

the Practitioner



Special Edition: 2013 Colorado Floods: Five Years Later

The 2013 Colorado floods were a series of natural disasters that started on September 9. Heavy rain and catastrophic flooding spread across a range of almost 200 miles from north to south affecting 24 counties. Nearly 120 lane miles of state highways were damaged or destroyed cutting off access to entire communities. Farmers and ranchers on the eastern plains suffered \$55 million in damage across 67,000 acres. More than 18,000 homes suffered some level of flood damage.

The rebuilding effort since 2013 has been immense. More than \$2 billion in federal, state and local money has been allotted for flood recovery. Roads, bridges, parks and trails have been rebuilt with several more projects still in the works. 110 emergency repair projects took care of immediate transportation needs. There are 32 permanent repair projects of which 17 have been completed. Nine are under construction and six will go out to bid this fall. Work is expected to be completed in 2020.

The Practitioner published articles from several agencies affected by the floods in our 2013 Fall issue. Five years later we caught up with some of those agencies and asked them to provide us an update of what has happened these last few years, challenges faced, lessons learned and how they have moved forward.

Statistics quoted from various news sources including The Denver Post, Boulder Daily Camera and The Coloradoan.

The Practitioner, Fall 2013:

As communities deal with the damage caused by the flooding that occurred in Colorado, public works departments and their employees helped to lead those recovery efforts.

As the damaged areas face rebuilding through repair and recovery, public works employees will be leading the charge. Many of those employees have worked tirelessly 24/7 as they aided their communities.

Estes Park

Greg Muhonen

Estes Park Public Works Director

People love interacting with water. This magnetic appeal motivated the historic development of Estes Park along the banks of five major drainage ways (Fall River, Big Thompson River, Black Canyon Creek, Fish Creek, and Dry Creek). The risk of putting buildings, utilities, and roadways adjacent to waterways became all too apparent on September 12, 2013 when Estes Park residents awakened to stormwater flows well beyond the stream banks, converting the adjacent roadways into raging overflow channels. The damage downtown and throughout the Estes Valley was disheartening. Citizens and Town staff alike were immediately thrust into new roles of response and recovery. Normal daily routines and major capital projects were put on hold as we worked shoulder to shoulder for weeks on end to clean up the mess. "No flush" restrictions were imposed for two months. Contractors were hired for repairs at 25 different sites. We had no idea it would take a full five years to recover.

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Looking back today at the areas of destruction, the casual observer would have no grasp of the devastation experienced in the Estes Valley during the September 2013 flood. We feel blessed and fortunate that we have recovered well. Our community spirit is strengthened, our interagency and customer relationships and trust are deepened, and our confidence to withstand a future disaster is elevated. We learned about our vulnerabilities, we learned how to better collaborate, and we learned how to better prepare. While the learning was painful in some respects, it was fruitful. We are a more resilient community now. Going forward from the 2013 flood, we have new vision in the areas of resilient infrastructure repairs, preventative maintenance, and the need/value in a dedicated Stormwater Utility.

Resilient Infrastructure Repairs: Fish Creek Road, situated along the Fish Creek basin on the east, suffered the greatest infrastructure damage in our community. Highly erosive, sandy subgrade soils were quickly removed by the aggressive flows, exposing and severely damaging all the buried utility systems, the roadway, and trail system. In response, the impacted local agencies teamed up to tackle the repairs together in collaboration with State and Federal agencies who administered disaster recovery grant funding. Together, the Town of Estes Park, Larimer County, Upper Thompson Sanitation District, and the Estes Valley Recreation and Parks District teamed with the Colorado Department of Transportation, Colorado Department of Homeland Security & Emergency Management, the State Engineer's office, and the Federal Highways Administration to rebuild the public infrastructure in a resilient manner not previously understood or provided in the original design and construction. This effort was supplemented by channel revegetation efforts performed by the Estes Valley Watershed Coalition. We are encouraged that the larger box culverts, armored and revegetated channels, and realigned trail system will now withstand the next major flood event in the Fish Creek basin.

Preventative Maintenance: The Public Works Department has to plead mea culpa here. The risk of damage resulting from deferred maintenance of our two jurisdictional dams in the Scott Ponds Natural Area was exposed when the east dam failed due to scouring of the downstream face during flood flow overtopping. We are fortunate the west dam withstood similar overtopping turbulent flows. The Town inherited these two High Hazard dams in the early 1990's, some thirty years after they were built as a recreational amenity for the adjacent residential land development project in the 1960's. Little was known of the construction quality, and little attention was paid to the bushes and trees growing in the earthen spillways and dams. While the damage to these two dams was unfortunate, the repairs have enhanced our ability to safely pass 90% of future Probable Maximum Precipitation inflows and improved our structural resilience which diminishes our risk of future failure. Simply stated, this area of the community is better off having experienced the 2013 flood because it's now a safer place to be.

