



# News Waves



A joint publication of MSAWWA & MWEA  
Fall/Winter 2019

## **Straight From The Chair**

**By: John Alston, MSAWWA Chair**



Greetings to all section members. It's hard to believe the year is almost over. Several things of note have happened this year in the water world. As you know AWWA has a dedicated staff of 6 in our DC office. They were instrumental in getting money from the farm bill for source water protection. The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) announced \$300 million in available funding for the Regional Conservation Partnership Program (RCPP). This program encourages partnerships to address natural resource concerns related to agriculture at scale. With the passage of the 2018 Farm Bill, at least 10% of NRCS conservation spending will go toward protecting drinking water sources. By participating in an RCPP, utilities can help assure that these funds have the most benefit possible to protecting source waters. Utilities are both welcomed and encouraged to form partnerships with other interested stakeholders (such as conservation districts, agricultural groups, watershed groups, etc.) and apply for RCPP funding. This summer section members Kurt Vause, Craig Woolard, Nate Weisenburger, Vice President Greg Lukasik and Section Chair John Alston met with Tom Watson Montana's State Conservationist and his staff in Bozeman. Tom was able to educate us on the process of possibly having projects funded. Section Members Nate Weisenburger, Dave Carlson and Wayne Lovelis have attended State Technical Meetings in Billings and Great Falls learning the process of how to get projects funded. As most of you know the EPA is in the process of revising the Lead and Copper rule, AWWA is very engaged in this process. Stay tuned for updates.

Please save these dates for our annual conference April 21-23 in Great Falls at the Heritage Inn. Kevin Morley from AWWA will be coming to discuss tools that AWWA has developed for cybersecurity guidance.

Have a great holiday season and see you next year!!!  
~John

## **MWEA President's Message**

**By: Mike Abrahamson, MWEA President**

Fall/Winter greetings to all MWEA members (and curious MSAWWA members)! I hope everyone had a wonderful 2019! Hopefully you were able to enjoy your favorite summertime activities during the few days here and there where it actually felt like summer; as well as enjoy the "abbreviated" fall season, before a severe cold front robbed us of the colorful foliage over much of the State and required a lot of gardens to be harvested overnight! Now it looks and feels like winter (at least here in Helena), but it is December and is expected!



I recently attended a conference in Cleveland where it was brought up that the Cuyahoga River, which flows through Cleveland and into Lake Erie, last caught fire there 50 years ago. In fact, since the late 1800's that river had caught fire 13 times! The most recent fire in 1969, was one of the events that led to passage of the Clean Water Act in 1972. For most, if not all of us, it is because of this Act that we find ourselves working in the clean water industry and as members of the MWEA today. As I contemplated my career in the wastewater industry sector, I realized just how much the field has changed over the last two decades with regards to treatment requirements and the evolution of treatment technologies to meet those limits (or in some cases vice versa), and let's not forget the impacts to cost. It certainly is an ever-evolving industry that has, and continues to keep things interesting to say the least. But I think one of the most rewarding aspects of all of this has to be the many people that we have all met along the way which come from all facets of the wastewater industry including: consulting engineers, facility operators, manufacturer representatives, community leaders and officials, and government regulators. Each with their own experiences and expertise coming together to find solutions to our wastewater problems and in the process, sustain, protect and improve our water resources. While rivers catching fire are a thing of the past, we still face several challenges with regards to water quality including nutrients, ammonia removal in lagoon systems, toxic algae blooms in our lakes, microplastics in our oceans, PFAS, dead zones, the hassles of flushable wipes, an aging operator population, and operator certification challenges to name just a few of the topics making recent headlines. (cont. on page 8)



***“Working Together To Protect Montana’s Water Resources”  
Highlights from the 2019 Conference***

The 2019 annual MSAWWA-MWEA Joint Conference was held in Billings April 23-25 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 April 23rd and was titled “First Look At Resource Recovery in Montana”. Total Conference attendance was approximately 150. In addition, there were 55 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 during the General Session on Wednesday and lunch on Thursday. The awards presented for MSAWWA and for MWEA at the 2019 Conference were as follows:

- WEF Arthur Sidney Bedell Award—Dana Audet, Veolia Water**  
**MWEA Small Systems Award—St. Regis Sewer District**  
**MWEA Stockholm Junior Water Prize—Lilly Hanson, Baker Highschool**  
**MSAWWA-MWEA Lifetime Achievement Award—Herb Bartle**  
**MSAWWA-MWEA Donald Willems Scholarship—Luke Thompson, Abigail Northrup & Kaely Langton/  
Montana State University**  
**AWWA George Warren Fuller Award—Craig Nowak, Morrison Maierle**

Dignitaries representing both AWWA and WEF were in attendance at the conference. Representing AWWA this year was Brenda Lennox, 2018-2019 AWWA Immediate Past President. Representing WEF at the conference was Board of Trustees member Joan Hawley.

