

The Open Channel

Winter 2014 Vol. 25 / Issue 1



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2013 Annual Conference Recap

By Shea Thomas, PE, CASFM Conference Program Chair

The 2013 CASFM Conference in Steamboat Springs will certainly stick in everyone's minds as a rare event. I'd like to think that's because of the fantastic program, but I know it will be remembered for other reasons. On the first full day of the conference Colorado was experiencing some of the heaviest rainfall it had ever seen, while 250 of the state's stormwater and floodplain managers sat comfortably dry in a conference room in Steamboat Springs. The result of that rainfall, of course, was some of the most intense and disastrous flooding the northeast part of our state has experienced in decades. As attendees who serve as emergency responders and flooding experts for their communities peeled away from the conference and headed back to offer whatever assistance they could provide, it left a noticeably somber condition on the remaining attendees at the end of the week.

Though it's difficult to separate the two and put the storm aside, the conference was eventful and successful. The venue was the beautiful Sheraton Steamboat Resort, which has the honor of hosting more CASFM conferences than any other location. Both the Permanent Water Quality BMP Inspection and Maintenance and the NFIP Reform workshops were well-attended this year, though we hoped for a better turnout. We'd love to increase attendance to these workshops in the future, so your feedback on what topics you would like to see offered in the future would be greatly appreciated. The Modification of Stream Restoration Techniques for Arid and Semi-Arid Environments workshop unfortunately had to compete with the flood of attendees leaving early to deal with the flooding back home, but those who did attend praised

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the material presented.

I don't know what the final tally for the CASFM Award finalists was, but I do know selecting one over the other two was a tough choice for me. The Lefthand Creek Flood Control Project presented by the City of Longmont and Muller Engineering ended up on top, and as a reward was put to the test with major flooding during the storm. From what I've heard, the project performed beautifully as designed so there's need for a recall of the award! The other two finalists –the Cherry Creek Stream Reclamation at Parker Jordan Centennial Open Space presented by Southeast Metro Stormwater Authority and J3 Engineering Consultants along with the Brantner Gulch at Holly Street presented by the City

of Thornton, Urban Drainage and Flood Control District and ICON Engineering – received second and third place awards. It's so nice to see successful, rewarding, innovative projects designed and constructed by our own members every year. Be thinking of your own projects to submit for next year's award.

The field trips this year were also sparsely attended due to people returning back to the Front Range. Those who did stick around were rewarded with a look at the Burgess Creek Daylighting project right behind the hotel, followed by a walk along the Yampa River to see the progress of the restoration efforts. The Yampa River was also visited by the mountain bike tour where stabilization measures along the tributaries and water quality improvements measures were





David Hollingsworth (Longmont) and Joe Juergensen (Muller) accept the 2013 CASFM Project Award

discussed. There is some disappointing news to report from the golf tournament – yours truly did not retain the championship title due to what I’m pretty sure were some semi-pros brought in to stack the winning team. It was a beautiful day on a beautiful course and most of us finished right before the heavy rain hit.

The theme this year was All Hands on Deck, signifying the importance of individuals of all generations in our industry. In an effort to make the group aware of the different generations we had attending the conference, all attendees were given a colored sign indicating to which generation they belong. These signs then came into play in the opening panel session which was intended to inform the crowd of the stereotypical differences between the generations, and to get people to start thinking about how these differences affect their own workplace. A huge thanks to Jason Messamer, Danny Elsner and Penn Gildersleeve who were my Millennial, Generation X and Baby Boomer representatives on the panel. I was so impressed with their willingness to participate in the unknown and to handle the occasional ribbing from the moderator! The panel was a warm-up act for the expert in the field, this year’s keynote speaker Bob Wendover. Bob is with the Center for Generational Studies and he shared his insight into the generational differences in the workplace. His engagement with the audience enabled some interesting discussions and perspectives from conference attendees, and I hope we all took some of the key topics back to the office as a lesson of how to work together better and potentially massage our way of doing business to accommodate and highlight the skills this younger generation entering the industry has to offer.

