



# The Open Channel

Volume 14, Issue 2

Summer 2003

## Looking Forward to.... I've Seen Fire, I Haven't Seen Rain

### Inside this issue:

Letter from the Chair	2
Association News Committee Reports	2&3
Regional News	4
National News	5
Project News	6
CASFM Officers and Representatives	7
Calendar of Events	8

### CASFM's 14<sup>th</sup> Annual Conference, Sept 10-12 Beaver Run Resort-Breckenridge

Registration is now going on for the 2003 conference in Breckenridge. Complete conference information and on-line registration can be found at [www.CASFM.org](http://www.CASFM.org). You can also register by mail using the conference brochure mailed out in mid-July. Chris Pletcher of RTW, phone (970) 224-5999, is handling the registrations.

This year, at the annual conference, CASFM will be proctoring the ASFPM CFM exam. A training session will be offered on Tuesday and the test will be held Wednesday morning. **You must register for the test through ASFPM, not CASFM.**

You can register on-line at ASFPM's web site,

[www.floods.org](http://www.floods.org). You must be a member of CASFM to take the exam at the Conference. There is also a \$20 surcharge to take the exam for a conference attendee, or \$40 if you do not attend the conference. This helps defray our costs for facilities, notebooks, etc. Please indicate on your registration form if you will be taking the test. If you register on-line, please check the appropriate box for the CFM test.

This year's conference should be a good one. On Wednesday Dr. Tom Noel will give the keynote address on "A History of Colorado Drainageways". Dr. Noel is a Professor of History at the University of Colorado at Denver and has written numerous books on Colorado History. The Plenary Session following lunch



will feature a panel discussion on "Impacts of the Drought and Fires in 2002". Following the panel discussion will be the project presentations for 2003 Best Project Awards. Plan on attending to vote for your favorite project.

**Continued on Page 4**

## Alternative to Golf Tournament!!!

By Georgia Simpson

How about a sail on Lake Dillon (it is now full) Friday afternoon? I would be happy to skipper a sailboat for a couple of hours if there is any interest in this. You don't need previ-

ous sailing experience--I'm a pretty good teacher. I could take 3-5 people, depending on the size of boat. If there is a lot of interest in this sort of activity, we could rent a pontoon boat instead for cruising around. Obviously,

this will be weather-dependent, but e-mail me a [gsimpson@ci.arvada.co.us](mailto:gsimpson@ci.arvada.co.us) if you are interested. I will then look into boat rentals, and we can all get together at the conference. See you there!

## ASSOCIATION NEWS

### *Letter From the Chair—Stuart Gardner, P.E.*

Here we are getting ready for our 14<sup>th</sup> annual CASFM conference. This is the time of the year when we elect new officers and come together to discuss the direction of the association, network, and have a lot of fun. It's also a good time to reflect on where we've been, and it's been a busy year since the last conference:

- At this time last year, the Scholarship Committee was just getting started. This spring, we awarded the first CASFM scholarship of \$1,000 to a CSU graduate student. The award amount has increased to \$2,000 for the upcoming academic year and preparations are under way to make our second award. A big thanks to Jeremy Franz for working so hard to make this a reality.
- The Certified Floodplain Managers Committee was absorbed into the Floodplain Committee, and Kallie Sampish will soon take the reins as committee chair. We will be offering the CFM exam for the second time in Colorado this year at the conference. Last year we had two dozen take the exam and so far it's looking like we'll have a similar, if not higher, turnout this year.
- The Association has sponsored and assisted with a number of classes and other professional development opportunities this year, such as:

A DFIRM (Digital Flood Insurance Rate Map) course was held in Denver last October with about 60 in attendance;

A Best Management Practices seminar was held in April and attended by over 250 people;

The Stormwater Quality Committee has been *very* active, hosting a sediment standards session, two committee meetings, and a BMP tour of the Denver area for a few dozen people. A great big attaboy goes to Kevin McBride for bringing great ideas and a lot of energy to the committee;

We hosted two National Highway Institute hydraulics courses this summer – “Stream Stability & Scour at Highway Bridges” and “River Engineering for Highway Encroachments”;

The Metro Area continues to lead the way with three social events this year. And the NW and NE regions had social hours of their own;

We broke the continental divide barrier a second year in a row and had a general membership meeting in Glenwood Springs.