**One AWWA Operator  
Scholarships Available**

MSAWWA has teamed with AWWA’s **The Water Equation Campaign** to offer (1) \$1000 or (2) \$500 Operator Scholarships for water operator training and education, based on need. The scholarship award can be used for certification/licensure, two-year water related associate degree, technical school program, professional training program, books and manuals and operator related conferences. Each scholarship recipient will also receive a one-year AWWA Operator membership.

**Please spread the word that these scholarships are available!**

Click here for more information:

[www.montanawater.org/awards-scholarships/scholarships-available/](http://www.montanawater.org/awards-scholarships/scholarships-available/)

**Montana Water Environment Association  
Operator Scholarships Available**

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, Rodney Lance at [rodney.lance@veolia.com](mailto:rodney.lance@veolia.com).

## 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 the Montana Water Environment Association and is published twice yearly. It is available for viewing or printing on our website at: [www.montanawater.org](http://www.montanawater.org).

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

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Seeley Lake, MT 59868  
Phone: 406-546-5496

E-mail: [Info@montanawater.org](mailto:Info@montanawater.org)

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

MSAWWA and MWEA produce **NewsWaves** twice yearly for the water and wastewater industries including professionals from Montana cities and towns, engineering firms, and equipment suppliers. We certainly would like to hear from the education community as well. 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 or WEF. The next newsletter will be published this coming winter/spring. Articles must be received by March 15, 2018 to be considered. For more information, please contact Robin Matthews-Barnes at 406-546-5496 or by email at: [Info@montanawater.org](mailto:Info@montanawater.org)



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## Upcoming events:

**2020 Joint Conference**/April 21-23 in Great Falls. Click here for more information:  
[2020 Joint Conference](#)

### AWWA:

Membrane Technology Conference/March 16-20, 2020  
AWWA/WEF Young Professionals Summit/February 25-28, 2020  
Utility Management Conference/February 25-28, 2020  
Sustainable Water Management Conference/March 29– April 1, 2020  
ACE20/June 14-17, 2020

[Click here to go to the AWWA upcoming event calendar for more workshops, webinars, and conferences](#)

### WEF:

Utility Management Conference/February 25-28, 2020  
Design-Build for Water/Wastewater Conference/April 20-22, 2020  
WEFTEC/October 3-7, 2020

[Click here to go to the WEF upcoming even calendar for more workshops, webinars, and conferences](#)

### 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 [info@montanawater.org](mailto:info@montanawater.org). The next issue will be published in March, 2019, so keep it in mind!



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**SAVE THE DATE!!!**

**Come and take advantage of the educational and networking opportunities at the 2020 Joint MSAWWA-MWEA Conference**

**April 21st—Preconference hosted by MSAWWA:**

**April 22nd/23rd—Conference "Working Together To Protect Montana's Water Resources"**

**Location: Heritage Inn/Great Falls, MT**

Registration information will be emailed to members and is also available on the website:  
[2020 Joint Conference](#)

## ~Joint Scholarship Fund Raffle~

Thank you to **Morrison-Maierle, Great West Engineering, and Yellowstone Waterworks** for their generous donations for this year's raffle to help fund the Donald G. Willems Joint Scholarship.

1st prize was a \$500 gift certificate to the 320 Ranch. 2nd prize was a \$200 Amazon gift card, and 3rd prize was a \$100 Scheel's gift certificate.

The raffle raised over \$1500 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 Greg Lukasik (Chair) and all who serve on the scholarship committee.



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.

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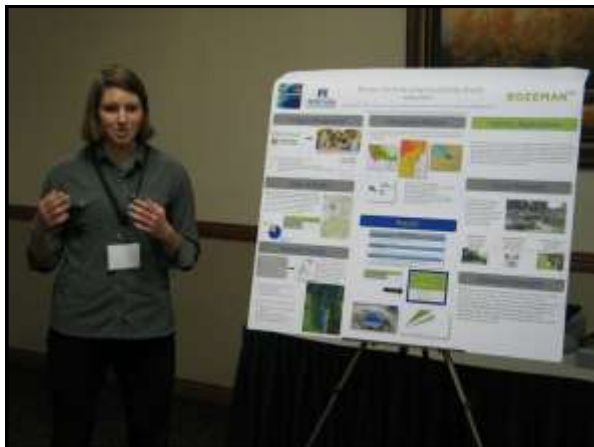


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### Fresh Ideas Poster Competition Winner

**Heather Nold**, a student at MSU was the winner of the 4th Annual SYP “Fresh Ideas” poster competition at the 2019 Conference. The Joint SYP Committee plans to hold the 5th Annual poster competition at the upcoming 2020 Joint Conference in April. **The submission deadline for entry for the 2020 competition is January 31, 2020.** [Visit the joint website for more information.](#)



2019 Fresh Ideas Poster Competitors and Judges

(continued from page 1)