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Chair Brian Varrella presents past-chair David Bennetts with a service award.

A special treat this year was our featured speaker John Fielder; renowned photographer, publisher, teacher and preservationist. The first part of John’s presentation was a narrative of his experience creating the popular Colorado: 1870 – 2000 coffee table book, supplemented with beautiful images from the book. The second part of the presentation highlighted his new book, Colorado’s Great Outdoors – Celebrating 20 Years of Lottery-Funded Lands, speaking to the importance of floodplain and open space preservation.

Of course, the meat of the conference is always the numerous technical presentations from the CASFM members. This year we had great talks in the fields of Water Quality, Floodplain Management, Stream Restoration, Technical Modeling, Stormwater Management and Emergency Preparedness. I was particularly interested in some of the atypical presentations that focused on technologies used in our industry but not often discussed in the forefront and also talk about the need to think about how to deal with burnout in the industry. Coming from a once burnt-out engineer, that presentation hit close to home.

I hope you all join us at the 2014 CASFM Conference in Vail at the Vail Cascade Resort from September 30th to October 3rd. Hopefully with the location being a little closer to home for most of us, we’ll be able to set record-breaking attendance levels. We’re about to start the planning for that conference and are soliciting any suggestions for themes, keynote speakers, field trips, workshops or any program modifications you may have in mind. We’d like this to be a conference for CASFM members designed by CASFM members, so let the ideas flow!



A Word From the Chair

Greetings CASFM Members,



The preparation of this newsletter arrives as 2013 closes in on 2014. I believe this will be a year for all of us to remember, and it is sure to be a career-defining year for many of our members.

I will start first by thanking all of you, the professionals that make our organization live and breathe, for working so hard over the past year. To showcase your hard work across the State, and to help us lead Colorado to a safer and more resilient future, I am pleased to announce we will be hosting the 2013 Colorado Flood Symposium on February 27, 2014 in Broomfield. This event has been supported by many individuals from our membership, but I have to give Dave Bennetts and Shea Thomas special thanks for organizing a venue, attendee list, and a working agenda. Special thanks also to our partners Colorado State University, URS, CH2M Hill, Pikes Peak Regional Building Department, and Walsh Environmental. Registration will be limited and will be announced soon; available details for the Flood Forum were e-mailed out to the general membership on December 17, 2013.

Members of CASFM include stormwater managers, hydrologists, hydraulic specialists, engineers, planners, floodplain managers, watershed scientists, surveyors, fluvial geomorphologists, and other professionals who work daily to protect everyone in Colorado from flood hazards. Our mission, as summarized from our online brochure, is to reduce the loss of human life and property from flood and storm damage. I have seen our members completing this mission continuously, often against impossible odds, from the private sector, the public sector, and our academic institutions. A 1,533 square mile disaster can either fracture a community or cause it to rise up and pool resources; the community of CASFM immediately chose to rise up and assist Colorado neighbors.

Articles in this newsletter showcase the benefits our committee chairs and regional representatives provide to members every year. Marsha Hilmes--Robinson's Community Rating System Committee has been nationally recognized for their insight, involvement, and influence on policy from our national colleagues. Jamie Prochno's Floodplain Committee has a packed agenda for 2014 and continues to help Colorado be one of the states with the highest number of Certified Floodplain Manager (CFM) practicing. Kevin Gingery is hard at work in the Membership Committee helping us renew our 2014 memberships, and Morgan Lynch has exciting news from the Scholarship Committee. Holly Piza's Stormwater Quality Committee is planning another field trip day, which has become one of our best-attended annual events. We still have the best state chapter website at www.CASFM.org thanks to our Website Committee Chair Stuart Gardner, and our Regional Representatives continue to be the functional backbone of our organization at a local level.