Proposed Stormwater Utility: Estes Park has never had a stormwater utility to plan, construct, operate, and maintain properly designed stormwater infrastructure. The flood was a blessing to the Town in this regard, as it highlighted the visible need for master planned stormwater infrastructure, and presented a grant funding opportunity to create a Stormwater Master Plan. The Town expanded this effort by funding a companion Stormwater Utility Feasibility Study. Building on the collaboration exercised during the Fish Creek repairs, the Town's and County's Public Works Departments are preparing to poll the owners of 7280 improved parcels within the Town and adjacent unincorporated Larimer County regarding their willingness to support a user-fee and sales tax funded stormwater utility to build \$79M (which inflates to nearly \$130M over 30 years) of needed stormwater infrastructure. Our vision is optimistic for an improved future Estes Park that again steps up and takes control of our destiny.



Above: River Confluence during the 2013 flood
Below: River Confluence in 2018



Above: Brodie Avenue at Fish Creek during the 2013 flood
Below: Brodie Avenue at Fish Creek after 2017 repairs

Photos courtesy of Rick Grigsby, Art Messel and Town of Estes Park staff members

Estes Park: Five Years Later



Left: Fish Creek Road Post-Flood

Right: Fish Creek Road after the 2018 repairs



Above: Carriage Hills East Dam breached during the flood

Below: Carriage Hills East Dam after the 2016 repairs



Above, left: Carriage Hills West Dam during the flood

Below: Carriage Hills West Dam after the 2016 repairs



Carriage Hills Dam Repair Project - West Dam Spillway

Fort Morgan: Five Years Later

Steve Glammeyer
City of Fort Morgan
Public Works Director

“What a long strange trip it’s been” – those famous words from the Grateful Dead lend well to this article. I’ll never forget that September week in 2013 when the east side of the Rockies experienced one of the worst natural disasters in history. Some said “the biblical flood” occurred that week. I didn’t live on this side of the mountain back then, but was in Denver to open the first ever Public Works Institute being held, strangely enough, at the Urban Drainage offices downtown. Needless to say, class was canceled that day and I spent the rest of the day trying to get back home to Delta.

Today, I live and work in Fort Morgan. I was asked to share the progress that has been made on flood recovery efforts in areas damaged during those fateful days in this city. Fort Morgan was fortunate to escape any significant residential and business property impacts and any injuries or loss of life. The majority of damage occurred in and around a large 300-acre open space area known as Riverside Park. The impact to the park was significant and City staff immediately began to seek financial assistance to not only repair the ballfields and other damaged facilities, but to upgrade them to today’s standards.

Initially, the Federal Emergency Management Agency (FEMA) and the State of Colorado were willing to provide funds to rebuild facilities to the pre-flood state, but did not allow for any upgrades or improvements to be funded. The facilities were built in the 1970’s and were undersized for adult and older youth play and lacked many amenities now common in such facilities. Staff struggled with the idea of rebuilding substandard facilities and decided to press the issue with FEMA.

After many discussions, staff learned of a little-known pilot program under which FEMA would provide the same disaster relief funding necessary to return the fields to pre-flood conditions, but allow that funding to be used on a project that would enhance and improve facilities instead of simply rebuilding them as they existed before. City staff secured the FEMA funding and coupled it with grant funding from Great Outdoors Colorado (GOCO), which had also set aside a separate pool of money specifically for restoration of recreational and outdoor facilities damaged by the flood.

Fort Morgan secured \$500,000 in funding from the two sources and matched that money with \$500,000 in cash to complete \$1,000,000 in restoration projects. The fields were realigned and rebuilt with expanded dimensions, Americans with Disabilities Act (ADA) accessibility improvements, and the creation of a central focal point for spectators and concessions. The project also added concrete walkways and bermed viewing areas, three new access points from the field complex to the existing trail system, and ADA access to the adjoining youth T-ball fields.

But the trip is not yet complete. Staff just completed a meeting with representatives from FEMA to start the initial phase of the funding audit. The hope is to have our audit complete this year, and thus, close the chapter on this song. Then, we can sit back, enjoy the great park area we have and look to the future.



2013: From what used to be a walking trail along the banks of the South Platte River in Riverside Park; it was difficult to tell the river, left, from the park, right.



2018: Trails have been repaired and an ADA sidewalk built in the park.



Photos courtesy of the City of Fort Morgan

Ballfields and many other recreational amenities were destroyed by rushing floodwaters that tore through Riverside Park (above). The repairs on the ballfields have now been completed. (right)



City of Longmont: Five Years Later

Jennifer Loper

Public Information Specialist

Public Works & Natural Resources, City of Longmont

In September 2013, Longmont made national news when, according to the National Weather Service, “flooding of Biblical proportions” destroyed homes and businesses, dividing the city in two as bridges crossing St. Vrain Creek were overtopped by floodwaters. In a four-day period, the watershed of St. Vrain Creek received over 17 inches of rain, comparable to Boulder County’s average annual rainfall. Hundreds of homes and businesses were severely damaged or lost, and much of our city’s infrastructure was left crippled or broken.

