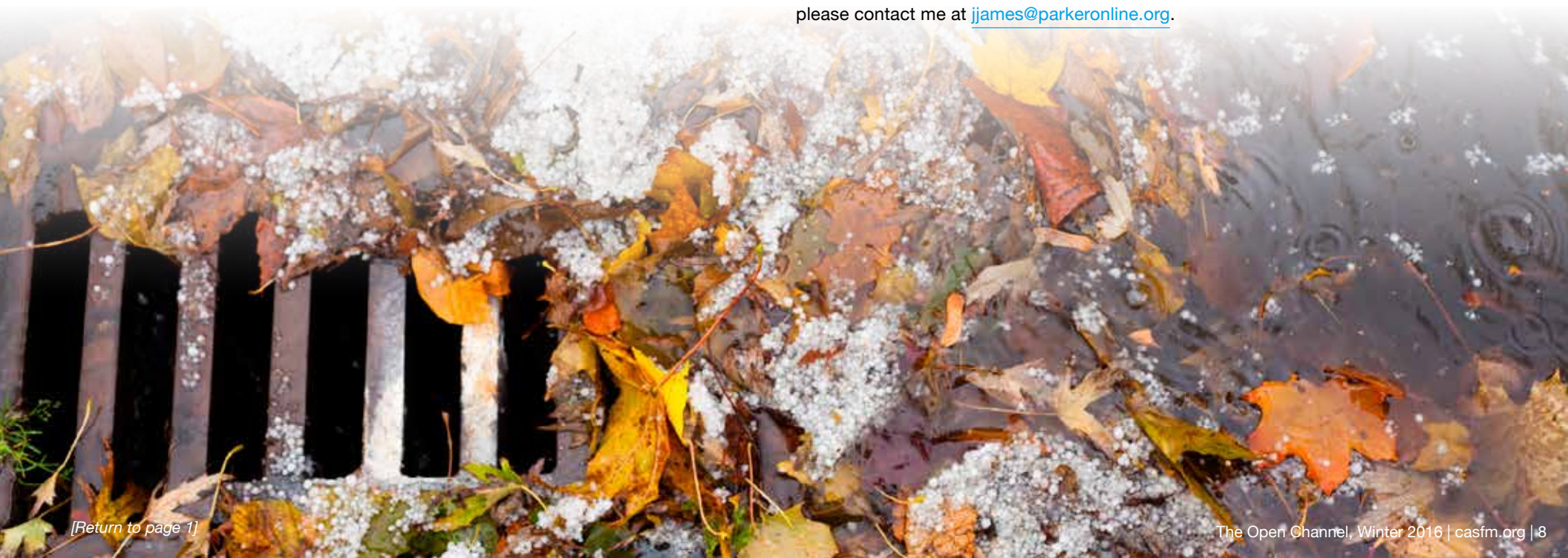
The scholarship committee received several excellent applications for the 2015 CASFM Ben Urbonas Scholarship and awarded the scholarship to Brad Bettag last fall. We wish Brad the best as he continues on towards a graduate degree in hydrology and hydraulics!

Unfortunately, no applications were received for the 2015 CASFM Family Scholarship leaving an untapped resource for CASFM members that are a parent or guardian of an eligible college student. Everyone is encouraged to visit the scholarship link on the CASFM website to review the eligibility and see if you have a family member that can apply in 2016.

The committee is excited to announce the return of the undergraduate scholarship for 2016! This scholarship will now be funded by CASFM and will be available for eligible undergraduate college students. The committee will be working on finalizing the eligibility criteria and application process this year and we are looking for more volunteers to help shape the scholarship.

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

The Scholarship Committee would like some more volunteers so if you are interested please contact me at jjames@parkeronline.org.



Flood Technical Assistance Partnership (TAP) Committee

By Brian Varella

Much of the work completed by CASFM members is behind-the-scenes, and one of the least visible committees is the Flood Technical Assistance Partnership, or FTAP. This committee is really a collective of state agencies with federal and local government partners with one purpose; enhanced collaboration between agencies responsible for comprehensive flood preparedness and floodplain management seeking to improve customer service and help each other fulfill our common missions. The vision for the group started with leadership at the Colorado Department of Homeland Security and Emergency Management (DHSEM) many years ago.

