

# Montana Section News Waves

American Water Works Association

**FALL 2015** 

## Straight From The Chair Bv: Slim Miller. MSAWWA Chair

The recent lunar eclipse highlighted several weeks of fine fall weather - what a great time to enjoy life in

Montana. Fall is definitely here with the press of the coming winter and the energy of the changing season. And speaking of energy, alot is happening within the Montana Section of AWWA. It is an exciting and very rewarding time to be part of the Board and a real honor to serve as this year's Chair. Many thanks to Greg Lukasik for a great job as Chair this past year, and a hearty



welcome to Wayne Lovelis, our new Junior Trustee. Wayne is the Water Plant Manager for the City of Great Falls.

It is gratifying to see that Section membership is up helping us meet the membership challenge from AWWA. The joint conference this spring in Billings was one of our most successful yet, judging from attendance, vendor participation, and revenue. We are very appreciative of the support we receive from the equipment and product vendors, they make our conference possible. Our annual conference has grown to the point that it is difficult to find a conference facility large enough—but look for another great conference planned by the Bozeman contingent this coming vear April 26-28. Yes, we are returning to Bozeman after a hiatus of several years and are expecting big things from John Alston and associates.

Other recent activity includes the new joint website which can be found at <a href="https://www.montanawater.org">www.montanawater.org</a> This is just one more indication of how closely MSAWWA works with the Montana Water Environment Association (MWEA), the Montana association of the Water Environment Federation (WEF). Our joint goal is to make the website more useful and accessible for members. These two organizations have worked together successfully for many years, proving the old adage that there is strength in numbers. (continued on page 9)

## MWEA President's Message By: Amy Deitchler, MWEA President

Fall Greetings!! This is one of my favorite times of the year, with abundant reminders to be thankful! I am

certainly thankful to be in Montana during this season and to be a part of the MWEA group. I would like to thank everyone that helped put on a very successful spring meeting in May. Without our hard working members, such a conference would not be possible.

The partnership of the MWEA board members continues to be representative of operators, city and town officials, state and federal private employees, and

consultants. This partnership is critical to keeping our board diverse and with knowledge from a variety of Our newest Board Member is Mike experiences. Abrahamson from the Montana Water Pollution Control State Revolving Fund (DEQ), who is coming in as Junior Trustee. His experience and enthusiasm will serve our Board well.

I am excited to announce a program to help support our teachers and youth - the Grants for Teachers program. The final application was approved at the Fall Board meeting and is now available to teachers. We will be supporting teachers with money to help with equipment, supplies, or travel for wastewater or stormwater projects. We may be reaching out to the membership to help support a presentation as part of this grant award!! If you know any teachers that need additional supplies, please let them know about this grant. The application is available at our joint website www.montanawater.org (Continued on page 9)

#### Inside:

- 2015 Conference Highlights
- 2015-2016 MSAWWA-MWEA Boards
- 2015-2016 MSAWWA-MWEA Committee Chairs
- Direct links to advertisers—just click 'n go!

# "Working Together To Protect Montana's Water Resources" Highlights from the 2015 Conference

The 2015 annual MSAWWA-MWEA Joint Conference was held in Billings on May 6th and 7th and provided an excellent opportunity for networking and a wide variety of sessions and topics eligible for continuing education credits. The Preconference was hosted by MWEA on May 5th with approximately 72 people attending the "Wastewater Pretreatment" themed sessions. Total Conference attendance was approximately 205 including speakers. In addition, there were 58 vendors on site that provided valuable information to all who took advantage of the opportunity. Numerous awards were presented during the banquet on Wednesday evening, as well as at the luncheons on Wednesday and Thursday. The awards presented for MSAWWA and for MWEA at the 2015 Conference were as follows:

WEF William D. Hatfield Award—Ron Edwards, Big Sky County Water & Sewer MWEA Beneficial Reuse Award—City of Missoula MWEA Small Systems Award—City of Chinook MWEA Stockholm Junior Water Prize—Brenna DeMarios, Missoula MWEA 5S Award—Allen Kelm & Coralynn Revis MSAWWA-MWEA Lifetime Achievement Award—Wayne Robbins MSAWWA-MWEA Donald Willems Scholarship—Kayla Bayer, Carroll College AWWA Operator's Meritorious Service Award—Mike Rubich, City of Billings AWWA George Warren Fuller Award—Nate Weisenburger, AE2S, Inc.

Dignitaries representing both AWWA and WEF were in attendance at the conference. This year's AWWA dignitary was Dave Rager. In January 2012, David became the CEO of SD1, the wastewater and storm water utility for three counties of Northern Kentucky. Prior to his position at SD1, David served for 17 years as the CEO of the Greater Cincinnati Water Works. David has over 39 years of experience at the local government level. In addition to serving as the CEO of the Greater Cincinnati Water Works, he has served as city manager, deputy city manager, and planning commissioner for Cincinnati, Ohio. Currently David serves on the Board of Directors for the American Water Works Association (AWWA). In June 2012, David began his term as the new AWWA Treasurer. He has also been chair of the Water Utility Council, chair of the Board of Trustees for the Water Research Foundation, a member of the International Council, and previously served as President of the Board of Directors for the Association of Metropolitan Water Agencies.

Jenny Hartfelder joined the Conference as the representative from WEF, and is a member of the 2014-2015 Board of Trustees. Jenny is currently a Vice President with MWH and serves as the Rocky Mountain Client Service Leader in Denver, Colorado. IA WEF member since 1997, Jenny has held multiple leadership and committee roles within the Federation. She has served on the Stockholm Junior Water Prize (SJWP) Committee and the Public Communications and Outreach Committee for many years, chairing the SJWP Committee. Jenny also has served in the House of Delegates as the Speaker of the House, Chair of the Ways and Means Workgroup, and as a member of several HOD workgroups and committees. She is a member of the Select Society of Sanitary Sludge Shovelers and a recipient of the Arthur Sidney Bedell Award. Also an active member of the Rocky Mountain Water Environment Association, Jenny chaired several committees including Public Education, Nominations, Awards, and the Joint Annual Conference Committees, and has moved through the MA officer chairs serving as the President in 2006-2007.

Thank you to both of these individuals for attending the 2015 Joint Conference!

# ~2015 Conference Photos~



Lisa Kusnierz—EPA opens the 2015 Preconference with her presentation "Overview of Pretreatment—Big and Small".



Bill Enright of Interstate Engineering and Craig Nowak of Morrison Maierle, enjoy some networking at the Wednesday evening social.



Greg Lukasik as MSAWWA Chair presents the AWWA Operator's Meritorious Award to Michael Rubich with the City of Billings. The award recognizes special performance in system operation, maintenance, operator training, and dedication to the public beyond normal job responsibilities. Congrats to Mike on this award!



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Bill Bahr presents the MWEA Small Systems Award to Eric Miller with the City of Chinook. Congratulations!



Carrie Gardner and Cindy Bye man the WFP raffle table.

At left, the 2015 Preconference speakers answer questions during the final panel session.

# Are You Ordering Books from AWWA?

If so, please place your order through Robin Matthews-Barnes, MSAWWA Executive Secretary. MSAWWA receives credit for your order. The cost is the same to you, but MSAWWA gets a bonus!