As floodwaters receded and cleanup began, the initial focus was on interim repairs to streets, water resources, drainage systems, power lines and public buildings, such as Longmont’s Wastewater Treatment Plant (WWTP), which was forced to shut down during the flooding, sending untreated wastewater into the creek. (Because of the efficient shut-down of the WWTP, including shutting off aeration to the basins, the microorganisms that treat the wastewater survived and the plant was back online and meeting permit requirements only 48 hours later.)

City operations crews put in long hours supporting residents by hauling away flood debris and the remnants of water-logged basements that had been piled on neighborhood streets.



Longer-term flood recovery projects—including restoring damaged parks and trails, relocating and rebuilding a flood-destroyed community pool, repairing sewer lines and replacing bridges—were inventoried and prioritized under an umbrella plan called Longmont Works! Signs were installed throughout the community to help keep residents apprised of progress on flood recovery work, and a basic spreadsheet on the city website provided more details.



This process of restoring City infrastructure to its full, pre-disaster function and capacity continued for nearly three years after the flooding. By September 2016, most recovery work was complete, and Longmont’s focus switched fully to protecting the community from future flood events.

From this disaster, the City of Longmont identified the opportunity to create a more resilient and sustainable community. City engineering staff began exploring ways to redesign the St. Vrain Creek corridor to protect people, property and infrastructure from the risk of future flooding. At the same time, undertaking this work in an environmentally sensitive manner also remained a priority. The result was Resilient St. Vrain, an extensive, multiyear project to reduce the size of the 100-year floodplain through Longmont, which began construction in late 2016.

The Resilient St. Vrain project ultimately will remove more than 800 acres from the existing floodplain. This shrinking of the floodplain will also reduce the risk of flooding for more than 500 structures, including mobile homes, senior housing, and many small businesses. The threat of damage from smaller, more likely flooding also will be reduced. To date, two sections of the project have been completed, with a third section currently underway. The project is anticipated to continue through 2020.

Work on Resilient St. Vrain is also restoring a well-traveled greenway trail that was heavily damaged in the 2013 flood. The St. Vrain Greenway provides an east-west transportation route along the creek corridor for residents relying on bicycle or pedestrian transportation. As the trail is rebuilt, it is being relocated along one side of the creek bed to allow for a dedicated wildlife corridor along the other side of the creek.

Throughout our flood recovery and protection process, we have been fortunate to have support and backing from the Longmont City Council and from residents, who voiced their desire that the community be more prepared for future flooding and other disasters. In 2014, voters overwhelmingly approved the issuance of \$20.5 million in storm drainage bonds to fund improvements to St. Vrain Creek and City infrastructure. These bonds, along with street tax revenue, help provide the matching funds required for much of the federal funding that Longmont is using to complete the protection work.



The 2013 flooding destroyed trails (left).

Photos courtesy of the City of Longmont



The completed Sandstone pedestrian bridge (right).



2013: Overhead of Martin Street



2018: East of Martin Street

Message from the President



Happy Fall Everyone!

Although it seems like we have skipped Fall and have gone straight from Summer to Winter. With snow predicted, big thanks to all the Public Works professionals that keep our communities safe in all types of Colorado weather.

The National Snow Roadeo and Snow and Ice Conference, held in Loveland in September, hosted folks from all over our Nation tuning up their skills for winter maintenance including the Winter Maintenance Supervisor Workshop. Thanks to our great vendors, speakers and congratulations to the Roadeo Champions!

Our Annual Chapter Conference and Awards Luncheon was held at the Arvada Center, October 29 & 30. The New Age of Public Works conference included meetings on becoming a high-performance government agency, innovative project funding ideas and much more. We also had the opportunity to recognize many of Colorado's outstanding projects, programs and individuals at the annual awards luncheon.

Our Chapter Board plans to adopt the 2018 Strategic Plan at our November Board meeting. Thanks to the many members who have shared your visions and passions with us as the plan developed. Special thanks to our Board, Past Presidents, our Regional Director, Delegates and support from National APWA. We couldn't have done it without everyone "leaning in". We can't wait to share highlights with everyone at the 2019 conferences.

APWA Colorado Chapter is something special. It has been an honor to serve as the President this year. The Board, our Committees and our Chapter Administrator have taught me so much about volunteer passion, commitment and how to celebrate our Public Works profession.

I hope you will consider becoming a committee member, attending a conference, congratulating a PWI graduate, improving your skills through certification or expanding your professional network. The Colorado Chapter of APWA has something for you!

Thank you for allowing me to be your President!

Lesley Thomas, City & County of Denver

2018 Snow & Ice Conference & National Snow Rodeo



The 38th APWA Western Snow & Ice Conference and National Snow Rodeo was a big success this year with over 1,100 attendees! The conference was held in Loveland, Colorado on September 26-28, 2018, at the Embassy Suites Hotel and Conference Center.

This year's conference theme, "Balancing Act: Demands vs. Resources" helped bring real solutions to issues that every agency faces; looming regulations, increasing costs, competing technologies, customer expectations, and evolving collaboration. The conference featured over 30 of the best technical and educational programs available with expert speakers sharing their expertise about the many aspects of snow operations.