Our newest committee is the Training and Outreach Committee, which promptly received its first assignments in response to the September flooding immediately after inception. Alan Turner and Craig Jacobson acted swiftly and with very little direction to organize a cadre of volunteer experts to mobilize to affected communities to provide initial direction, assistance, and guidance for flood recovery. CASFM Board members and volunteers made contact with communities, water suppliers, and non-governmental organizations, elected officials, and residents and businesses to help wherever needed. We received immediate support from ASFP and state chapters in New Jersey, Oklahoma, Texas, Arizona, New York, and Montana. All efforts were focused around a single guidance document issued on October 4, 2013, with 8 individual strategies for



long-term flood recovery. I encourage members to read through the report in this newsletter from Alan and Craig on upcoming activities and functions in the Training and Outreach Committee; they have big plans CASFM and need your help!

It may be ironic that the September flood disaster started while we were kicking off our 2013 Annual Conference in Steamboat Springs on September 9th. The event is summarized by Annual Conference Chair Robert Krehbiel in this newsletter, and I believe he will agree it was a success. I was especially excited about the panel of the generations facilitated by Vice Chair Shea Thomas. The panel preceded our Keynote Speaker Robert Wendover from the Center for Generational Studies. The kickoff theme and audience participation reminded me that we have a diverse group of members at CASFM!

Many of our members had to leave the Annual Conference on Thursday morning to respond to flooding along the Front Range and urban corridor, but those who were able to stay enjoyed John Fielder's perspective of our state as presented through the lens of his camera. If you are wondering who won the project award this year, I will not ruin the suspense for you – all 3 entries were fantastic, and the outcome will be

discussed by Robert Krehbiel in his Conference Summary. Our 2014 Annual Conference will be hosted in Vail from September 30 to October 3, 2014, and more details will be discussed at our General Membership Meeting on January 16, 2014.

CASFM members have been hard at work across the country. The ASFPM Arid Regions Conference was held in Scottsdale, Arizona from October 15-18, 2013. Dave Bennetts was part of the planning team and reports that the event was a success and was well attended by CASFM members, some of whom were able to present at the Conference.

Members of CASFM are participating in a white paper for ASFPM Region 8, which includes Colorado, Utah, Wyoming, Montana, South Dakota and North Dakota. The white paper will be drafted in 2014 and hopefully distributed in 2015, and will identify flood hazards unique to western mountain states and potential solutions that could be offered from national partners. There will be a focus on post-wildfire flash flooding, oil and gas development, and the impacts of RiskMAP funding on rural communities. Special thanks to Jamie Prochno for providing technical services and support for this effort on behalf of our Colorado chapter.

We have seen a continued high participation in

water quality field trips, stream restoration workshops, and [CFM exam preparation](#) and testing; all services we anticipate offering again in 2014. New training functions will be provided across Colorado to help our members stay up to date on trends and development, and to help our CFMs keep up with their continuing education credits.

I want to recognize outgoing Region Representative Andi Staley for her contributions from the Northwest Region. She recently took a job a CDOT in Grand Junction and could continue to support our members in the northwest part of state. Mark Kempton also completed his tenure as the Northeast Region Representative after 2 years. Outgoing Chair Dave Bennetts is still heavily involved in CASFM but left big shoes to fill, as did our outgoing Floodplain/CFM Committee Chair Kallie Bauer. All will be missed, but I am very excited to be working with our newest Board of officers and committee chairs. Volunteer opportunities are available in nearly every committee, and I recommend anyone interested in getting involved contact our committee chairs or officers to help you find a fun and interesting role in the organization.

I will close by thanking Vice Chair Shea Thomas and our graphic artist Emmett Jordan of Jordan Designs for preparing this newsletter. It is a tremendous effort every year and we always have a fantastic update from our Region Representatives, Committee Chairs, and member across the organization. All CASFM members are encouraged to attend the general membership meetings 6 times a year, held on odd months and accessible remotely for those who are unable to travel. The CASFM calendar will help you track these events, and your participation and active engagement at these meetings helps direct your Board and its decisions.