**NewsWaves** is a publication of the Montana Section of the American Water Works Association and is published twice yearly. It is available for viewing or printing on our website at: www.montanawater.org.

We welcome contributions to **NewsWaves**. For more information, contact:

Robin Matthews-Barnes PO Box 582 Seeley Lake, MT 59868 Phone: 406-546-5496

E-mail: Info@montanawater.org

# Calling All Student Writers!! Write About Anything Water and Receive \$100

MSAWWA has produced **Newswaves** twice yearly for the water supply community. Our subscribers include professionals in the water supply industry including Montana cities and equipment engineering firms, and towns. suppliers. We certainly would like to hear from the education community. For each newsletter we encourage submission of student papers of 1000 words or less. If the submitted article gets published in the newsletter, the student will receive \$100 along with a 1 year membership to AWWA. The next newsletter will be published this coming winter/spring. Articles must be by February 15, 2016 received considered. For more information, contact Robin Matthews-Barnes at 406-546-5496 or by email at: Info@montanawater.org



#### Water For People Raffles

Thank You to Great West Engineering, R.L. Winston Rod Co., and Montana Fly Goods for again donating the fly rod and reel for the Water For People raffle that took place at the conference. Retail value of the prize was \$1,170.00. Over \$3300 was raised for Water For People at the conference this year including contributions from Mountain Water Company and MWEA, and from the auction of a GPS unit donated by Congratulations to Collette Anderson of Great West Engineering on winning the rod and reel. Thank you to Carrie Gardner (Chair) and the other members of the Water For People committee for all of your efforts, and thank you to those who supported the raffles by purchasing tickets or raffle items.

# Do You Have Something To Say?

If you have ideas, announcements, articles, or stories you would like to submit for consideration for publication in the next issue of NewsWaves, please email Robin Matthews-Barnes at <a href="mailto:info@montanawater.org">info@montanawater.org</a>. The next issue will be published in March/April, so keep it in mind!

## Thank you Morrison-Maierle!

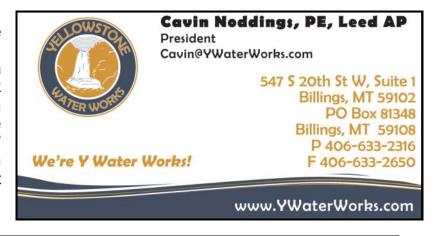
For once again providing the prize for the early bird drawing at the conference. Morrison-Maierle has been donating a beautiful Big Sky Carvers wooden duck as the prize for one person who is drawn from the pool of those registering for the conference before the "early bird" deadline. Laura Gundlach of Murtagh Municipal Engineering was the recipient of the duck this year. Congrats Laura!



# Have you checked out the new MSAWWA-MWEA joint website yet?

#### www.montanawater.org

If not, please do so! Let us know what you think—we are open to comments and suggestions for additional content. Contact Robin Barnes at info@montanawater.org



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#### ~Joint Scholarship Fund Raffle~

Thank you to Morrison-Maierle, Inc., DOWL, Great West Engineering, and Interstate Engineering for their generous donations for this years' raffle to help fund the Donald G. Willems Joint Scholarship.

1st prize was a \$500 gift certificate to Big Sky Resort PLUS a bonus 2 night stay for 2 people at Huntley Lodge. 2nd prize was a \$100 gift certificate to Cabelas and 3rd prize was a \$100 gift certificate to Scheels.

1st prize winner was Ross Mollenhauer, 2nd prize winner was Mark Fitzwater, and 3rd prize winner was Scott Forsling.

The raffle raised over \$1700 for the scholarship fund. Thank you to all who purchased tickets to support the opportunity to help the students who benefit from the scholarship awards. Thank you also to Coralynn Revis (Chair) and all who serve on the scholarship committee.



## Operators...

Do you know that you have the legal authority to control what is discharged to your treatment facility by non-residential Pretreatment is a general term for both the users? regulations governing and the implementation programs controlling discharge by industrial and commercial wastewater collection system users. The goal of Pretreatment Programs is for communities to protect their investments in wastewater infrastructure by controlling what is discharged to the system. The Pretreatment Subcommittee is working to 1.) provide local pretreatment training opportunities and 2.) develop a united Montana Pretreatment Group to share information about successful pretreatment program development and implementation. If you are interested in joining the Pretreatment Committee in working toward these goals, please contact LeAnn at lbooks@m-m.net



American Water Works Association

#### Mission of Montana Section AWWA-

The Montana Section of American Water Works Association is dedicated to the promotion of public health and welfare in the provision of drinking water of unquestionable quality and sufficient quantity. Montana Section of AWWA will provide the forum and opportunity through which its membership can exchange information, learn of new issues and technologies, educate the public, and enhance the professionalism of workers in all areas of the water industry.

Mission of the Montana Water Environment Association The Montana Water Environment Association (MWEA) is a non-profit organization dedicated to the preservation and enhancement of Montana's water environment. The Association is committed to advancing science and education, disseminating technical information, increasing public understanding and promoting sound public policy in the water quality and water resources field.





## MONTANA WATER ENVIRONMENT ASSOCIATION OPERATOR SCHOLARSHIPS

The Montana Water Environment Association (MWEA) has allocated funds to certified operators looking for assistance in paying for continuing education and/or training event costs. Applicants must complete a scholarship application one month ahead of the training session they plan to attend, and awards of up to \$500 can be realized by each applicant. When approved in advance, the award money can be used to pay for the actual training as well as other miscellaneous costs associated with attending. Applicants must be a Montana certified operator or operator in training. Applications are available through the Montana Environmental Training Center (METC) or can be obtained by emailing MWEA Secretary/Treasurer, Dana Audet at dana.audet@veolia.com.

#### **SAVE THE DATE!!!**

Come and take advantage of the educational and networking opportunities at the 2016 Joint MSAWWA-MWEA Conference. The conference will be held at the Holiday Inn and Best Western GranTree in Bozeman:

April 26, 2016—Preconference (hosted by MSAWWA) The focus of the Preconference will be on water conservation, sustainability, reuse, and related topics.

April 27-28, 2016—Conference "Working Together To Protect Montana's Water Resources"

Registration information will be emailed to members and will also be available on the website at a later date:

www.montanawater.org

#### Straight From The Chair continued ....

And changes are planned to make this newsletter a truly joint effort. Watch for the next edition and let us know what you think.

The Board has updated the action items tied to the Section's recently adopted strategic plan and measuring progress made toward meeting that plan. We are also consolidating all the governing documents into a single searchable package to be called the Section Operating Plan. Governing documents include policy and procedures, job descriptions for the Board members, committee descriptions and goals, investment policy, bylaws, strategic plan and reserve policy. The new Operating Plan will then be posted to the new website where it will be available for review and comments.

Our first small systems operator training session was successful beyond everyone's expectation, with 45 attendees, from a wide area of the state and a range of systems. The training was free to attendees and funded by an EPA training grant through AWWA. A huge thank you to Barb Coffman of the Montana Environmental Training Center for facilitating the training, and thanks to our executive secretary Robin Barnes for helping organize it. Held at Helena College campus, classes were taught by volunteer instructors with materials provided by the EPA. Due to the success of the inaugural session, AWWA has requested that we provide two additional training sessions in the coming year, and has made the necessary funds available. This training allows us to move forward with our goal of providing more resources for small systems and their operators. Stay tuned.