The Opening General Session began with the Estes Park High School Choir performing the National Anthem, and a presentation of the flags by the Colorado State University ROTC Army Color Guard. The conference was privileged to feature opening remarks by APWA Colorado Chapter President, Lesley Thomas, Region IX Director, Dan Hartman and City of Loveland Deputy City Manager, Rod Wensing. Nick Kittle, award-winning government innovator, was the keynote speaker. He wowed the crowd with his witty style and way with words (like "sustainovation", translated into "building sustainable innovation"). His main message was how to build innovation into public works programs and snow operations. It was a powerful message and many attendees also attended his break out session on building high performance teams.

The exhibitors show teemed with over 100 exhibitors showcasing equipment, products, and services in over 90,000 square feet of space both inside and outside the Embassy Suites Conference Center. Attendees could find everything needed for winter maintenance from weather technology to giant snow blowers. Many exhibitors also provided presentations to showcase their products, services, and equipment.

The Winter Maintenance Supervisor Certificate Workshop for supervisors, managers, and operators, had over 100 attendees and provided a well-rounded overview of all aspects of snow and ice control including how to implement a winter maintenance plan, deciphering weather patterns, how to determine material and equipment usage, and much more. Participants provided great feedback about the value of this program.

The National Snow Rodeo proved once again to be one of the conference highlights. Over 250 of the best equipment operators from across the United States came together to test their skills and knowledge. There were five Rodeo competitions throughout the event: single axle snow plow, tandem axle snow plow, loader, grader, and skid steer. Awards were presented to the proud winners at the awards luncheon on the last day of the conference.

Attendees enjoyed a "Blades Up Social" which was an opportunity for attendees to network and have a little fun. It was a casino night theme and featured a very popular mechanical bull that was kept busy all night! Special thanks to 4Rivers Equipment for sponsoring the evening. And a great big thank you to the many sponsors and exhibitors who helped the conference be so successful.

Mark your calendars for September 25-27, 2019 and plan to attend next year's Western Snow & Ice Conference and National Snow Rodeo, which will once again be at the Embassy Suites in Loveland, Colorado.

2018 Snow & Ice Conference



2018 National Snow Roadeo



2018 National Snow Roadeo

Champions

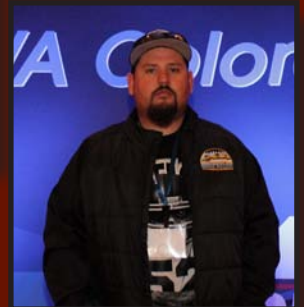


Grader Winners:

First Place: Luke Granden, Ada County, Idaho

Second Place: Billy Kreis, Missoula County, Montana

Third Place: Robert Giese, Sarpy County, Nebraska



Loader Winners:

First Place: Steve Emanuele, City of Lakewood

Second Place: Clint Walker, Missoula County, Montana

Third Place: Manny Ruiz, City & County of Denver



Single Axle Winners:

First Place: Ramon Moreno & Doyle Stwalley, City & County of Denver

Second Place: Rick Anderson & Efrain Arrellano, City of Greeley

Third Place: Curtis Lewis & Mark Merrill, Maine DOT



Skid Steer Winners:

First Place: Joe Sack, City of Thornton

Second Place: Brad Lattin, Town of Pagosa Springs

Third Place: Juan Salas, City of Westminster



Tandem Axle Winners:

First Place: Chuck Dietz & Chris King, Delaware DOT

Second Place: Doug Brown & Cody Miller, Colorado DOT

Third Place: Tom Bucholz & Andy Stephens, City of Arvada

2018 PWX August 26-29 Kansas City

Kansas City was the host for this year's Public Works Expo (PWX) held August 26-29, 2018. The Kansas City Convention Center was the gathering place for thousands of attendees, speakers, exhibitor representatives and volunteers. There were inspirational general session speakers, more than 150 educational sessions and hundreds of exhibitors in 80,000 square feet showcasing products and services to help attendees meet their daily public works challenges and plenty of social events and opportunities for networking.

Sunday's general session was opened by host and session speaker, Thom Singer. He introduced Bo Mills, outgoing APWA National President. Mills encouraged attendees to be active in the organization. "Volunteer at your chapter or branch or ask to serve on a committee or to speak on a topic. When you share your expertise, we are a better association. APWA needs you. Be an advocate for public works. Tell your story, share your service. It doesn't matter whether you are a consultant, a materials supplier, a vehicle or equipment provider, a support agency or a public servant in public works, we all work together to make lives better. Our work is important!" He then introduced the 2018-2019 President, David Lawry who commented that the members are the strength of APWA and the organization is there to support public works professional's needs. The keynote speaker for Sunday was Roy Spence, co-founder and CEO of The Purpose Institute. He works with organizations to achieve greatness by obsessing about "purpose". He believes your purpose is already inside you and focusing on what you love to do and are good at will help you find your purpose in life.

Other keynote speakers during PWX included Vernice "FlyGirl" Armour, a former captain in the United State Marine Corps who flew the SuperCobra attack helicopter in the 2003 invasion of Iraq and Jason Latimer, Curator of Impossible Science at the Reuben H. Fleet Science Center in San Diego. Jake Wood, Co-Founder and CEO, Team Rubicon spoke at the Closing General Session on Wednesday.