- The Association bylaws have been revised to better reflect the way we do business.
- The Association website continues to serve us well. In many ways, the use of e-mail and the internet has helped propel membership renewals and member activity. As of the July meeting this year, we have over 500 members, which represents more than a 33% increase in members from just two years ago. Attendance is also up dramatically over the past few years at the bi-monthly meetings of the general membership and also the annual conference. In 1999 there were just 75 conference attendees. Over the next several years we more than doubled conference participation to 151 in 2002, and it's looking like we'll exceed that this year.

In short, the state of the Association is as strong as it has ever been. It looks like, in spite of the economy, that this year's conference is shaping up to be the best and largest one yet. The annual CASFM conference is hands-down the best opportunity in Colorado to meet and greet other professionals from the industry and take new knowledge back to your place of business.

This May I attended the Association of State Floodplain Managers (ASFPM) national conference in St. Louis on behalf of CASFM. I attended the state chapter workshop to network with other chapter officials and discuss what they do. One item I took away from that gathering is that one reason we don't have many members from federal agencies is that the federal government is reluctant to cover membership fees for associations such as CASFM. Because the participation of federal agencies would be beneficial to CASFM members as well as help carry out their missions, CASFM is discussing ways of increasing participation from agencies such as FEMA, the NRCS, the Corps of Engineers, the EPA, and others.

One thing that would help us with this goal is for our current members (you) to think of individuals in these and other federal agencies that should be association members, and send their names and addresses to our membership coordinator, Kevin Gingery, so that they can be invited to join and participate.

**Continued on Page 3**

# Committee Reports

## Scholarship

By Jermei Franz

The Colorado Association of Stormwater and Floodplain Managers is pleased to announce that it has awarded its first annual scholarship to Jeremy Shaw. Jeremy obtained his BS degree in Forest Management from the Warnell School of Forest Resources at the University of Georgia in December 2000. After graduating, he worked as a hydrologist for a small civil engineering consulting firm in Georgia. Jeremy is currently a student in the Watershed Science program at Colorado State University working towards a MS degree under Drs. John Stednick and Lee MacDonald. His research is currently focused on examining which watershed characteristics might account for the various types of riparian vegetation found in Petrified Forest National Park in NE Arizona. Hopefully, Jeremy will be able to present his research at the 2003 annual CASFM conference.

The response to this inaugural scholarship exceeded our expectations.

Four applications were received, and of those received, three were short-listed. The scholarship committee members, John Hunt, Jamie Cribbs and Jeremy Franz held interviews with the short-listed candidates. All three applicants were outstanding, but Mr. Shaw stood out from the rest due to the close relationship of his field of study to CASFM goals. He also demonstrated sincere interest in becoming more involved with CASFM, and helping other students to become more involved as well. He shows great leadership potential and desires to pursue a career in Colorado if possible.

Applications for the 2003-04 scholarship will be due in early September. This next year's award will be \$2000. Details are available on the CASFM website. Please encourage any graduate students that you know to apply!

## Stormwater Quality

Kevin McBride hosted a wonderful field trip on July 25th. It was a full day, starting with a tour of various water quality projects in Cherry Creek State Park, lead by Jim Wull-

man. Next we traveled to the Stapleton Redevelopment site where we toured the water quality and detention ponds that are currently in the final stages of construction. As part of this tour we saw the Westerly Creek project which totally reconstructed the channel from a previous piped condition. Robert Krehbiel, this year's conference chair co-hosted the tour. Next we traveled up to the City of Longmont to see the beautiful Left Hand Creek Project, which incorporated stormwater quality BMPs and stream restoration. This newly constructed channel was designed to enhance fish habitat. David Hollingsworth provided tour guide services for this project. We ended the day touring the Environmental Center of the Rockies building in Boulder which re-uses most of the stormwater runoff for the site in their landscaping design. Paul Lander served as the host for this part of the tour. It was a wonderful day and all Kevin's work in putting it together is greatly appreciated. See the photos elsewhere in this newsletter.