The energy emanating from our most recent joint committee, the Students and Young Professionals Committee, is palpable and really exciting. Thanks to Dave Carlson of AE2S, the committee chair, for his great organizational talents and enthusiasm. With joint Board support, look for more information about what this committee is up to on the new joint website soon.

As you can see, the Montana Section is a dynamic organization that provides important resources and support for the water industry in Montana. The men and women working in this industry, though they live in a large state, seem more like a small community, with much give and take between individuals. Thanks to all of you that belong to MSAWWA, and thanks to all of you that work hard to protect and improve our precious water resources. If you would like to become more involved with work that this organization does, from helping out on one of the many committees, attending Board meetings, or just providing input on what you would like to see or what we could do better, please contact myself, one of the Board members, or anyone of the existing committee members. We love to share our passion for this organization and always welcome ideas to maintain our momentum, implement our plans, and take this energy to the next level.

My personal goals for this year are to improve communication with our members, provide greater opportunity for members to serve on committees, continue to grow membership, expand MSAWWA as the go-to source for information, provide support and resources for the water industry here in Montana, and to work toward the national goal to grow municipal and service providers membership. Ambitious goals, but this organization is nothing if not ambitious. Thanks again to all of you that work in the water field and support our great organization. ~Slim

#### MWEA President's Message continued......

The new website was launched at the 2015 conference. We are starting to get it populated with articles and information for the membership. The membership is encouraged to post job opportunities on the website. Please contact Robin Matthews-Barnes if you have an advertisement. In addition, the conference registration and call for abstracts for the 2016 conference will be available. If you have not had time to check it out, I highly recommend that you do.

The Pretreatment and Stormwater committees have been formed and are currently looking for new members. The current committee members will be reaching out to the membership looking for active members. The Pretreatment committee is having phone calls every two months and really starting to be an active committee. If you interested in the Pretreatment committee, please contact LeAnn Books. The Stormwater committee has been formed and they are currently looking for members and in the process of getting the committee active. If you interested in the Stormwater Committee, please contact Coralynn Revis. Both LeAnn and Coralynn's contact information can be found on the website under the Committees tab.

We are now gearing up for the 2016 conference in Bozeman. We are excited and the City of Bozeman host committee has some great activities planned. The Call for Abstracts will be coming out shortly so watch for them in your inbox. We hope to have a really good technical program again this year. I will encourage you to submit an abstract or volunteer for one of the committees.

We are looking forward to another great year with MWEA!! Hope to see you all at the Joint Conference in Bozeman!! ~Amy

# Message from MSAWWA's National Director ~Logan McInnis~

Dear AWWA Members.

I would have to say that my first year on the AWWA Board was a bit like taking a drink from a fire hose! There's an awful lot going on within AWWA but all the staff and Board members keep saying that is the most exciting time for AWWA since the invention of chlorinated water. I guess I came along at the right time!

What is it that makes this the best time for AWWA? Well, the economic downturn of the late 2000's lead to some pretty bleak times for AWWA's membership and finances. That is all in the rearview mirror now and Association membership is on its way back up. The financial picture has also improved to the point where AWWA has launched some exciting new initiatives that many of you are probably aware of. Some of these initiatives include:



- Opening of AWWA's first overseas office in India (<a href="http://www.awwa.org/membership/awwaindia.aspx">http://www.awwa.org/membership/awwaindia.aspx</a>)
- Creation of a new scholarship fund which is being called The Water Equation Campaign (<a href="http://www.awwa.org/donate.aspx">http://www.awwa.org/donate.aspx</a>)
- Creation of the Community Engineering Corps (<a href="http://www.awwa.org/membership/get-involved/community-engineering-corps.aspx">http://www.awwa.org/membership/get-involved/community-engineering-corps.aspx</a>) jointly with the ASCE and Engineers Without Borders-USA
- Obtaining EPA grants that allow AWWA to offer incredible training at no cost to water system operators. In May, the Montana section offered an 8 hour free training session for 45 operators from more than 20 small systems throughout the state. We will be offering 2 additional free training workshops next year.

The list truly goes on. We are continuing to make AWWA a more effective organization by greatly improving relationships between the Association and the Sections. Our local board has witnessed this through the tremendous help we received earlier this year in completing a new Strategic Plan. AWWA is also working toward a new 21<sup>st</sup> Membership Model that will improve the value provided to members.

Not only are there great things happening at the Association level, but I'm very excited about what we've been able to achieve within our local section. Our membership numbers are increasing, our financial picture is very strong and we are finding great new ways to involve members and to increase the value that we are providing them. I hope that each of your will consider finding a way to get involved with AWWA activities. My involvement has truly been one of the most important and fulfilling things I have done in my career.

Again, I thank you for this great opportunity to serve on the AWWA Board of Directors. Feel free to contact me at <a href="mailto:logan@mtnwater.com">logan@mtnwater.com</a> if you want to know more about what is happening at the Association level.

Sincerely,

Logan McInnis



# Message from MWEA's National Delegate ~Coralynn Revis~

Greetings from the Windy City!

I recently attended WEFTEC in Chicago on behalf of MWEA. With over 25,000 attendees and a vendor hall the size of multiple football fields (1,033 vendors), it was quite impressive. Sharks highlighted the opening general session with a presentation by musician and film maker Rob Stewart, highlighting his quest for sustainable water ecosystems. The opening general session can be watched here:

http://www.weftec.org/meetings\_events/page.aspx?id=56

In other exciting news, a partnership of water sector organizations — the National Association of Clean Water Agencies (NACWA), the Water Environment Federation (WEF), the Water Environment Research Foundation (WERF), and WateReuse —released the *Water Resources Utility of the Future 2015 Annual Report* at the WEFTEC executive session. Written collaboratively with industry thought leaders, the



Annual Report is an update on the water sector's efforts to transform treatment into full resource recovery that includes sustainable, cost-effective management options that capture valuable and reusable products for society. Since the original Water Resources Utility of the Future (UOTF) efforts began in the summer of 2013, several utilities have successfully implemented new and creative programs to address local watershed-wide challenges. The report includes several notable case studies from across the country.

WEF is also part of the Value of Water Coalition, responsible for the recent public service campaign to remind people of how important water is to us. I'd encourage you all to sign up to be Water Advocates, because you already are! This week is the Value of Water Coalition's, "Imagine a Day without Water" as part of the national campaign on the value of water. <a href="http://thevalueofwater.org/">http://thevalueofwater.org/</a>

The MWEA Board met this fall in Helena and I also wanted to give you the latest about one of our very exciting new programs, Grants for Schools. We've set aside money for school teachers to apply for grants in their science programs to do a project related to water. The program went live this fall and is open for applications. Headed up by current president Amy Deitchler, we're very excited to see what kind of project we can help science teachers accomplish and spread the knowledge about the importance of water in Montana. Please pass along to any teachers in your realm of influence! Applications are available on the new joint website—check it out at <a href="https://www.montanawater.org/awards-scholarships/scholarships-available/">www.montanawater.org/awards-scholarships/scholarships-available/</a>

I'm looking forward to serving you guys through the next year as your National Delegate to WEF. Please let me know if you have any questions or concerns.