Attendees had access to more than 200 field experts, faculty members and consultants on hand to share their knowledge in a multitude of educational, technical and personal development sessions. Colorado presenters included Patty Carrico (City of Arvada), AJ DeAndrea (City of Arvada Police Department), Angie Hager and Pat Kennedy (City & County of Denver), Laura Kroeger (UDFCD), Steve Materkowski (UDFCD), Renee Railsback (Colorado LTAP), Dan Sailer Town of Castle Rock), and Dave Zelenok (HR Green).

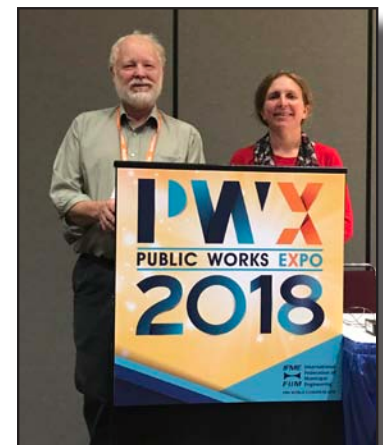
Hundreds of exhibitors displayed their products and services in the exhibit hall. Manufacturers and service providers are always working to improve their products and provide new technologies in support of public works and there is no better place to see these advancements than at PWX.



There were several other events including the annual blood drive, golf tournament, workshops and tours. The Get Acquainted Party was held at downtown's Power & Light District where attendees got to enjoy some delicious Kansas City barbecue!

Make plans now to join your fellow public works professionals for next year's conference. The 2019 PWX will be held in Seattle, Washington, September 8-11. Mark your calendars now!

*PWX Speakers Pat Kennedy and Angie Hager,
City & County of Denver*



2018 Region IX Dinner



No Other Pub in Kansas City's Power & Light District was the location for this year's Region IX Dinner held during PWX.

Region IX Director, Dan Hartman, welcomed the group of over 100 guests that included people from all over the Region for an evening of good food and fun times. Attendees enjoyed great barbecue and a fun location that had bowling, golf simulators, billiards, darts and more. A few lucky people were even able to walk away with prizes!

As always we thank our sponsors for their generous support of our event.

Plan to join us in 2019 in Seattle for another great event!

2018 National Equipment Rodeo at PWX



The second annual APWA National Equipment Rodeo was held at the 2018 PWX in Kansas City, Missouri. Chapter Rodeo champions from across the country competed in a two-part test including a backhoe and a mini-excavator challenge. There was also a skid-loader and fleet technician area added to the National Rodeo this year.

For the backhoe course, participants had to first pick a basketball off of a traffic cone, transport it through a PVC pole course, and then place the ball in a trash can to stop the clock. This test challenged operators ability to smoothly maintain an elevation while maintaining control of the backhoe. Contestants then climbed into the mini-excavator where they reached over and through a type 3 barricade to knock tennis balls off traffic cones one at a time. This tested competitors ability to safely demonstrate the many functions of the mini-ex. The winners were scored for the fastest time with the least amount of penalties. Penalties were accrued by either losing the basketball or hitting the PVC and on the mini-ex course, by touching the barricades. Colorado was proud to send our first and second place winners of the Colorado Chapter competition that was held at the Spring Street Conference in Grand Junction this past April. Spencer Esch, Bureau of Reclamation, and DJ Hughes, Pitkin County, both competed in the backhoe/mini excavator competition.

New this year was the skid loader course where participants completed several skill tests as they maneuvered around the coned course. Another great addition this year was for you fleet staffers out there; there was a multi-station test area for mechanics. They were asked to complete or fix: wiring circuits, hydraulic leaks, diagnostics, tire repair, fab shop, snow plow issues and more. Both were very challenging additions.

Colorado did not bring home any belt buckles this year, but had a great time and represented us well. Great job Spencer and DJ!



*Scott Mattice
Pitkin County*

West Slope Branch Chair-Elect

PWX - National Awards

Colorado received recognition for several awards and certifications at the APWA National Awards ceremony held Monday, August 27, 2018 at PWX.

Congratulations!

Top Ten Leader of the Year



Larry Schneider, City of Fort Collins

Project of the Year - Transportation
\$5 million but less than \$25 million

US 6 & 19th Street Interchange

City of Golden



Project of the Year - Transportation
Less than \$5 million

Wadsworth-Waterton Intersection Improvements

Jefferson County



Project of the Year - Small Cities/Rural Communities
Transportation Sandstone Underpass

Town of Vail



Presidential Award for Chapter Excellence (PACE)

Colorado Chapter



APWA Accreditation

Arapahoe County



Certified Public Works Professional-Manager (CPWP-M)

Jeremiah Unger, CDOT



2019 Construction Inspection Conference

Save the Date!

The APWA Colorado Chapter Construction Inspection Conference will be held January 31 (8am-4:30pm) and February 1 (8am-1:30pm) at CU Denver South (formerly known as The Wildlife Experience), 10035 South Peoria Street in Parker.