The original group functioned for a while and lost momentum, but in 2012/2013 it was re-invigorated by Marilyn Galley and many other CASFM members and colleagues at DHSEM. There was widespread recognition that wildfires along Colorado's Urban Corridor were changing flood severity, and the link between disasters was strong. DHSEM realized it would take an army of agencies and their professionals to effectively combat natural hazards, share resources, and provide a united planning front to prevent

duplication of efforts. The FTAP was reformed and reinvigorated just in time to experience Colorado's worst wildfires, and its worst recent regional flood in 2013.

The FTAP Committee was formed by the CASFM Board in 2014 to provide leadership when DHSEM resources were stretched to their limit. Under Julie Baxter's leadership, the Committee continued to meet every 2 months and share resources on hazard mitigation, the Community Rating System, emergency response protocols, and technological advances. Today the FTAP is comprised of professionals from UDFCD, City & County of Denver, FEMA Region 8, DHSEM, the Dam Safety Division, DOLA, CDOT, the CRRO, and CASFM itself. The Committee will be working on a couple long-term projects including a disaster response & recovery toolkit, and will continue to work on annual projects like updating the flood portion of the State Hazard Mitigation Program. CASFM is proud to provide interim leadership through 2016, and to provide resources to all communities, agencies and individuals here and across the nation so that we can maintain a safe, resilient and vibrant Colorado.

CRS Committee

By Marsha Hilmes-Robinson

On Nov.2-5, 2015, we were fortunate to have the CRS field deployed class offered in Colorado. The City of Longmont hosted us for the four day training with communities from across the state attending. Several communities not yet in the CRS participated, which is a great sign of the interest in CRS. The training offered a chance to learn in depth about the various CRS activities and discuss the specific documentation requirements for each. In addition, communities were able to collaborate and discuss more local issues and resources. We appreciate the work of FEMA Region VIII and CWCB staff for advocating for this important training opportunity.



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources



Outreach and Training Committee

By Alan Turner and Craig Jacobson

The CASFM Outreach and Training Committee supports the CASFM board and membership through the dissemination of information within the organization, support of the training needs of the members and external outreach and support to a growing group of associated professional organizations as well as providing support to regional communities. Here is what we have been up to since the 2015 CASFM Conference as well as what is coming up soon:

The Outreach and Training Committee met on October 23, 2015. We took the energy from the CASFM conference and set up sub committees. These committees include:

Social Media

Emily Murphy Siem, Calibre
Brian Varrella, CDOT
Lisa Lauver, Stantec



Training

Tyler Rosburg, ICON
Rich Borchardt, UDFCD
Emily Murphy Siem, Calibre

CASFM Committee Communication

Lisa Lauver, Stantec
Carrie Herbolsheimer, Applegate

Website

Stuart Gardner, CDOT
Craig Jacobson, Icon
Alan Turner, CH2M
Jeremy Deischer, Icon

Younger Members Group

Jeremy Deischer, ICON
Ryan Taylor, Muller
Jessica Lammers, Matrix
Andrew Espinosa

CASFM External Networking

Alan Turner, CH2M
Craig Jacobson, ICON
Emily Murphy Siem, Calibre

With the sub-committees established the group set to work. The social media committee headed by Brian and Emily have added a twitter feed to the CASFM website and have done a phenomenal job of finding pertinent and relevant information to post to Twitter and LinkedIn.

The Junior Members group has been active in plotting the goals of the group and have established a mission statement:

"The CASFM Younger Members Group is dedicated to creating a welcoming social environment that promotes the professional and leadership development 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."

The group has had an initial meeting on November 12, 2015 with a goal to have the initial Younger Members Group social in January, 2016. In addition, the group has developed a web page that can be found on the CASFM Wild Apricot Page which is now live at: <http://casfm.wildapricot.org/YMG>

The group plans to present a live survey at the initial group social in January to further refine the goals of the group moving forward. Much thanks goes to Jeremy Deischer, Ryan Taylor, Jessica Lammers and Andrew Espinosa for all the work they have done in getting this group up and running.

The Outreach and Training Committee now has an active web page. This was built in Wild Apricot and can be found at: <http://casfm.wildapricot.org/Outreach>.