Thank you,

Cora

#### In With The New!

Now that we have accomplished the goal of creating a Joint website <a href="www.montanawater.org">www.montanawater.org</a>, the MSAWWA and MWEA Boards have agreed to combine efforts on a Joint newsletter. Although it has served its purpose over the last couple of decades, this will be the last edition of <a href="#www.montanawater.org">Newswaves</a>. We are looking forward to a fresh start for the winter/spring edition and would encourage input from our members on a name for the newsletter and suggested content. If you would like to be involved with this task or have some ideas, please contact Robin Matthews-Barnes at:

Info@montanawater.org or members of the Information Management Committee (see page 25)

#### **Putting the Squeeze on Sludge**

The City of Missoula Wastewater Treatment Plant (WWTP) is underway with a biosolids dewatering improvements The City processes approximately 9 dry tons of biosolids per day at the facility with a single centrifuge. The centrifuge operates 6 days a week, approximately 8 hours per day and spins at a high speed with a 200 HP motor. The lack of redundancy led the City to consider adding another piece of equipment. The dewatering improvements project includes the purchase and installation of a single volute press. The volute press turns much more slowly, can be operated 24hours per day and has a horsepower of 7.5. The lower horse power leads to lower power consumption and an expected demand reduction to the tune of up to \$36,000 per year. Another benefit is the drain return to the head of the plant can be equalized over the 24-hour period. This reduces slug loading on the secondary process that can occur when dewatering during the day shift only. It is expected to result in higher effluent quality, or at the very least, a more robust system.

The project also includes the installation of a microwave-based total solids meter to measure the concentration of the solids in the pipe that feeds the volute press. In Missoula, the biosolids come from two locations, the digested sludge and the thickened waste activated sludge, that is not digested, both of which have a concentration that can vary over time. The installation of the total solids meter allows an instantaneous reading of the solids loading on the volute press and the control of the polymer dosing to optimize dewatering for that precise loading.

The volute press was just started up last week, but the City is excited to get used to operating it and realizing the benefits. ~Coralynn Revis, P.E. HDR Engineering



Volute press start up technician makes adjustments to the controls.



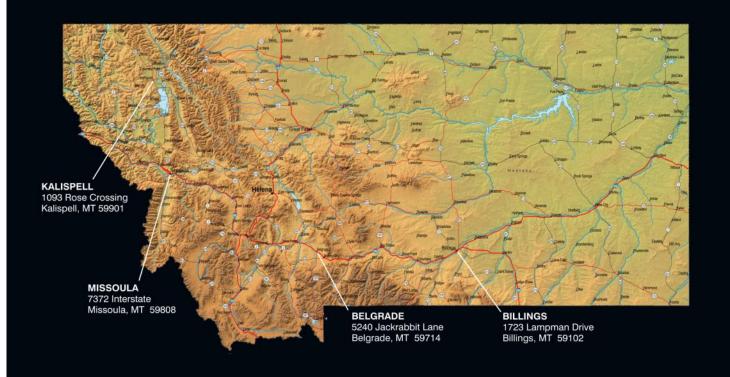
#### 2015 George Warren Fuller Award Recipient

Nate Weisenburger was the recipient of the MSAWWA George Warren Fuller Award for distinguished service at the 2015 Joint Annual Conference. Nate is Operations Manager for AE2S, Inc. in Great Falls, moving to Montana from North Dakota. Nate has been an active member of AWWA since 1998, and has served in several positions on the MSAWWA Board, presently as Secretary/ Treasurer. Nate is always willing to lend a hand and is a regular volunteer when tasks for the Montana Section need to be accomplished. Nate is an Eagle Scout, is a coach for his kids' hockey and baseball teams, loves the outdoors, and apparently brews good a Congratulations to Nate on receiving this prestigious award!



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#### **HEADLINE: WEF Fact Sheet Summarizes Air Quality Permit Pitfalls, Resources**

**By Myron Bachman**—Myron Bachman is a plant superintendent at the North Davis Sewer District in Syracuse, Utah. He can be reached at MyronBachman@NDSD.org

Air permitting is a challenging part of installing a combined heat and power (CHP) system. A new fact sheet, *Air Quality Permitting*, outlines the requirements and processes that utility managers will likely encounter in the air permitting process as well as available resources.

The fact sheet, which can be viewed at <a href="http://www.wrrfdata.org/AirPermittingFS/WEF-AirPermittingFactSheet2015.html">http://www.wrrfdata.org/AirPermittingFS/WEF-AirPermittingFactSheet2015.html</a>, was produced by the Bioenergy Technology Subcommittee CHP Task Force of the Water Environment Federation Residuals and Biosolids Committee.

#### Challenges of differing requirements, terms

One of the reasons that air permitting is a challenge is that there is little consistency in how to accomplish it or what will be required. In addition, the Federal Clean Air Act is one of the most complicated components of the *Code of Federal Regulations*. Each state is allowed discretion for air quality in its jurisdiction, as long as its regulations are as stringent as the federal ones.

Some states have promulgated regulations that are substantially more stringent than the federal standards. Also, some states have not only passed such stringent state programs, but have also divided themselves into subdivisions, each with different requirements. An example of this is California, which is divided into 35 air districts, each of which has its own regulations. Such requirements are different enough from each other that they are often unrecognizable as having come from the same state.

In addition, terminology can vary among agencies. To some, the initial permit is a "Permit to Construct," for others an "Authority to Construct," and for others, it's an "Approval Order." Some agencies use the term "volatile organic compounds" (VOCs) to describe the organic gases that act as precursors to ozone formation in the atmosphere, while other agencies call them "nonmethane hydrocarbons" (NMHCs), and still others, "precursor organic compounds" (POCs).

Innumerable examples of terminology confusion exist. The fact sheet uses terms that are most commonly encountered across the country.

#### **Fulfilling requirements**

Air quality requirements can be divided into three categories: Administrative, Performance Standards, and Permitting. Each is independently applicable, and an exemption from one is not necessarily an exemption from all.

At a high level, the process of acquiring an air permit is nearly the same in all jurisdictions. Generally, after a permit application is prepared and submitted, it is reviewed by the permitting agency, and in some cases, it requires review by the public. The permit is either granted or denied. In many jurisdictions, a temporary permit is granted that authorizes construction. After construction is complete and the facility is assured to function as permitted, a final permit is issued.

#### Involve regulators early in the process

An important consideration when beginning the permitting process is a permitting strategy. This strategy should consider all aspects of the permitting process and is described in *Air Quality Permitting*. One of the most important elements, however, is agency interaction. The ultimate goals of agency interaction are to make the permitting process move as smoothly as possible and to minimize the number of requirements imposed on the permit. It is important to consider what opportunities are available for agency interaction, the specific goals of each interaction, and how to approach the agency, both generally and specifically at each interaction.

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# ~2015 Conference Photos~



Allen Kelm, right and Coralynn Revis, left are inducted into the Select Society of Sanitary Sludge Shovelers and are presented with their pins by Starr Sullivan, also a member.



Bill Bahr of MT DEQ is presented with his award for 25 years of membership with WEF. Jenny Hartfelder presented the plaque.



Great prizes were purchased by the big winners at the blackjack tables during Wednesday evening's casino night.