Registration will open November 2018 on the Colorado Chapter website: <http://colorado.apwa.net/>

For additional conference information, please contact Wanda DeVargas, conference chair at wdevargas@greenwoodvillage.com or 303.708.6140.

Sustainability Update

Mark your calendars for the Symposium for Sustainable Infrastructure III. APWA along with ASCE and APA are presenting the third symposium. The symposium will explore 'The City We Have, The City We Want'. The date is April 5-6, 2019. The first day will be a series of speakers and the second day will be the ISI Envision® Training.

Sponsorship and volunteer information will be out soon.

*Noelle Beegle
Alfred Benesch & Company
Sustainability Committee Co-Chair*

In Remembrance

Rowena Pennell

Jim Pequette

APWA Colorado sadly recognizes the passing of two of the Chapter's Past Presidents, Rowena Pennell and Jim Pequette.

Rowena worked for the City of Brush before retiring and moving to Rangely. She was the Chapter President in 2002. A donation was made by the Chapter to the National Kidney Foundation.

Jim was diagnosed with leukemia in 1993 and was able to go into remission from that disease in 1994, but due to complications from the chemotherapy he had received, he could no longer work a normal job but he was able to take care of his young daughter, Naomi, and participate in environmental cause and progressive political activities later in life. However in early 2017, Jim was diagnosed with a bone marrow condition called MDS (Myelodysplastic Syndrome) in which some cells in the marrow operate normally and others do not. This condition can occur in a small percentage of people who have had leukemia and, if not treated, can lead to a reoccurrence of leukemia. Jim was unable to tolerate the treatment for MDS and it developed into end-stage leukemia in just a few months. He passed peacefully at home. Jim was Chapter President in 1990. A donation was made by the Chapter to the Leukemia Research Foundation.

2018 CARMA Winter Workshop

October 11
Town of Windsor

CARMA Winter Workshop a Success

The Colorado Association for Roadway MAintenance (CARMA) is a sub-committee of APWA that continues its tradition of delivering great opportunities for training and networking with their annual Winter Workshop. The Winter Workshop is designed to offer topics to help local agencies prepare for winter and keep staff on the cutting edge of methods, materials, and operations. The 2018 workshop was a success and occurred on October 11 in Windsor, Colorado.

The Town of Windsor hosted the event at their new Public Works Service Facility. The Public Works Department oversees the management of the town's water, sewer, storm drain, fleet, and streets, along with maintenance of public areas. Opened in the fall 2017, the new complex consists of six buildings, including an administrative office building, fleet services, heated equipment storage, and two covered storage buildings. The complex also incorporates several sustainable features, including an electric vehicle charging station and solar panels. Windsor Public Works maintains 175.5 miles of streets, operates a 2.8-million-gallon per day wastewater treatment facility, and monitors approximately 700 million gallons of water that flows into the town from outside providers each year. The Public Works Department's projects and services are vital to the community's growth, health, safety, and quality of life.

The Winter Workshop sessions addressed several engaging topics. The keynote speaker was Mark DeVries, a nationally recognized winter maintenance expert. Mark worked for the McHenry County Division of Transportation (retired) for 30 years. He is a Past Chairman of the National APWA Winter Maintenance Sub-Committee and past member of the Winter Maintenance Technical Service Program. Mark has presented at Snow and Ice seminars all across North America, won several awards, and has been published in several industry publications. Currently, Mark serves as an Application Expert for Vaisala Inc. At the Winter Workshop, he opened with his recommendations on How to Convince Stakeholders to Implement New Winter Maintenance Practices & Technology and also shared his insights on Salt Smarts - Achieving Minimal Environmental Impact and Maximum Public Safety on an Itty-Bitty Budget. We are honored Mark was able to participate in our event, and we'd like to send a big thank you to Vaisala for sponsoring Mark's travel from Illinois. Larry Schneider, streets superintendent for the City of Fort Collins presented on the Use of Technology in Winter Maintenance Management. Through Larry's leadership, Fort Collins has become a nationally recognized leader in innovative snow operations, including equipment, materials and technology, winter maintenance training, and storage facilities. The workshop also presented on Winter Survival Tips & Skills and four local agencies shared their experiences in a roundtable discussion addressing issues before, during, and after the storm.

Town staff completed the program by taking the group on a tour of their new public works facility. Participants toured aspects of Windsor's winter maintenance program which consists of a fleet of snow removal equipment, including six snow plow dump trucks, each equipped with sanders; one-ton pickup; five 3/4 pickups; two four-wheel drive tractors (one with snow blower); one motor grader; one front-end loader; and two backhoes.

CARMA would like to thank the following agencies for their volunteer participation and insightful presentations: Vaisala Inc., City of Fort Collins, EnviroTech Services, Pitkin County, Town of Breckenridge, Summit County and the City & County of Broomfield.

Most of all – we are thankful for the kind hospitality and help with the meeting accommodations of our hosts at the Town of Windsor. Let us know if YOU would like to host this event in October 2019!