Brian Varrella

CASFM Chair

The 2013 Flooding impacted numerous communities along the Front Range and Eastern Plains of Colorado. We have all seen and heard about the damaged and destroyed homes and businesses, the hundreds of miles of roads that were damaged or destroyed and the millions of dollars in public infrastructure that was damaged. This was a major event that will take years for recovery. However, what we may not hear so much about are the success stories. These are the floodplain regulations and stormwater mitigation projects implemented long before the floods happened. These successes are the result of decades-long work by stormwater and floodplain managers, community officials, and citizens to protect against future flood events. If not for these efforts, the damage could have been worse.

The Community Rating System provides a framework for communities looking to go above and beyond the minimum FEMA floodplain standards and credits communities for various activities ranging from public education, drainage system maintenance, higher regulatory standards, open space preservation, and flood warning. Members of the CASFM CRS Committee compiled the following success stories as examples of how the CRS promotes sound floodplain management and reduces the impact floods have on our communities.



Photo 1. Toby Lane Development in Boulder protected from flood damage in September 2013 because the homes were elevated two feet above the 100-year flood elevation.

City of Boulder –Toby Lane Development Not Damaged

Submitted by: Katie Knapp, Engineering Project Manager, P.E., CFM
 CRS Activities: 430 – Higher Regulatory Standards (Freeboard = 2 feet), 410- Additional Flood Data (New Study)

The Toby Lane Development was within the newly re-mapped floodplain of South Boulder Creek. The City of Boulder started regulating development in the remapped floodplain prior to approval by FEMA. Houses were required to meet the City’s higher freeboard standard of 2 feet above 100-year flood elevation. Because the homes were elevated, they were not damaged in the flood.

City of Fort Collins – Acquisition Projects and Open Space Preservation Minimizes Damage

Submitted by: Marsha Hilmes- Robinson, Floodplain Administrator, CFM
 CRS Activities: 420 – Open Space Preservation, 520 – Acquisition

The flooding on the Poudre River was a 50-year event with a flow of approximately 10,400 cfs at the Mouth of the Canyon. There was very minor damage within city limits in large part due to the preservation of open space and acquisition of high risk structures. For several decades, the Fort Collins Natural Areas Program has proactively purchased property along the Poudre River Corridor, most of which is in the floodplain. In addition, the City’s Parks Department owns and maintains several parks. Table 1 compares the floodplain acreage in the City limits to the amount of open space preserved by the City of Fort Collins. Preserving this land as open space not only minimizes damages during a flood, but it also enhances the natural and beneficial functions of the floodplain including allowing floodwaters to spread out and slow down and providing beneficial habitat (Photo 2).

Parks in 100-year Floodplain (acres)	Natural Areas in 100-year Floodplain (acres)	Total Open Space Preserved (acres)	100-year Floodplain Inside City Limits (acres)	This shows that 66% of the 100-year floodplain is preserved as open space.
54.8	923.9	978.7	1484.6	

Table 1. Amount of Open Space preserved in the Poudre River 100-year floodplain in Fort Collins.



Photo 2. *Open Space preserved in McMurry Natural Area and Legacy Park along the Poudre River in Fort Collins. Floodwaters in September 2013 were able to spread out and slow down and not cause any damages.*

In addition to preserving large tracts of open space, the City's Stormwater Department, in coordination with the Natural Areas Department, purchased several properties in the College Ave. and Vine Dr. area as part of a Willing Seller -Willing Buyer program. There have been two commercial structures and one residential structure removed. At the time of the flood, a second residential structure had been purchased, but the building had not yet been demolished. That structure had 8-10 inches of water in the basement from the flood and is expected to be removed in the near future.

City of Lakewood – Bear Creek Lake Park Does Its Job and Now Begins Its Recovery

Submitted by: Marty Wilson-Lloyd, Construction Document Technician and CRS Coordinator

CRS Activity: 420 – Open Space Preservation

Bear Creek Lake is located at the confluence of Bear Creek and Turkey Creek and is part of the Tri-Lakes projects built by the Army Corps of Engineers to control flooding on the South Platte River through Denver. Completed in 1982, the dam and reservoir collect runoff from a tributary area of approximately 236 square miles in the mountains between Mount Evans and Bear Creek Lake Park. The dam can handle a rise in the water level to 109 feet above normal.