A full house at the Wednesday morning opening session



The 2nd annual Operator Pub Trivia was held on Thursday morning and was again a big hit! The team from Billings was this year's winner—\$25 gift certificates for each team member!



A large contingency of AWWA George Warren Fuller Awardees were in attendance at the 2015 Conference, and assisted in presenting this year's recipient, Nate Weisenburger of AE2S, with the prestigious award.

#### **AWWA 2015 Regional Meeting of Section Officers**

Slim Miller, Chair of MSAWWA, and Nate Weisenburger, Secretary/Treasurer of MSAWWA, attended the Regional Meeting of Section Officers (RMSO) in Banff, Alberta on October 2-3, 2015. Region 5 is made of up Sections from Montana, Idaho, Washington, Oregon, California, Nevada, Hawaii, Alaska, British Columbia, Alberta, Saskatchewan and Manitoba. Information conveyed to RMSO participants included the "AWWA2020: A Path to One AWWA" strategic planning initiative, which is accompanied by a new graphic – make sure you stay on the lookout for it in future email and mailings from AWWA. A presentation on AWWA India was also provided to attendees as an update to the global efforts by AWWA to make the world a better place through the delivery of clean and safe water.

Portions of the meeting were devoted to three key areas, including Education, Membership, and Finance. Individual Sections had the opportunity to provide a brief presentation on activities or challenges related to the topics of discussion as a means of sharing ideas and success stories and identifying potential strategies used to overcome challenges that may be experienced by other Sections. Information shared by MSAWWA consisted of an update on the financial health of the Section, with an emphasis on the importance of the financial contribution received from AWWA on

an annual basis and recent investment decisions to increase the earning potential of cash reserves and the joint scholarship account held with the MWEA.

Attendees were treated to a facilitated networking event on Thursday evening and a great BBQ on Friday evening. To round out the trip and take in the beautiful scenery of the Banff area, the Western Canada Section arranged for a gondola tour to view the breathtaking scenery of the Lake Louise area. The weather turned cold on Friday evening and Saturday, but the rain and snow relented on Saturday afternoon to



allow for some great sightseeing of the majestic Rocky Mountains of Canada along with the starkly contrasting colors of autumn. ~Nate Weisenburger, AE2S, Inc.

#### Free Poster, Flyer, Ad, and Bill Stuffer Materials!

The AWWA Connections newsletter from 8/21/15 contained an article titled "Imagine a Day Without Water' campaign debuts this fall." I imagine many of you have seen it but for all those who don't get the AWWA newsletter or skipped reading the article, I would like to draw your attention to the free toolkit that is mentioned in the article. The Value of Water Coalition developed it and made it available to the public at no cost. They have several designs that are available in pdf formats for anything from bill stuffers to posters. You can find them here <a href="http://thevalueofwater.org/mediakit/preview">http://thevalueofwater.org/mediakit/preview</a>. Please check them out and forward this info to anyone who might have an interest in using these great materials. Check out the full page ad right here in our own newsletter (see next page).

~Rika Lashley, Joint Public Education & Information Committee Chair



Summer visitors at Missoula's Wastewater Treatment Plant

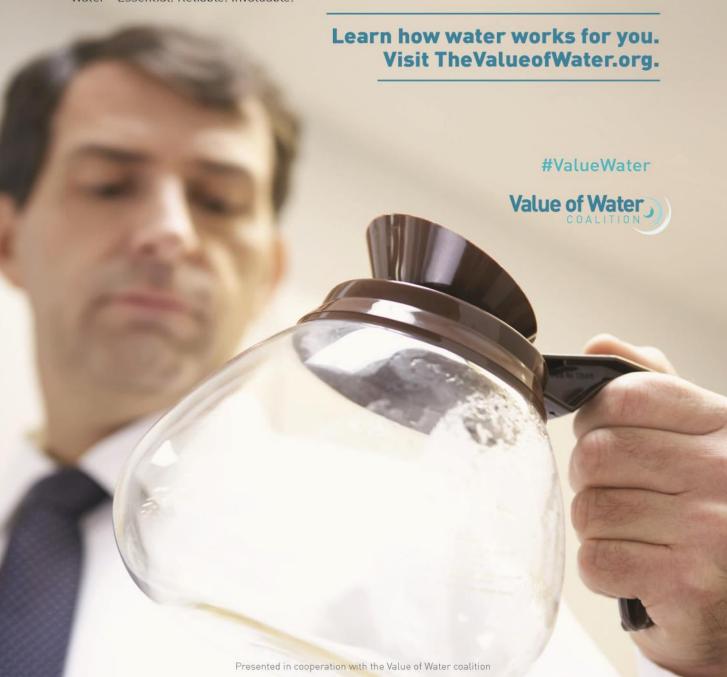
# WHAT'S THE VALUE OF WATER?

Mornings wouldn't be the same without water.

Most of us never think about how water gets to the tap or where it goes after it swirls down the drain. Luckily, we don't have to. Pumps, treatment plants, and pipes bring us clean water.

But our water systems are aging. They need investment to continue delivering life's most essential resource. We need water to make a cup of coffee and most everything we do in life. All day, every day.

Water-Essential. Reliable. Invaluable.



#### **WASTE OR RESOURCE?**

Until recently, sewage residuals were disposed of in landfills and by incineration. With today's modern treatment methods and technologies sewage residuals can now be converted into energy, compost/soil amendments and other resources. There are always the struggles with capital costs, public acceptance, regulatory hurdles and operational costs, but I believe these investments will be worth it in the long term. I know there are folks that believe these are green feel good projects have no real value. I would disagree. Anyone who ever paid a fuel bill or bought fertilizer or soil amendments knows these things have real value. Additionally, the folks in California and the southwest United States are certainly rethinking the value of the water discharged from their treatment facilities. Perhaps the time has come for Montanans to start thinking about and planning for using the resources they have in their treatment facilities. I know there are a number of facilities in Montana that are already utilizing these resources including Missoula.

Concerning Missoula, we have chosen to maximize our resource recovery program in the following ways. For a number of years, Missoula's wastewater treatment facility has generated methane or biogas that fully

fuels the facility's boilers. However, the boilers use only about 60% of available biogas, so we've recently launched a project replacing the boilers with efficient engine-driven generators that will utilize 100% of the biogas to produce electricity. Waste heat from the engines will, in turn, fully heat the facility.

In addition, 100% of Missoula's treated biosolids and green waste are turned into compost in public-private partnership with Eko Compost. In 2014, the City also made strides in keeping excess phosphorus and nitrogen (which contribute to unhealthy river algae blooms) out of the Clark Fork by planting 90,000 hybrid poplar trees irrigated with the facility's treated effluent.



Instead of reaching the river, trace amounts of phosphorus and nitrogen in the treated effluent are absorbed by trees as nutrition. The trees will be harvested and sold as saw logs. Treated effluent can also be used animal feed crops, golf courses and grass lands.