*Renee Railsback
Colorado LTAP*

APWA Colorado Secretary & CARMA Committee



Local Colorado County Wins National Innovation Award

PAVEMENT TRACKING SOFTWARE APP

In Colorado, many local agencies strive to implement a culture of innovation throughout their programs and processes. To reward these innovative ideas the Federal Highway Administration's Office of Innovative Program Delivery - Center for Local Aid Support (CLAS) sponsors the National Build a Better Mousetrap Competition (similar to Colorado's "You Show Us" Innovation Contest.) This program rewards local agencies for their innovative solutions to everyday problems and issues that transportation agencies encounter. They can be anything from the development of tools, equipment modifications, and/or processes that increase safety, reduce cost, improve efficiency, and improve the quality of transportation. Solving these problems requires efficient use of existing funds and materials along with innovative techniques. Competition entries are evaluated in one of the following categories:

- Inspection and Data Collection
- Asset Management Techniques
- Maintenance Tools and Methods
- Facilities Improvements

FHWA-CLAS recently announced that Arapahoe County's Pavement Tracking Software App was awarded 1st Place in the Asset Management Techniques category. The agency was awarded a framed certificate and sponsored to participate in the upcoming Every Day Counts 5 innovation summit in Portland, Oregon.

National Champion – Asset Management

According to the U.S. Census Bureau, Arapahoe County has a total area of 805 square miles of which 798 square miles is land. The county measures 72 miles east to west and 4 to 12 miles south to north. Within this area, the County Road and Bridge department is responsible for maintaining 1,100 lane miles of paved roads and depending on the time of year, tracking this work can be a daunting task.

The Patching Supervisor for Arapahoe County's Road & Bridge department partnered with the GIS Administrator to design and build a real-time pavement tracking system for monitoring upcoming and completed potholes and major patch work. This powerful project tracking system provides the ability to identify work on a map with status indicating icons and details about the work. The details include a wide range of important information specific to each project, as well as the ability to attach pictures of the job. The system utilizes the County's GIS program both on desktop PC's and on mobile devices (Android or Apple phones) to provide real-time map data viewing and collection anywhere in the County, in the office or in the field.

The results and success that the County has had has far exceeded their original expectations. Initial testing started with trees and potholes as the only two reportable incidents. Since then, and through trial and error, Road and Bridge has broadened their incidents to also include major patches, cutbacks for concrete work and wide crack repair. They have also added a color-coded status indicator function for quick progress identification (red is new, green is completed). The ability to input, especially citizen driven work requests, from either the desktop in the office or the smartphone in the field, saves a significant amount of time. The access to crucial job information in real-time all but eliminates those "surprises" you find on almost any job. Laying out daily asphalt work for the crews and reporting the production to management is virtually seamless.

Colorado APWA would like to congratulate Arapahoe County on their national achievement!

Local agency innovations are submitted to CLAS by the state's LTAP Center. If your agency would like your latest ingenious ideas to compete in the National Build a Better Mousetrap Competition, you can submit projects online at: https://www.ColoradoLTAP.org/ltap/Local_Innovation_Projects.asp. You do NOT have to be the Colorado state winner of LTAP's You Show Us Innovation Contest to compete nationally. We look forward to YOUR innovative solutions!



Colorado LTAP Director and APWA Secretary, Renée Railsback, presents Arapahoe County with their national award at a recent County Commissioner's meeting

West Slope Branch Update

The summer of 2018 was spectacular for all of Colorado, with wonderful weather and strong visitation numbers. Unfortunately, the drought conditions persisted throughout much of the 2018 calendar year and there were numerous large wildfires statewide. On a brighter note, fall is chock full of APWA activities including PWX in Kansas City, the West Slope Snow & Ice Conference in Gunnison, the Western Snow & Ice Conference & National Snow Rodeo in Loveland, and the Annual Chapter Conference in Arvada.

The West Slope Branch enjoys tremendous branch membership coupled with an active leadership group. The branch is looking to increase diversity in both the general membership group as well as the leadership team, and everyone is encouraged to engage and participate as much as they can. Please help us be the best that we can be.

The West Slope Branch hosted the inaugural West Slope Meet & Greet on August 23rd at Veltus Park in Glenwood Springs. The event was well attended and the food and networking opportunities were abundant. Coincidentally, Veltus Park was closed for a modest river restoration project and we therefore had the park to ourselves. The hope is that additional meet & greet events can be scheduled in other West Slope locations during the next year. Anyone interested in hosting a meet & greet should contact the West Slope Board and we look forward to having events wherever there is interest.

The branch also continues to work on developing the Young Professional Program (YP), supports the Public Works Institute (PWI) program attendees, provides scholarships for education in a Public Works related field, and assists with a Public Works Internship program. Anyone interested in any of these opportunities should contact a West Slope Board Member.

The West Slope Branch is always looking for new ideas and additional organizational energy. Anyone interested in increasing their involvement, sharing ideas, or just talking about Public Works can contact myself or any West Slope Branch Board Member. Think snow and take care!