The group met again on January 8, 2016 at the ICON offices. This meeting updated the group on the past months progress and brought up new issues.

Items discussed at the meeting were:

Website:

1. The existing website needs to be cataloged to determine what is stored on the website, what is historically relevant and what can be deleted.
2. A discussion of updating the website to a more modern format. This would include compatibility with Wild Apricot, selecting a website development platform, long term updating and management

There is more to come on this topic so stay tuned.

Outreach to other Professional Organizations:

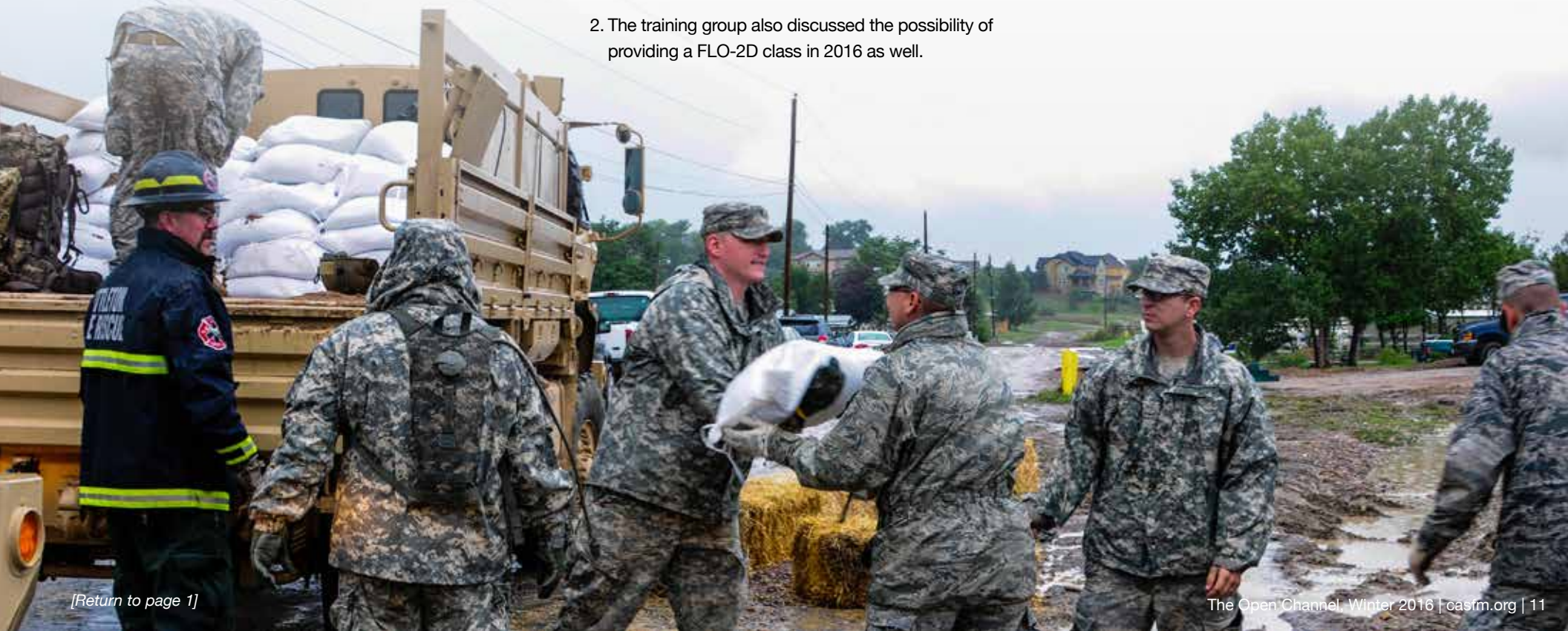
1. The Group was contacted by the Red Cross and we will be reaching out to the Red Cross to see what opportunities exist to mutually benefit each group.
2. Reach out to other professional organizations in 2016 including APA, FloodSmart and others that we have been working with for the past several years. It is hoped we can begin to get some interrelated training and interaction that is mutually beneficial to all groups.