~Starr Sullivan, City of Missoula Wastewater Treatment Plant Superintendent

#### Free training coming in 2016!

The Montana Section AWWA in partnership with the Montana Environmental Training Center will again be offering free small system training workshops in 2016. Two 8 hour workshops will be held in the state, with CEUs available. The workshops are titled "Training and Technical Assistance to Improve Water Quality and Enable Small Public Water Systems to Maintain Compliance with the Safe Water Drinking Act"

The content will include updated and revised topics from the 2015 workshop such as Regulatory Review, Microbial Contaminants, Distribution System Operation and Maintenance, and Disinfection Byproducts Formation and Control, along with additional topics such as Nitrites/Nitrates, Arsenic and Radionuclides, Source Water Protection, and a 2 hour seminar for Small System decision makers and board members. The workshops will be held in Missoula on April 14th and in Billings on October 18th. Please feel free to contact Robin Barnes, MSAWWA Exec. Secretary/MWEA Exec. Director at <a href="mainto:info@montanawater.org">info@montanawater.org</a> for more information. Information will also be posted on the joint website at <a href="mainto:www.montanawater.org">www.montanawater.org</a> as it becomes available. The workshops are made possible with funding by the USEPA and AWWA's partner, the Rural Community Assistance Program.

# NEW LAGOON REGULATIONS ARE COMING

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# Thank You To All Of The Exhibitors that participated at the 2015 Joint Conference ~Your support of the Annual Joint Conference is vital to its success and is sincerely appreciated~

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- Yellowstone Waterworks

## Montana Chapter of EWB Seeking New Members

The Montana chapter of Engineers Without Boarders is looking for Montana engineers and others who are interested in volunteering their time to improve the lives of people who do not otherwise have the resources to help themselves. The chapter is just starting work on a water distribution project in west Cameroon and will send a team to the site in early November to gather information. If you are interested in finding out more about the chapter and the current project, please contact Laura Gundlach at 406-294-5088 or email her at Laura G@municipaleng.com.

#### Announcing the

# STUDENT & YOUNG PROFESSIONALS (S&YP) COMMITTEE

for the Montana Section of AWWA & Montana WEA



## WHY JOIN AWWA/WEF?

AWWA and WEF give you the opportunity to connect with a valuable network of operators, professionals, regulatory agencies, and technical staff that can help you forge your career in the water industry.

#### WHY S&YP?

By participating in the student & young professionals section of MSAWWA/MWEA, you will be presented with employment opportunities and continuing education activities. You will also have access to a network of the current and next generation of water industry leaders.

#### **GET INVOLVED!**

MSAWWA/MWEA offers a wide variety of activities that promote success for students and young professionals in the industry including S&YP social events, fresh ideas poster competitions, training opportunities, and MTAWWA/MWEA conferences.

MONTANA SECTION AMERICAN WATER WORKS ASSOCIATION



**ENVIRONMENT ASSOCIATION** 

#### FOR MORE INFORMATION

David Carlson, AE2S 406-268-0626 David.Carlson@ae2s.com





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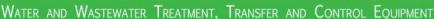
**Pumps & Controls** 

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logan@mtnwater.com

#### **Past Chair**

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glukasik@greatwesteng.com

#### Chair

Doug "Slim"Miller (406) 441-1408

millerdl@cdmsmith.com

#### Vice Chair

Collette Anderson (406) 495-6164

ctanderson@greatwesteng.com

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#### **Junior Trustee**

Wayne Lovelis (406) 727-1325

wlovelis@greatfallsmt.net

## **Secretary**

Nate Weisenburger (406) 268-0626

nate.weisenburger@ae2s.com

## ~2015-2016 Joint Directory~

The Joint Directory is being updated again and emailed to both memberships soon. If you have not received a digital copy, or would like a hard copy mailed to you, please email Robin Matthews-Barnes at <a href="mailto:info@montanawater.org">info@montanawater.org</a> and let her know. ALSO, PLEASE EMAIL ANY UPDATES TO YOUR CONTACT INFORMATION TO ROBIN. An electronic version allows changes to be made on a more regular basis rather than just annually, saves \$\$\$, and saves paper!

# 2015—2016 MWEA Board of Directors

#### **National Director**

Coralynn Revis (406) 532-2219

coralynn.revis@hdrinc.com

#### **Past President**

Michelle Marsh (406) 444-5322 mmarsh@mt.gov

#### President

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adeitchler@greatwesteng.com

#### **President-Elect**

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starrs@ci.missoula.mt.us

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#### **Senior Trustee**

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hbartle@bozeman.net

#### **Junior Trustee**

Mike Abrahamson (406) 444-6776

mabrahamson@mt.gov

## **Executive Secretary**

Dana Audet (406) 761-7004

dana.audet@veoliawaterna.com



#### Congratulations!

Steve Ruhd of Morrison-Maierle, Inc. and John Camden with Montana Rural Water Systems have both received their **Silver Water Drop Award** this year! The Silver Water Drop Award

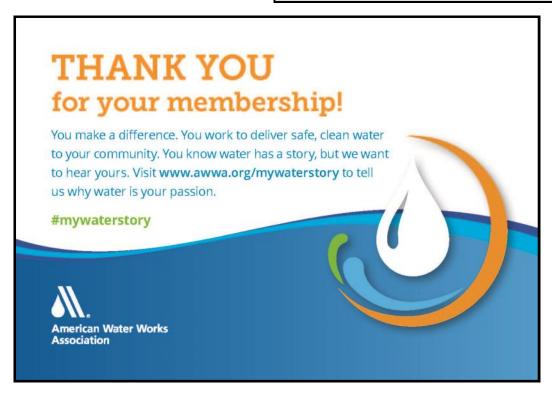
recognizes individuals who have been members of AWWA for 30 years.

Doug Whitney of Kadrmas, Lee & Jackson and Shelley Nolan who retired last year from MT DEQ received the award in 2014.



## **Donald G. Willems Scholarship**

Please remind any students you know that are pursuing degrees in the water or wastewater fields to submit an application for the 2016 Willems Scholarship. March 15, 2016 is the deadline and application information and materials are available on the website—click on the "Awards & Scholarships" tab for an application form, OR click here: <a href="http://www.montanawater.org/awards-scholarships/scholarships-available/">http://www.montanawater.org/awards-scholarships/scholarships-available/</a> Up to (2) \$1000 scholarships can be awarded each year. This is a joint MSAWWA-MWEA Scholarship. Please pass the word!





# Congratulations Big Sky Water & Sewer District!

WEF Representative Jenny Hartfelder, Evan Whipps with RW Gate Company, and MSAWWA National Director Logan McInnis (photo at left) serve as judges for the Montana Section's 2nd Annual Best Tap Water Taste Test. Big Sky Water & Sewer District won the contest again for the second year and competed at ACE15 held in Anaheim, CA in June. Big Sky took 1st place at the 11th annual national "Best of the Best" Tap Water Taste Competition, competing against a long list of other water systems in the U.S. This is a very prestigious award and Big Sky should be proud!

#### 2015—2016 Committee Chairs

Below is a list of the members of MSAWWA and MWEA that volunteered to chair each committee at the 2015 Joint Conference. Volunteers are always welcome, so if you wish to help your association and serve on a committee you may still sign up by contacting the chair of that committee or Robin Matthews-Barnes at <a href="mailto:linfo@montanawater.org">linfo@montanawater.org</a> or (406) 546-5496.