During the height of the fall floods, the park's water level rose roughly 55 feet above normal. The park, more than 2500 acres in size, suffered substantial damage due to the high water level, but functioned as it should and protected many people and properties downstream. The water level climbed high enough to submerge picnic shelters, restrooms, docks and trails. The cottonwood trees near the reservoir show the high water level as the foliage below the water was destroyed, leaving the tops of the trees above the water untouched (Photos 3 and 4).



Photo 3. *Bear Lake Park in Lakewood showing the 2013 high water line on the trees. The water level rose 55 feet during the September flooding. Photo: Lakewood resident Carole Kaune*



Photo 4. Cottonwood trees in Bear Lake Park dramatically show the high water line from the September 2013 flooding. The leaves below the high water line were destroyed, leaving the tops of the trees untouched and still able to display their fall colors.

Repairs to the park are expected to cost more than \$300,000 and will include repairing damaged structures, rebuilding trails and removing flood debris. To help with the park's recovery, an outpouring of more than 150 community members, high school students, Boy Scout troops and others have volunteered their time. Numerous residents have also donated money to assist in the recovery costs.

Town of Estes Park – Stream Setbacks and Elevation Show Their Value

Submitted by: Will Birchfield, Chief Building Official, CFM

CRS Activities: 420 – Natural Shoreline Protection, 430 – Higher Regulatory Standards (Freeboard = 1 foot),

The Town of Estes Park has not yet joined the CRS. However, they have been looking into the program for a number of years. They already have proactive standards in place that helped provide protection during the 2013 flooding. In the Town's Land Use Code, there are stream setbacks that in most cases result in new construction being located outside the Special Flood Hazard Area. In the



Photo 5. An Estes Park business owner next to his building that was not damaged in the 2013 flooding due to elevating the structure.

past 15 years, there have only been four permits issued for new structures in the 100-year floodplain. All of these buildings were permitted prior to the Town having adopted freeboard standards. However, building permit staff “highly encouraged” those property owners to elevate the new structures. That recommendation paid off because each elevated 2-3 feet above the 100-year flood level and none were damaged in the September floods (Photos 5 and 6). In fact, every building that sustained structural damage, including one that was completely destroyed, was outside the mapped floodplain. The town of Estes Park now has a required freeboard standard of one foot.

Summary

We all know that there will be flooding in the future. We just don't know when and where. However, by learning from the past, examining successful mitigation strategies and implementing sound floodplain management programs, such as those credited under FEMA's Community Rating System, we can build more resilient communities for the future.



Photo 6. View behind the elevated structure looking at the Big Thompson River during the 2013 flooding.

Open letter to all CASFM Members

Dear CASFM Members,

The Urban Watersheds Research Institute has been partnering with CASFM since our incorporation as a nonprofit organization dedicated to technology development and transfer. One of our goals has always been to support all stormwater professionals and CASFM members by offering quality continuing education classes at the lowest possible cost to the students. As you know, the cost of doing business has been going up, and over the years we had to increase registration rates.

However, thanks to a grant from the Urban Drainage and Flood Control District we are able to offer a much reduced fee for everyone (almost \$200 less than last year). In addition, due to our commitment to support CASFM, we offer a \$450 registration fee for CASFM members (another \$150 discount).

In addition, we negotiated with all the instructors for them to accept some-

what lower honoraria to make that the reduced fees possible without UWRI going in the red. Nevertheless, the success of this approach depends on reasonable numbers of students registering for our classes in 2014.

For 2014 we have lined up nine (9) classes. You may view the complete list on our web site at <http://www.uwtrshd.com/seminars/seminar.html>. If you are at all interested in any of them, please register for them after you receive an e-mail from CASFM with the discount code for that class.

Wishing you all a very good New Year.