Jim Wulliman leads us through a walk in the Park, (to see the Shop Creek Water Quality Improvements) Stormwater Committee Field Trip.



## Letter From the Chair—Continued from Page 2

Kevin's contact information is on the "officers" page in this newsletter (and of course on the website).

Anthony Lowe with FEMA spoke on the topic of Map Modernization. The total program is expected to cost on the order of a billion dollars, with a goal to begin map modernization work in half of the most populated areas of the United States this summer. While we welcome this effort in our profession, the modernization process can be politically difficult, because as properties are suddenly placed into or out of the floodplain, questions will arise as to whether the new information is really any better than the old.

And, of course, being in St. Louis, the ever present topic was the great Mississippi River flood of 1993, of which this year marked its 10<sup>th</sup> anniversary. We were reminded that

in 1875, Mark Twain wrote of the Mighty Mississippi that man "...cannot tame that lawless stream, cannot curb it or confine it, cannot say to it, Go here, or Go there, and make it obey; cannot save a shore which it has sentenced; cannot bar its path with an obstruction which it will not tear down, dance over, and laugh at." These words have proven true time and again not just of the Mississippi, but of many works that we undertake, and should serve as a reminder as we go about our daily tasks.

In closing this article, I just want to say that it has been a true privilege to serve this organization.

Thank you.

*Stuart Gardner*

## Regional Reports

### METRO REGION

Yet another happy hour social was held on July 9 at Baby Doe's Restaurant in Denver. Alan Searcy from the City of Lakewood presented an overview of their NPDES program. It was a great and entertaining presentation (maybe Alan can assist Stuart with the Conference Banquet entertainment!) We noticed that as the weather warms, the interest in these type of even events fades, so we may consider taking the summer off in the future.



Robert Krehbiel explains the water quality features of the Westerly Creek Project at the Stapleton Redevelopment site to the Stormwater field trip participants.

### NORTHEAST REGION

On July 8th, the NE Region hosted a field tour of the City of Ft. Collins Sheldon Lake Project followed by refreshments and discussion. The speakers were Link Mueller, City of Ft. Collins and Andrea Faucett, Sear Brown. The City of Ft. Collins Sheldon Lake (City Park) project involves stormwater improvements within the Canal Importation Basin, to reduce the 100-year floodplain. Unique aspects of this project include: excavation of Sheldon Lake to lower the normal water surface elevation and allow stormwater detention, installation of two Onermeyer gates with upstream side

spill weirs one each on the New Mercer Dirch and the Larimer County Canal No. 2 ditch, the incorporation of a detention pond on hole #6 of the City Park golf course, and a storm sewer system which connects the golf course pond to Sheldon Lake.

The tour was well attended (about 25) despite the 100+ temperatures.

### NORTHWEST REGION

Another social will be held in the next three or so months. Stay tuned to the web site for location and topic.



David Hollingsworth leads us to a closer view of the root wads at the Left Hand Creek Stream Restoration Project in Longmont.

## Looking forward to .....the 2003 Breckenridge Conference - Continued from Page 1

On Thursday morning there will be three concurrent technical sessions followed by two workshops in the afternoon. The workshops will include "Practical Aspects of River Restoration" and "Bridge Scour Investigations". Another option available in the afternoon will be a field trip along the Blue River to discuss the restoration project that took

place there several years ago. On Thursday evening will be the Associations Annual Dinner and awards ceremony for the Best Project. The conference concludes on Friday with two concurrent technical sessions in the morning followed by the annual golf tournament at the Breckenridge Golf Club. For those of you who don't golf, we have added a

bike trip in the afternoon. Hope to see you all there.