## Joint Committee Chairs

#### **Cross Connection Control**

• Barb Coffman (406) 265-3763 barbara.coffman@msun.edu

#### **Exhibitors**

• Bill DeMeyer (406) 671-7051 bill@tellerus.com

#### **Information Management**

• Nate Weisenburger (406) 268-0626 nate.weisenburger@ae2s.com

#### **Host City**

 John Alston (406) 582-3201 jalston@bozeman.net

#### Lifetime Achievement

• Paul LaVigne (406) 444-5321 plavigne@mt.gov

#### Program

• Amy Deitchler (406) 465-6160 adeitchler@greatwesteng.com

#### **Public Education & Information**

• Rika Lashley (406) 495-3448 rlashley@m-m.net

#### **Scholarship**

• Coralynn Revis (406) 532-2219 coralynn.revis@hdrinc.com

#### **SYP Committee**

• David Carlson (406) 268-0626 'david.carlson@ae2s.com

## **MWEA Committee Chairs**

#### **Beneficial Reuse**

• Terry Campbell (406) 444-7374 tcampbell@mt.gov

#### **Education**

• Jeremy Perlinski (406) 495-3447 jperlinski@m-m.net

#### **Government Affairs**

Scott Buecker (406) 570-5184
 scott.buecker@ae2s.com

#### **Honors & Awards**

• Bill Bahr (406) 444-5337 bbahr@mt.gov

## **Long Range Planning**

Not active at this time

#### Membership

• Coralynn Revis (406) 532-2219 coralynn.revis@hdrinc.com

#### **Pretreatment**

• LeAnn Books (406) 495-3584 lbooks@m-m.net

#### Stockholm Jr. Water Prize

• Kristi Kline (406) 945-2043 kjfarm@mtintouch.net

#### **Stormwater**

• Coralynn Revis (406) 532-2219 <a href="mailto:coralynn.revis@hdrinc.com">coralynn.revis@hdrinc.com</a>

## **MSAWWA Committee Chairs**

#### Awards

Need volunteers

#### Education

• Collette Anderson (406) 495-6164 ctanderson@greatwesteng.com

#### Legislative

• Nate Weisenburger (406) 268-0626 nate.weisenburger@ae2s.com

## Membership

• Logan McInnis (406) 370-8285 logan@mtnwater.com

## **Water For People**

• Carrie Gardner (406) 495-6176 cgardner@greatwesteng.com

• John Camden (406) 459-0782 jcamden50@bresnan.net

#### A SPECIAL THANK YOU.....

To all of the volunteers who helped to make the 2015 Joint Conference successful. It takes many helping hands to make it all come together, and all of the help is greatly appreciated. A special thank you to the Host City Committee, the Program Committee, and MWEA Education Committee and the registration desk helpers:

#### **Host City Committee**

Greg Lukasik (Chair)

Jackie Kuhl Doug Whitney

Whitney Cross

Tyrel Clark

Justin George

Christopher Clark **Emily Wortman** 

Bill DeMeyer

John Harcus

Randy Straus

#### **Program Committee**

Terry Campbell (Chair)

Michele Marsh Doug Whitney

Jeremy Perlinski

Tammy Filliater

Bill DeMever

Matt Mudd

Jeff Ashlev

Greg Lukasik

Amy Deitchler

Collette Anderson

#### **Registration Desk**

Ilene Neudick

**Emily Wortman** 

Lisa Mitchell

Whitney Cross

Randy Straus

Bill DeMever

Lou DeSauver

John Harcus

Becky Bey

Lisa Etzel

# **MWEA Education Committee**

(Preconference Program) Amy Deitchler (Chair)

Coralynn Revis

Doug Whitney

Bill Bahr

Jeremy Perlinski

Scott Murphy

Thank you also to Barb Coffman for your help during the week of the conference—your time and experience are greatly appreciated!



### Congratulations to Kayla Bayer! Recipient of the 2015 Donald G. Willems Scholarship

Kayla Bayer is the recipient of the \$1000 MSAWWA/ MWEA Joint Scholarship given in honor of Donald G. Willems. Kayla is a student at Carroll College and is pursuing a degree in Civil Engineering. Congratulations to Kayla and best wishes in her future endeavors!



#### Stockholm **Junior Water Prize Awardee**

For the second consecutive year, Brenna DeMarios from Missoula Sentinel High School was the recipient of the award for her project titled: "Use

of a Tertiary Algae System to Remove Pharmaceuticals from Wastewater". presented her project at the National SJWP competition in Herdon, VA in June. Congrats to Brenna!

## ~2015 Conference Photos~



2014-2015 MWEA Board of Directors: shown from left are Starr Sullivan, Amy Deitchler, Jeremy Perlinski, Herb Bartle, Dana Audet, Coralynn Revis, and Dan Harmon. Mike Abrahamson (no shown) was voted as the new Junior Trustee for 2015-2016.



Jeremy Perlinski presents the 2015 Beneficial Reuse Award to Starr Sullivan and the Missoula Wastewater Treatment Plant.



Longtime MSAWWA member Gerry Lukasik and son Greg, 2014-2015 MSAWWA Chair enjoy some time at the Ice Breaker.



WEF Representative Jenny Hartfelder presents Ron Edwards of Big Sky Water & Sewer District with the WEF William D. Hatfield Award. The Hatfield Award is presented to operators of wastewater treatment plants for outstanding performance and professionalism. Congratulations to Ron for the much deserved award!



Shown at left are the 2014-2015 MSAWWA Board of Directors. From the left are Logan McInnis, Nate Weisenburger, Jeff Ashley, Collette Anderson, Greg Lukasik, and Slim Miller. Wayne Lovelis (not shown) was voted in as the new Junior Trustee for 2015-2016.



#### **National Ingenuity Contest Champs Stun Judges with Amazing Ideas**

#### By Steve Spicer, Managing Editor of Water Environment & Technology Magazine

Four inventors received awards from the 2015 Ingenuity Contest at WEFTEC® 2015 in Chicago. This marks the fourth year that the competition has recognized fixes that tackle a persistent problem with nothing more than the materials at hand and a hearty dose of ingenuity.

#### **Captains of the Inspection Squadron**

When the City of Casper, Wyo., worried about the condition of the pipes within its water resource recovery facility, the wastewater crew found a floating solution. The crew — Lane Christensen, David Ferguson, Matt Wilhelms, Jared Winzenried, Brody Allen, and James Soller — pieced together some foam-board, a piece of wood, rope, and fasteners to create a raft for its collection system camera. The crew nicknamed the contraption The U.S.S. WWTP.

The crew needed a way to guide the camera through the pipe safely and ensure that it could be recovered at the downstream manhole. To accomplish this, the crew first dropped an inflatable ball attached to several hundred feet of twine into the pipe and tied the twine to the upstream manhole. When the ball made its way to the downstream manhole, the crew retrieved it with a hook. This left a long stretch of twine running the length of the pipe between the manholes.

Next, they tied the U.S.S WWTP to the twine at the upstream manhole, gently lowered it into the pipe, and then pulled at a steady rate from the downstream manhole. Upon arrival at the downstream manhole, the U.S.S. WWTP was removed using the long-handled hook.

The video collected from the camera was invaluable. It showed areas of severe corrosion and pipe collapse that must be repaired in the near future.