Sincerely,

Ben Urbonas





Outreach and Training Committee

By Craig Jacobson and Alan Turner

The Outreach and Training Committee co-chairs had the honor of beginning our assignments the day before the September flood events. Since then it has been an exciting and wild ride, as you could imagine. Our first mission was to help establish CASFM as a go

to resource for providing support to flood ravaged communities. For towns including Estes Park, Lyons, and Milliken, the outreach chairs helped connect community officials with technical resources. CASFM members also served as on the ground volunteers to assist with documentation and other flood related needs (thanks to Janel Servis of Aqua Terra Restoration, for serving as CASFM's initial field volunteer in Estes Park).

Now that we are beginning to move beyond the flood reaction mode, the committee is further defining goals for 2014. We have already begun looking into CASFM's use of social networking and recently helped in refining procedures for managing CASFM's Twitter feed. We will soon be looking into the best uses for CASFM's Linked-In network. We would like to encourage the membership to continue to follow the organization through these outlets, as well as through the CASFM website.

With respect to training, CASFM holds a quarterly Lunch and Learn in January, April, July, and October. This year topics consisted of the following:

- Doug Laiho, P.E. and Ashley Ficke of GEI Consultants presented Engineering for Fish - Fish Passage

- Ben Urbanas, PE, D.WRE, President of Urban Watersheds Research Institute and former Manager of Master Planning at Urban Drainage and Flood Control District presented History and Calibration of The Colorado Urban Hydrograph Procedure (CUHP).
- Rick McLaughlin, McLaughlin Whitewater Design Group – a Division of Merrick & Company presented Design and Management Issues Related to In-Channel Safety
- Chris Olson of CSU and the Colorado Stormwater Center at will presented The EPA Stormwater Calculator

We are planning to have an initial committee meeting set up by the end of January. This meeting will have a focus on training, including discussing currently scheduled training, as well as brainstorming a training wish list for the future. Please feel free to share any ideas you have with us. In the coming month we will be actively recruiting leaders to help continue expanding the community outreach developed as part of the September flooding throughout Colorado, training, and helping to continue to develop and expand the vision of CASFM including the development of a trial student chapter at a University in Colorado. Please contact the co-chairs directly if you have an interest in helping to develop the future vision of CASFM. (cjacobson@iconeng.com, Alan.Turner@CH2M.com).



Membership Committee Report

By Kevin Gingery, PE, CFM

- We have 729 active 2013 members.
- The 2014 membership form is posted on the web site.
- We are receiving 2014 membership dues - ongoing.



Scholarship Committee Report

By Morgan Lynch, PE, CFM

As another year closes, another round of scholarships has been distributed by the CASFM Scholarship Committee. Each year our scholarships draw more and more applicants and 2013 was no exception. The Committee awarded three scholarships, the 2013-2014 CASFM / UWRI Scholarship, the CASFM – Ben Urbonas Scholarship and the

Inaugural CASFM Family Scholarship. The scholarships range from \$2,500 to \$4,000 and are awarded to the selected student for the following school year.

In 2013 we had a total of 19 applications for the 3 scholarships. The CASFM / UWRI Scholarship was awarded based on the top overall application essay, the CASFM – Ben Urbonas Scholarship and the Inaugural CASFM Family Scholarship were awarded based on both application essay and candidate interview. We were excited to award the scholarships to the following three students:

- CASFM / UWRI Scholarship – Krystina Pacheco, Undergraduate Student at the Colorado School of Mines
- CASFM – Ben Urbonas Scholarship – Tony Tran, Masters Student at the University of Colorado at Denver
- CASFM Family Scholarship - Mikayla Bortolini, Pre-Nursing Student at the University of Northern Colorado

The CASFM Family Scholarship was made possible by a donation from an anonymous CASFM member. It is the vision of this member that an endowment fund be created to support the scholarship beyond the initial five year period. In 2014 the CASFM Scholarship Committee will work on a plan to help the member's vision come to fruition.

In the interim, please remember that CASFM is officially recognized as a 501(c)(3) with the IRS and all donations to the CASFM Family Scholarship Fund are tax free. If you have any interest in donating to the CASFM Family Scholarship please contact Brian Murphy, our current Treasurer.