Dave Bennetts, 2003 Program Chair

## NATIONAL NEWS

### EPA seeks \$1 million in storm-water fines

By **Todd Hartman**, Rocky Mountain News  
July 24, 2003

The Environmental Protection Agency is seeking penalties totaling nearly \$1 million against 12 companies for allegedly failing to control erosion and manage storm water at nine construction sites in the metro area.

Target Corp., Richmond American Homes and companies that built Colorado Mills and FlatIron Crossing shopping malls are among the firms cited by the EPA. Nine of the 12 companies are Colorado-based.

The EPA said the companies failed to obtain storm water permits, put in place storm water management plans, control sediment runoff or inspect their construction sites for such problems.

Regulators say storm water flowing off construction sites is an environmental hazard because the sediment it carries clogs rivers and buries river-bottom habitat for fish and bugs.

"Everybody's starting to look at this as a place we need to (pay) a little bit more attention," said Diane Sipe, an enforcement director for EPA's regional office in Denver.

The \$928,500 in proposed fines against builders and property owners range from \$48,000 for Westwoods Development Co. related to construction of Westwoods Center in Arvada to \$137,000 for Miller Weingarten Realty and Adolfson & Peterson Construction of Minnesota, related to building the Aurora Town Center.

The EPA frequently settles for less than the initial penalty proposal.

Though state and federal environmental officials began requiring construction sites to manage sediment 10 years ago, many builders still aren't complying, the agency said. In 1999, less than one-third of construction projects had storm water permits, according to the EPA.

State and federal regulators have only recently started enforcing laws related to controlling storm water flows.

In the most significant action so far, the Colorado Department of Public Health and Environment cited T-REX contractors in May for at least 50 alleged violations relating to erosion control along the 19-mile highway reconstruction project in the southeast metro area.

State officials say the latest round of actions was handled by EPA because so many sites needed inspection and staffing levels at the health department weren't sufficient to handle the



load.

But Howard Roitman, director of environmental programs for the health department, said the state is ramping up training and staffing to take over the work.

"We would prefer to do all aspects of the program, and we're moving toward that," Roitman said.

Other firms cited by the EPA include Roche Constructors, Saddle Rock Marketplace, Village Homes, JDN Intermountain Holdings, Midcities Enterprises, Coalton Acres and The Mills Corp.

## PEOPLE NEWS

Several CASFM members have received National awards for their outstanding contributions to the Stormwater/Floodplain profession.

**L Scott Tucker, P.E.**, Executive Director of the Urban Drainage and Flood Control District received an award for one of **The 2003 Top Ten Public Works Leaders of the Year**.

**Ben Urbonas, P.E.**, Chief of Master Planning and South Platte River Programs of the Urban Drainage and Flood Control District, received **The 2003 ASCE State of the Art of Civil Engineering Award** for the National Stormwater Best Management Practices Database. **Jonathan E. Jones, P.E.**, CEO of Wright Water Engineers, and **Eric**

**Strecker**, Principal at GeoSyntec Consultants in Portland, Oregon, were also co-recipients of this award.



# PROJECT NEWS

## 14<sup>th</sup> and Stout Street Storm Sewer

By **Thomas Blackman, P.E.,**  
and **Jim Potter, City and**  
**County of Denver**

The history behind the 14<sup>th</sup> and Stout Street storm sewer project really starts with the design approval process of the convention center expansion project in February, 2002. Existing Stout Street from Speer to 14<sup>th</sup> Street had three 36" diameter brick storm sewer lines with a full flow capacity of about 90 cfs. These storm lines were over 100 years old and the configuration of the lines precluded inspection of two of the three lines. The convention center expansion project design included the relocation of the street and all the utilities in the street, including the storm sewer system. The convention center expansion project initially proposed replacing the 36" diameter pipes with a 4' by 6' reinforced concrete box culvert (RCB) with a capacity of about 160 cfs, a significant improvement in capacity. While this solution improved the situation, a unique opportunity presented itself. Storm sewer upgrades have not occurred in downtown Denver in many years due to the high cost, lack of funds, and difficulty of construction. There are so many storm water needs in Denver that the downtown area has not been a high priority. But here was the opportunity to have two City and County of Denver agencies: Wastewater Management Division and Design and Construction Management work together to maximize tax dollars and user fees for the citizens of Denver.