*Article and photo courtesy of Paul Ruud
Town of Telluride, West Slope Branch Chair*



5th Annual Rockies Game...NEW FACES AND A ROCKIES WIN!!

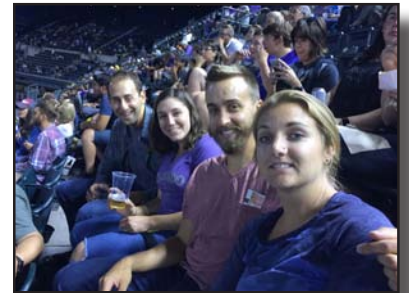
Another year in the books for our Annual APWA Rockies game! With nearly 60 in attendance, it was a beautiful, warm evening to share among new faces, APWA Board members, and Colorado Public Works Young Professionals.

A special thank you to Alfred Benesch & Company for sponsoring a \$20 concession credit on each ticket. That sure made the evening all the more fun!

Contact Melissa Jucha at Melissa.jucha@dot.gov if you would like to get involved. Feel free to share with others in your office that may be interested in becoming part of this professional organization. Public Works is best shared with others, so come be a part of the group!

Keep your eyes open for our upcoming Winter Networking Event!

*Article and photo courtesy of Jenna Phillips
Muller Engineering*



YP Rockies Night

News & Announcements

Announcements

APWA Colorado Email List

The Chapter will be updating and reviewing its email distribution list in the upcoming months. You may receive an email asking you to confirm information or agency contacts. If you have updates at any time, please contact Pamela at bdweimer@msn.com.

The Practitioner

Do you have information on an emerging topic of interest, project, or news that would be of interest to our members? All members are welcome to contribute to future newsletters. *The Practitioner* is published quarterly. The submissions deadline for the next newsletter is January 11, 2019.

Job Postings

Does your agency have a job opening? The Colorado Chapter website can help you with getting the word out! We list public works employment opportunities on our Chapter website under Resources/Employment: <http://colorado.apwa.net/> For more information, contact Pamela Weimer, Chapter Administrator at bdweimer@msn.com.

Membership

New Members

Colorado APWA would like to welcome the following new members who have joined in the last quarter.

Kristen Armbruster, City of Grand Junction
Tanna Boisvert, IDES
Crystal Carlow, City of Thornton
Patty Carrico, City of Arvada
Bill Cornelius, Farnsworth Group, Inc.
Chris Delles, Town of Vail
Wanda DeVargas, City of Greenwood Village
Shawn Farmer, City of Englewood
Justin Forman, City of Aspen
Cassie Free, City of Thornton
Christopher Groth, City of Englewood
Kirby Hamill, Town of Timnath
Mike Hayes, City of Greenwood Village
Scott Heller, City of Greenwood Village
Pablo Hernandez, City of Centennial
Kristin Holt, City of Greenwood Village
Todd Hutchens, Pueblo West Metro District
Ronald Hyer, Park County
Andrew Isaacson, Town of Avon

Doug Jardine, City of Fort Collins
R Scott Logan, City of Greeley
Emiley Lopez, City of Arvada
William Mast, Tetra Tech
Michael McMahon, HDR Engineering Inc.
Derrick Mills, City of Fort Morgan
C Montgomery, Douglas County
Cara O'Donnell, Douglas County
Matthew Peacock, Town of Crested Butte
Craig Schroeder, City of Thornton
Tom Scott, Graybar Electric
Steve Sheffield, Town of Monument
Michael Simonson, University of Colorado Denver
Tom Sutton, City of Greenwood Village
Anastasia Urban, City of Littleton
Stephany Westhusin, RockSol Consulting Group
Christa Wickland, Uretek USA
Dustin Wright, Pitkin County

News & Announcements

Upcoming Events

Colorado Chapter Events

January 31 & February 1:	Construction Inspection Conference, CU Denver South, Parker
April 16:	Spring Street Conference Golf Tournament, Tiara Rado, Grand Junction
April 17-19:	Spring Street Conference, Clarion Inn, Grand Junction
April 19:	State Backhoe Competition, Clarion Inn, Grand Junction
May 19-25:	Public Works Week
June TBA:	Chapter Golf Tournament
September 8-11:	PWX, Seattle
September 10:	Region IX/Chapter Dinner, Seattle
September 25-27:	Western Snow & Ice Conference & National Snow Roadeo, Embassy Suites, Loveland
October TBA:	CARMA Winter Workshop
October TBA:	Annual Chapter Conference
October TBA:	APWA Colorado Annual Awards Luncheon

***Check the Colorado Chapter website often for updates and new events.
Dates and locations will be added as they become available.***



American Public Works Association
Colorado Chapter
Pamela Weimer, Chapter Administrator
6540 South Tabor Street
Littleton, Colorado 80127

Did you know that much of the information contained in this newsletter is also available on the Web? Go to the APWA Colorado Chapter website at <http://colorado.apwa.net/>



APWA Toll Free Membership Hotline
1-800-848-APWA

2018 Colorado Chapter APWA Executive Committee and Chapter Board of Directors

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