To volunteer with the Scholarship Committee, or to receive information on the scholarships offered by CASFM, please contact me at morgan.lynch@ch2m.com. Please note the name and email change. I married my fiancé Patrick Lynch, September 14, 2013 at the Maroon Bells in Aspen. As a Colorado Native I was excited to get married in the mountains, as a Stormwater Engineer I couldn't believe it was the weekend the State was under water.



Information about each recipient can be found on the scholarship page on the CASFM website.

Congratulations, Morgan!



Stormwater Quality Committee Report

By Holly Piza, PE

CASFM research funds are helping fund a study to evaluate a variety of bioretention media. The study explores the quantity of organic content in bioretention media necessary to provide adequate nutrients for vegetation to establish and thrive while minimizing export of nutrients in the effluent. For each medium the team is comparing infiltration rates, effluent quality and vegetative growth. The study will also explore the impact of adding iron filings and use of a slow-release organic fertilizer. Eight test columns have been prepared. Infiltration tests will be recorded throughout the study and three of effluent samples from each column will be analyzed for a number of constituents including nutrients and metals. Results will be presented at the annual CASFM conference in 2014.

Lunch and Learns

By Holly Piza, PE

CASFM holds a quarterly Lunch and Learn in January, April, July, and October. This year topics consisted of the following:

- Doug Laiho, P.E. and Ashley Ficke of GEI Consultants presented **Engineering for Fish - Fish Passage**
- Ben Urbonas, PE, D.WRE, President of Urban Watersheds Research Institute and former Manager of Master Planning at Urban Drainage and Flood Control District presented **History and Calibration of The Colorado Urban Hydrograph Procedure (CUHP)**.
- Rick McLaughlin, McLaughlin Whitewater Design Group – a Division of Merrick & Company presented **Design and Management Issues Related to In-Channel Safety**
- Chris Olson of CSU and the Colorado Stormwater Center presented **The EPA Stormwater Calculator**



Elsner

Metro Region

By Danny Elsner, PE, CFM, CPSWQ

Since the CASFM conference, we have had two great speakers present. Make sure you come out to socialize with your fellow non-socializing engineers. Here is a summary of those presentations:

August 27, 2013

Jason Krueger discussed geospatial data and how this relates to floodplains and stormwater management. Jason is a project manager for Geospatial Services at Ayres Associates, located in Madison, WI. He specializes in geospatial project design for municipal engineering and transportation design. Geospatial data such as topographic mapping, aerial imagery, and planimetrics create the digital foundation for any engineering project. If you manage floodplains and storm water your first priority should be obtaining accurate up to date topograph-

ic data. Flooding is not the only application that benefits greatly from geospatial data. If planned well, data collection efforts can have multiple uses across cities, counties, and even between multiple entities. With shrinking budgets we need new ways to think about serving the people of our cities and counties. Rather than individual entities going it alone in their data collection projects, approaches exist that, are not only more cost-effective, but also encourage intergovernmental cooperation.

November 20, 2013

Penn Gildersleeve, President of ICON Engineering, presented a great photo essay on the Yukon River flood, his time spent helping to restore the Town of Galena, and compare the Colorado and Alaska responses to the 2013 flood events. This year there was a major flood in the United States, that essentially inundated an entire town, resulting in over \$70 million in damage. The devastat-

ing impact from the flooding may sound similar to what has happened here in Colorado, but the type of flooding, the immediate response and the short term recovery efforts were quite different. On June 25th the flood was officially designated as a Presidentially Declared Disaster. In August, FEMA announced the immediate need for trained disaster responders. Many answered the call and a few "lucky" ones were sent on an all-expense paid adventure. (Spoiler alert - Penn was one of the lucky ones.)

Upcoming Socials

I am currently working on a February presentation about the recent Boulder flooding.

We always welcome new speakers! (This is no joke!) If you have a topic of interest to the group, we would appreciate a presentation at a Metro social. Contact me to arrange a social at delsner@sehinc.com.