After much discussion, Wastewater Management Division agreed to fund the difference in cost and instead of installing a 4' by 6' RCB; a 5' by 10' RCB with a capacity of about 420 cfs would be installed. This size was selected, not based on

a master plan, but as the largest size that could fit in the street with other proposed utilities.

The 5' by 10' RCB pipe was designed by Lund Partnership under contract with the Convention Center Expansion Project. The project benefited the City and County of Denver in many ways beyond the capacity increase. It alleviated the maintenance issues associated with the 36" diameter system which was also close to the end of its design life. The project also constructed a new outfall. The old outfall entered Cherry Creek under the bridge, next to the pedestrian path. This situation was not attractive and also posed a hazard to passing pedestrians. The new outfall went under the path and also was designed to have 1 foot of standing water in the base to discourage entry.

While this work was impressive and a good deal for the City and County of Denver, there was a problem with it. While 430 cfs of capacity was available, there wouldn't be a way to get the water in the system. The 5' by 10' RCB would be connected to an upstream 54" diameter brick line with a capacity of 90 cfs. With the 54" diameter brick line, a 36" diameter lateral, and the Convention Center Expansion lines; the 5' by 10' RCB would flow half full at best. If this was the end of the project, the extra money spent on enlarging the box would be wasted.

At this point, the 14<sup>th</sup> and Stout Street project was born in late 2002. The goal of this project would be to extend the capacity of the box across 14<sup>th</sup> Street. While this wouldn't fill up the box, it would set the stage for future projects to continue taking the enlarged system further downtown and start to connect a new set of inlets. All parties involved agreed that since construction was already occurring at the convention center site, this was the

perfect time to extend the storm drainage system.

The 14<sup>th</sup> and Stout Street project is notable in many ways. First, is that it will involve the hand dug jacking of a 90" diameter storm pipe and removing a 54" diameter brick line at the same time. This has never been attempted in Denver before and is not known to have occurred elsewhere. This project will be the most expensive, on a per foot basis, storm sewer construction job in City history with a cost of \$4,000 per foot, not including structure cost. This project is remarkable in how quickly it went from design (November, 2002) to construction (March, 2003). This project also is unique in how many utilities that would be crossed (19 utilities) and also it is the first storm project to cross light rail.

The existing utilities dictated the design of the project, and there were many obstacles in the design and early stages of construction. These included a 16' deep steam vault, a catenary pole that supports the high voltage wires for the light rail, and two fiber duct banks located in the proposed pipe alignment. A televised survey of the existing 54" diameter brick line showed a bank of nine 4" diameter ducts acting as a dam in the 54" storm line. It appeared the fiber optic company had bored right through the storm line. Later during construction, huge voids were found in this area created by the flow of water out and back into the storm pipe through the break caused by the fiber optic penetration. The stormwater would carry soil back into the pipe after the flow had receded. Given enough time, it is most likely that a portion of the street and convention center would collapse. Construction is not finished yet, so stay tuned for the trials and tribulations associated with the next phase.

# CASFM OFFICERS, REPS AND CHAIRS

## BOARD OFFICERS

**CHAIR** [Stuart Gardner, P.E.](#)  
 Colorado Dept. of Transportation  
 606 South 9th Street  
 Grand Junction, CO 81501  
 (970) 248-7222



**SECRETARY** [John Hunt, P.E., CFM](#)  
 Ayres Associates  
 3665 JFK Parkway, Bldg 2, Suite 200  
 Ft Collins, CO 80525  
 (970) 223-5556



**VICE CHAIR** [Cindy Thrush, P.E.](#)  
 Urban Drainage & Flood Control District  
 2480 W. 26th, Suite 156B  
 Denver, CO 80211  
 (303) 455-6277



**TREASURER** [Trent Prall, P.E., CFM](#)  
 City of Grand Junction  
 250 North 5th Street  
 Grand Junction, CO 81501  
 (970) 244-1590