Training:

1. The training group has been working on getting a HEC-RAS 5.0 course on the western slope in Grand Junction. This is currently being planned for April or May with additional details to come.
2. The training group also discussed the possibility of providing a FLO-2D class in 2016 as well.

As always the training group is looking for ideas for training that is meaningful to the CASFM membership so if you have any suggestions please feel free to reach out.

Finally, moving forward, our group plans on having bi-monthly meetings continuing in February (off months from General CASFM Meetings). The next meeting will be held on February 19, 2016 with the location to be determined. Craig and I are excited with the progress our committee has made this year and are looking to continuing this through 2016. Thank you to all of our volunteers that are moving the goals of the group forward, and if you are interested in joining please feel free to reach out.



Metro Region By Drew Beck

The Metro area had some great socials this year on unique engineering challenges such as the Manitou Incline Project and how climate change may affect the way we map floodplains. For our fall social on August 27th Tom Browning, the Deputy Director of Integrated Water Resources from the CWCB presented an update on the Chatfield Re-Allocation Project. The Chatfield Reservoir Reallocation Project represents a great opportunity for Colorado eastern slope interests to make better use of an existing federal storage reservoir upstream of the Denver metro area. The project has proposed benefits for municipal and industrial water supply, agricultural uses, environmental needs, and recreational opportunities. There's also an important component for re-use. Tom provided a great overview of the project goals and mitigation requirements along with a status update on various efforts as the team works towards implementation.

The 2016 El Nino is setting up the mountains for another banner snow season. Hopefully you've got your skis/boards waxed up and ready to go. In between those powder days make sure to join us for some upcoming Metro social events. We are currently planning a January presentation from Holly Piza (UDFCD), Jim Wulliman (Muller Engineering), and Paul Thomas (Stream Design) on the final version of Denver's Ultra Urban Green Infrastructure Guide. Come learn how you can apply these innovative standards to your next project. We are also in the process of planning a joint Metro and Northeast Region social updating the Northern Colorado Flood Recovery efforts in February/March. Keep an eye on the CASFM calendar or your email on the exact dates and locations. As always if you, or someone you know, would like to present a project or research work, or if you would like to see a social event held at a specific location, please contact me at drew.beck@matrixdesigngroup.com. Happy New Year!

Northeast Region

It might seem quiet in the Northeast Region of Colorado these days, but many of our CASFM colleagues are more busy now than they have ever been in their careers. Members in the private and public sector have been asked to work their regular jobs and continue the recovery & resiliency efforts initiated after the 2013 Floods. Towns and cities like Loveland, Lyons, Evans, Estes Park and others are still repairing damages, and are executing Governor Hickenlooper's vision for a resilient state. The Colorado Resiliency Framework was developed by many of the members of our organization to accumulate the knowledge our industry gained during and since the floods, and was adopted in May 2015 to guide infrastructure, watershed, and other regulatory functions in our state. All of this work was Colorado formed and founded, and is now being turned into projects, actions and standards across the state.

We are excited to showcase some of the innovations of the Framework at a combined social event in March 2016. The Metro Region and Northeast Region will meet on the north side of the metro area to showcase the CWCB's Emergency Watershed Protection (EWP) program and projects. The program management team will present the goals, objectives and projects currently initiated by the watershed coalitions across the flood zones, and will answer questions associated with this \$70 million effort in our state. We hope to further the spirit of collaboration by inviting our friends from APA Colorado and the Colorado Riparian Association to attend and participate so that CASFM members can continue its efforts to reach out to colleagues in other areas of expertise. This event not only combines internal resources, but helps us create a larger network of professionals that can help discover unique solutions to post-flood challenges.

Details for the CASFM Combined Regions events will be emailed out as soon as they are available, and we look forward to packing the house with new friends and familiar faces.



Looking down the Manitou Springs Incline from Barr Trail Bailout, approximately two-thirds of the way up the incline. Photo by Ixbrian

Southeast Region By Keith Curtis

Southeast finally got its act together and organized a fall social in October. The Social was held at Bristol brewing company who graciously provided complementary Pints of their craft selections, while CASFM picked up the appetizers. Don Jacobs, from Enginuity Engineering Solutions gave a stellar presentation on Manitou Incline—The Most Extreme Trail Project You'll See. Great food, drink, and company was had by all.