Northeast Region Report

By Beck Anderson

As the fall of 2013 comes to an end, the Colorado winter is upon us! Typically fall in Colorado for me means the temperatures begin to drop, days get shorter, and my family and I make our annual trip to the mountains to enjoy breathtaking views of the changing colors. It is the time of year I dust off my ski gear and look forward to the first snow, spend weekend afternoons watching football, and most importantly of all venture out on our fall family elk hunting trip (which I look forward to all year long!).

This year, fall in Northern Colorado brought with it a lasting impression of why the work we do each day in our individual positions and as an organization is so critical to protecting human health and safety, educating the public, and sustaining and protecting our communities. As we all know, the September 2013 flood resulted in loss of life, and significant widespread damage throughout the Northern Front Range and Plains of Northeastern Colorado. This event has created many challenges for citizens and communities impacted by the flood as they navigate their way through the recovery effort. As with any natural disaster of this magnitude, recovery is, and will not be short-lived. In some of the hardest hit areas, the recovery effort will last well into this next year.

Many CASFM members and their colleagues have been working diligently in recent months as part of the flood response, and post-flood recovery and rebuilding effort. While I know personally that this is no small task, I would like to give my sincere thanks to everyone who has been involved.

Reflecting back on the events of this past fall, I have come to realize that the experience we have attained and the lessons we have learned from the flood as professionals is invaluable. Many people in this industry may work their entire career and not be involved with an event of this magnitude. As we move forward into the winter months and a new year, it is critical that we take these lessons and experiences and incorporate them into our future work in preparedness, design, mitigation and policy. As with any natural disaster small or large, the question is not "if", but "when" the next event will occur, and how can we better prepare for it in advance using lessons learned from the past.

I am very excited to serve as the Northeastern Region Representative, and look forward to organizing some great social events for the Region! A social event is currently being planned for late January or early February of 2014, and I will be sure to send out an email on the topic, time, and location as soon as this information becomes available. If you have a topic you feel would be interesting to present at a future social event, please contact me at banderson@fcgov.com

For a complete list of CASFM events, please visit the calendar on our website at <http://www.casfm.org>.

Other upcoming events that may be of interest to CASFM members include the following:

Colorado Association of State Floodplain Managers (CASFM) and Colorado State University (CSU) 2014 Colorado Flood Forum
Broomfield, Colorado
February 27

Urban Drainage and Flood Control District 2014 Annual Seminar
Aurora, Colorado
April 15

River Management Society Training Symposium
Denver, Colorado
April 15 – 18
<http://www.river-management.org/2014-symposium>

American Society of Civil Engineers (ASCE) Environmental & Water Resources Institute (EWRI) 2014 Water Congress
Portland, Oregon
June 1-5
<http://content.asce.org/conferences/ewri2014/index.html>

Association of State Floodplain Managers (ASFPM) 2014 National Conference
Seattle, Washington
June 1-6
<http://www.floods.org/index.asp?menuID=223>

Colorado Association of State Floodplain Managers (CASFM) 2014 Annual Conference
Vail, Colorado
September 30 – October 3
<http://www.casfm.org/>



THE COLORADO ASSOCIATION OF STORMWATER AND FLOODPLAIN MANAGERS

The Open Channel

Winter 2014 Vol. 25 / Issue 1

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Urban Drainage & Flood
Control District

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Pikes Peak Regional Bldg. Dept.

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Matrix Design Group

Floodplain/CFM Coordinator

Jamie Prochno, PE, CFM
Colorado Water
Conservation Board

Community Rating System

Marsha Hilmes-Robinson, CFM
City of Fort Collins

Stormwater Quality

Holly Piza, PE
Urban Drainage &
Flood Control District

Outreach & Training

Alan Turner, PE, CFM
CH2M Hill Engineers, Inc.

Craig Jacobson, PE, CFM
ICON Engineering, Inc.

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Scholarship

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ICON Engineering, Inc

Membership

Kevin Gingery, PE
City of Loveland—Stormwater

Website

Stuart Gardner, PE
Colorado Dept. of Transportation



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