#### Valedictorians of the School of Hard Knocks

During a March 2011 thunderstorm, operators at the Hill Canyon Wastewater Treatment Plant (Thousand Oaks, Calif.) noticed the pipe from secondary clarifiers to emergency retention basins was not flowing fully. After the storm, the crew — Mark Capron, Mike Mantor, and Robert Richardson — determined that nothing but air was blocking the pipe, but it remained less than half full.

They realized that the high point of the base of the 875-mm (36-in.) diameter pipeline was too high. This configuration led to empty space within the headspace of the pipe.

Restoring the pipe's full 189-m<sup>3</sup>/d (50-mgd) flow required getting the air out at the high point. Instead of a major construction project to lower the high point of pipe to prevent the air blockage, the crew installed a \$500 vacuum pump to the exiting air release valve.

When the pipe is full of air, one vacuum pump requires a full day to remove all the air. After the air is removed, the pumps run less than 100 hours per year in sub-second bursts. The crew also decided to leave the air release valve itself in place to prevent the vacuum pump from pulling in water.

With the air removed, the line regained its full capacity.

#### **Master of the Machines**

Vikas Bhaskaran, senior skilled trade technician at the Village Creek Water Reclamation Facility (Fort Worth, Texas), builds tools to aid his fellow mechanics. He created a plasma and oxy-acetylene cutting machine using parts salvaged from old traveling bridge filters. The machine cuts metal precisely to enable operators to fabricate metal pieces for custom repairs. Bhaskaran also created a ratchet to help remove and attach the stator from a screw pumps more safely. The ratchet enables a single person to do a task that, before, took five The U.S.S. WWTP sits ready to sail through the facility's people. (continued next page)



pipes. Credit: City of Casper, Wyo.

#### **Dean of Public Education**

The Jacksonville (Ark.) Wastewater Utility wanted to educate customers about how line inspections work. To achieve this, operators, led by Walton J. Summers II, built a display that includes a replica manhole, lateral, and cleanout cap. Part of the display gives an underground view of the lateral, which is cracked and wrapped with tree roots. Operators can show residents how smoke added to the manhole seeps up out of the grass — green outdoor carpet — and signals the need to televise the line to produce a defect drawing.

#### Share your ingenious fixes

The WEFTEC Ingenuity Contest will return in 2016 to honor more smart fixes and quick repairs. So, throw together a roughly 1-page description of the problem you faced and the fix you found. If your invention or idea can be photographed, snap a picture.

The submission window is open now until May 26, 2016. See the full entry details at <a href="www.weftec.org/ingenuity">www.weftec.org/ingenuity</a>. Author Steve Spicer can be reached at <a href="mailto:SSpicer@wef.org">SSpicer@wef.org</a>

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Jacksonville's (Ark.) smoke testing display helps customers understand the inspection process.

Credit: Jacksonville Wastewater Utility



Building a precision cutting tool from salvaged parts enables the Village Creek Water Reclamation Facility (Fort Worth, Texas) to make the custom pieces it needs for repairs. Credit: Village Creek Water Reclamation Facility

# Don't forget to check out the new MSAWWA-MWEA joint website! www.montanawater.org

Let us know what you think—we are open to comments and suggestions for additional content. Contact Robin Barnes at <a href="mailto:info@montanawater.org">info@montanawater.org</a>

## And in case you missed the news on page 11—this is the last issue of

**Newswaves!** The MSAWWA and MWEA boards have decided it is in the best interest of both organizations to have a truly "joint" newsletter. The boards are looking for suggestions for a name for the new publication—so please email Robin Barnes at <a href="info@montanawater.org">info@montanawater.org</a> with any suggestions you have. The next newsletter will be published in March. Articles with pertinent information are also always welcome!

#### **New Basin Creek WTP**

The City and County of Butte-Silver Bow (BSB) serves the public water supply system from three sources: the Big Hole River, Moulton Reservoir, and Basin Creek Reservoir. The Basin Creek source has historically operated as a surface water source with disinfection and without filtration. An administrative order from the Montana Department of Environmental Quality (DEQ) has resulted in the need to add filtration to the Basin Creek source. Initial efforts focused on site selection, pilot testing, hydraulic analysis, distribution system modeling, and process selection. Based on these initial efforts, a pressurized membrane filtration process was selected and ultimately the membrane equipment was procured by BSB.

Metawater USA (Metawater) has been selected to provide goods and services associated with their ceramic membrane filtration system. The filtration system will operate on a 4 hour backwash interval with a weekly chemically enhanced backwash and a 6 month CIP interval. A backwash recovery membrane skid will provide for 99.9% overall water recovery.

One of the primary design objectives was to minimize energy consumption by maximizing the use of gravity. The site selected for the new water treatment plant (WTP) put the facility at an elevation where no raw water pumping is required for filtration. Downstream from the filtration process, finished water pumping is not required under most scenarios. The hydraulics (dependent on degree of filter fouling, water surface elevation in the reservoir, and flow rate) allow for complete gravity flow through the WTP and into the distribution system.

Flow control is accomplished by the interaction between distribution system water demand and plant hydraulics. If water demand decreases, it causes pressure in the WTP to rise and the filtration rate decreases. When system demand increases a greater differential pressure between the reservoir and the distribution system causes the flow rate through the plant to increase and match the system demand. In this way, the WTP functions as an on demand facility.

A new pump station in the distribution system is included as part of this project. Since the Basin Creek zone is the lowest pressure zone in the system there will be times when operators choose to pump water produced by the new WTP to upper zones. The pump station will be equipped with a flow meter that constantly monitors the flow into the low zone that the WTP is to serve. The pumps will also have a flow meter and will run on their VFD's to maintain an operator entered daily flow. For instance, if the operators wish to make 7 MGD and the demand in the low zone is 4 MGD then the pumps will run at 3 MGD. In this way they can effectively set the demand for a stable operating condition at the new WTP while moving water to the upper zones.

~Nathan Kutil, P.E. HDR Engineering



Rendering of new Basin Creek WTP

#### Meet your new 2015-2016 Trustees:



#### MSAWWA Junior Trustee—Wayne Lovelis (City of Great Falls)

Wayne has been in water and wastewater treatment for about 31 years from Texas to Colorado and now Montana. He has been a member of AWWA for about 20 years and the Rural Water Association for about 17 years in various sections. Wayne has managed and operated many different treatment technologies. Wayne is currently the water treatment manager for Great Falls.



#### MWEA Junior Trustee—Mike Abrahamson, P.E., MS (MT DEQ)

Mike is an engineer with the Montana DEQ Water Pollution Control State Revolving Fund program. He has a BA degree in Microbiology and an MS degree in Environmental Engineering from Montana State University. Mike has 20 years of work experience in the wastewater field including research, planning, design, and funding.

Thanks to all who volunteer their time and talents to help lead MSAWWA and MWEA into the future!





#### SAVE THE DATE!!!

Come and take advantage of the educational and networking opportunities at the 2016 Joint MSAWWA-MWEA Conference
April 26th—Preconference hosted by MSAWWA Theme: to be determined
April 27th & 28th—Conference "Working Together To Protect Montana's Water Resources"
Location: Holiday Inn & Best Western GranTree in Bozeman

Registration information will be emailed to members and will also be available on the website soon: www.montanawater.org

Please visit our web site—www.montanawater.org