Pikes Peak Regional Building Department (PPRBD) provided \$25,000 to initiate a letter of map revision along Security Creek which hopefully will provide more accurate mapping for the citizens in that area. PPRBD also provided a generous donation of \$2,000 to the CASFM Scholarship program for 2016. Thanks PPRBD!!

The Pikes Peak Region finally received the long awaited DFIRMs for the whole county in July. We are currently in the appeal period expecting few comments and hopefully an expeditious adoption of the new maps.

Spring social is in the works probably back to Bristol since it is such an ideal venue.

Our CRS Cycle is 2016 so we are feverishly preparing our submittal and expect it to be ready December 31st by midnight ;-)

Are Your Communities Prepared for Flooding this Winter?

Now is the time to remind Colorado residents that it only takes one storm or an [early spring thaw](#) to cause devastating flooding. Since there is typically a 30-day waiting period before flood insurance takes effect, now is the time to help people in your community better understand their increased flood risk and the importance of having flood insurance.

While climate experts are predicting a drier and warmer winter for the Northern Rockies, it's important to know that the chance of less precipitation does not affect the severity of storms that may occur. A severe winter storm followed by warmer weather can cause ice jams and flooding in rivers throughout the State.

Few people are aware that Colorado's recent [wild-fires](#) add to the risk of flooding. Properties directly affected by fires and those located downstream of burn areas are at a heightened risk of experiencing a flood.

Charred grounds in burn-scarred areas cannot easily absorb water, placing residents at an increased risk for [flash flooding](#) and [mudflows](#). Remind your community that flood risk isn't solely based on flood history—it's also based on such factors as river flow, topography, and changes due to recent [building and development](#).

To educate members in your community about their flood risk and financial preparedness, FloodSmart—the marketing and education campaign of the National Flood Insurance Program—offers several tools and resources on [FloodSmart.gov](#) that you can use, including:

- » The [Cost of Flooding tool](#), which you can embed on your website to illustrate how just a few inches of water can cost tens of thousands of dollars in damage.

- » Our [Flood after Fire tool](#) to simulate how fires can increase flood risk.
- » [Consumer](#) and [business](#) checklists to share with residents to prepare before the next disaster strikes.
- » [Before, during,](#) and [after](#) the flood infographics to outline the actions residents can take to stay safe and file a claim.
- » [Social media messages](#) that you can share through Facebook and Twitter.

This winter, don't let out of sight mean out of mind. Now is the time to reach out to Colorado residents to help them better understand their flood risk, and encourage them to protect what matters with a flood insurance policy. It's a conversation you won't regret.



Interested in Volunteering?

The generous support of CASFM to the Red Cross following the floods in Colorado allowed them to deliver a sustained response, as well as support the longer-term recovery and preparedness needs of affected communities. If you are interested in volunteering with the Red Cross please contact Sarah Walsh at sarah.walsh@redcross.org.



**American
Red Cross**



New Hazard Planning Resource

An exciting new resource for Colorado communities is coming online in February, 2016. The Planning for Hazards: Land Use Solutions for Colorado printed guide and website will enable counties and municipalities to prepare for and mitigate multiple hazards. It does so by providing guidance on how to integrate resilience and hazard mitigation principles into plans, codes, and standards related to land use and the built environment. The guide, commissioned by the Colorado Department of Local Affairs, will provide detailed, Colorado-specific information about how to assess a community's risk to hazards as well as specific land use planning tools and strategies for reducing a community's risk. Sign up for updates and learn more by visiting www.planningforhazards.com.



Sign up for updates and learn more by visiting us at:

www.planningforhazards.com

The Planning for Hazards **guide** and **website** currently under development will enable Colorado communities to prepare for and mitigate multiple **hazards** by integrating resilience and hazard mitigation principles into **plans, codes, and standards** related to land use and the built environment. The guide will provide detailed, Colorado-specific information about how to assess a community's risk level to hazards as well as specific land use planning **tools and strategies** for reducing a community's risk.

Look for the guide in February 2016!

- The Planning For Hazards Team

THE COLORADO ASSOCIATION OF STORMWATER AND FLOODPLAIN MANAGERS

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