## REGIONAL REPRESENTATIVES

### Northeast Region

[Debbie Haferman, P.E.](#)  
 HEI Water Resources Engineering  
 6235 N Taft Hill Road  
 Ft Collins, CO 80524  
 (970) 484-3103



### Northwest Region

[Rick Dorris, P.E., CFM](#)  
 City of Grand Junction  
 250 N. 5th Street  
 Grand Junction, CO 81501  
 (970) 256-4034



## COMMITTEE CHAIRS

### Stormwater Quality

[Kevin McBride, P.E.](#)  
 City of Ft Collins, Stormwater Utility  
 700 Wood Street  
 Ft Collins, CO 80521  
 (970) 224-6023



### Floodplain

[Mark Matulik, CFM](#)  
 Retired  
 Florida and Fairplay, Colorado



### Membership

[Kevin Gingery, P.E.](#)  
 City of Loveland  
 200 N. Wilson Ave.  
 Loveland, CO 80537  
 (970) 962-3571



### Southeast Region

[Steven Harris, P.E.](#)  
 Harris Water Engineering Inc  
 954 E. 2nd Ave.  
 Durango, CO 81301  
 (970) 259-5322

### Southwest Region

[Joe Napoleon](#)  
 City of Woodland Park  
 P.O. Box 9007  
 Woodland Park, CO 80866  
 (719) 687-9246

### Metro Denver Region

[Peter Kozinski, P.E.](#)  
 Colorado Dept. of Transportation  
 555 Zang Street  
 Lakewood, CO 80228  
 (303)984-5277



### Outreach

[Chris Carlson, P.E., CFM](#)  
 Ayres Associates  
 3665 JFK Parkway, Bldg 2, Suite 200  
 Ft Collins, CO 80525  
 (970) 223-5556



### Scholarship

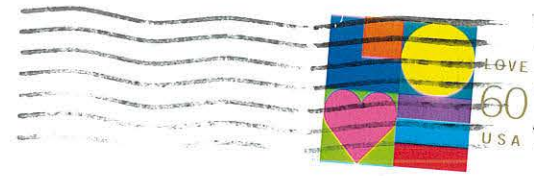
[Jeremy Franz, P.E.](#)  
 Ayres Associates  
 3665 JFK Parkway, Bldg 2, Suite 200  
 Ft Collins, CO 80525  
 (970) 223-5556



### Conference

[Robert Krehbiel, P.E.](#)  
 Matrix Design Group  
 1601 Blake St., Suite 508  
 Denver, CO 80202  
 (303) 572-0200



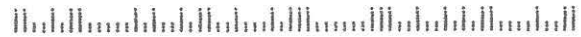


C A S F M

3665 JFK Parkway  
Building 2, Suite 200  
Fort Collins, CO 80525

ISS #6 DENVER CO P&DC 22:44 08/20/07

80228+2018



## CALENDAR

### 2003 GENERAL MEETING SCHEDULE

A notice will be sent through e-mail to all members prior to the meetings. The notice will include directions. Directions and meeting agendas can be found from the calendar link at [www.casfm.org](http://www.casfm.org).

<u>Date</u>	<u>Location</u>
Sept 11th	Breckenridge Conference Breakfast Meeting, 7:30 am
Nov. 13th	Boyle Engineering Lakewood, 9:00 am

### OTHER CLASSES/MEETINGS

See [www.casfm.org/calendar.htm](http://www.casfm.org/calendar.htm) for latest updates or to post your meeting or event.

<u>Date</u>	<u>Event</u>
August 7	FEMA CRS Training Workshop Federal Center, Denver

### OTHER CLASSES/MEETINGS

<u>Date</u>	<u>Event</u>
August 12-14	National Highway Institute River Engineering for Highway Encroachments, Northglenn Holiday Inn
August 12-15	Geospatial Hydrologic Modeling System: HEC-GeoHMS and HMS The University of CO at Denver
August 14-15	Urban Storm Water Modeling Using Colorado Urban Hydro graph Procedure: 2003 CUHP- UDSWMM The University of CO at Denver