Many of our connections in this industry have been made, or strengthened, through MWEA and MSAWWA membership and attendance at the annual MWEA/MAWWA joint conference as well as service on the various sub-committees or on the board. A few of the benefits of attending the Joint Conference include a better understanding of issues we face; the innovative technologies and approaches we learn about to address those issues; and the opportunity to reconnect with old friends and colleagues. I would encourage everyone to get involved in some role, if not already doing so, with one of the Associations; as a board member or as a committee member. And just in case you think "I simply don't have time", or "it will be overwhelming", etc. let me assure you that the existing board members and committee chairs are a friendly bunch and great mentors that are both knowledgeable and helpful thereby making it an enjoyable experience. In addition, we have a top-notch conference organizer and Executive Director in Robin Matthews-Barnes to help and guide you along the way. It really is a great opportunity to get to know your colleagues better and to understand what goes on behind the scenes and really makes you appreciate the hard work that goes into the organizations and conferences, making both so successful. In addition, it's a great resume enhancer! Just contact any board member or committee chairs to get involved! While all the committees are actively pursuing their goals and objectives, a few of the accomplishments from the various MWEA committees are as follows:

Beneficial Reuse Committee is expanding its scope to include resource recovery (i.e., land application, solar energy, composting, etc.), and plans to inventory activities at Montana facilities and be able to share successes (as well as failures) with other facilities around the State.

Grants for Teachers Committee is in its 5<sup>th</sup> year and still going strong! If anyone knows of a teacher that might benefit from a few extra dollars to help purchase equipment for lesson plans associated with water quality, please contact this committee for an application form.

Stormwater Committee recently held a webinar that was successful in terms of interest and attendance.

They plan to hold another webinar this spring and have reached out to several presenters and vendors inviting them to get involved with the Joint Conference next spring!

Both the MWEA and MSAWWA Boards greatly appreciate and thank the chairs and members of all the committees who work to keep their respective committees moving forward and improving our conference!

The MWEA welcomes Barb Coffman to the board as our newest Junior Trustee! Barb really needs no introduction as she has been attending the Joint Conference for years, serving as a board and committee member, George Warren Fuller Award winner, and has worked with many of us in her former role as the METC State Director. We also welcome all new members to the MWEA and thank Past-President Herb Bartle for his years of service on the board and as a member of MWEA.

In closing, I would like to say as we enjoy recreating on, or simply enjoying the beauty of, our rivers and lakes we can feel proud for what we as water professionals have accomplished. As an industry, we have come a long way in cleaning up our rivers and lakes over the last 50 years! We should be proud of the work we have done and energized for work we still need to do today and into the future! ~Mike

### ***Water For People***

Thank You to **Great West Engineering and R.L. Winston Rod Co.** for again donating the 1st Place prize fly rod and reel for the Water For People raffle that took place at the conference. Retail value of the prize was \$1,445.00. 2nd Place prize was a \$300 gift certificate to Quinn's Hot Springs and 3rd Place prize was a Davy Crockett Green Mountain Grill/Smoker donated by **Greg's Grills ([www.gregsgrills.com](http://www.gregsgrills.com))**. Over \$1900 was raised for Water For People at the conference this year from raffle ticket sales. Thank you to Carrie Gardner and John Camden (Co-Chairs) and the other members of the Water For People committee for all of your efforts, and thank you to those who supported the cause by purchasing raffle tickets.

### ***Congratulations to Luke Thompson, Abigail Northrup and Kaely Langton***

***Recipients of the 2019***

***Donald G. Willems Scholarship***

All are students at Montana State University! Luke was chosen as the recipient of a \$1000 award and Abigail and Kaely were both awarded \$500 MSAWWA/MWEA Joint Scholarships given in honor of Donald G. Willems.

Congratulations to all three recipients and best wishes in your future endeavors!





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 Front row: Rodney Lance/Veolia, Amy Deitchler/Great West Engineering, Herb Bartle/retired



2019-2020 MSAWWA Board of Directors  
 Back row: Greg Lukasik/Great West Engineering, John Alston/City of Bozeman, Wayne Lovelis/City of Great Falls, Jeff Jensen/City of Havre  
 Front row: Carrie Gardner/Great West Engineering, David Carlson/AE2S

## Brave Blue World Documentary Film Premieres In Los Angeles

ALEXANDRIA, Va. – A new feature-length documentary film titled Brave Blue World premiered in Los Angeles on December 16 and examines how new technologies and innovations can create a sustainable water future.

The Water Environment Federation (WEF) is a production partner for Brave Blue World and will use the film to raise public awareness about the solutions to water challenges.

“It is important to convey a sense of hope and spirit of optimism for water and that is why WEF is thrilled to be a production partner for Brave Blue World,” said Walt Marlowe, WEF Executive Director. “By showing a path to a sustainable water future Brave Blue World can help us to influence leaders, increase resources, change policies, and improve stewardship of water.”

The pioneering water film features compelling stories, beautiful scenery, and examples from across five continents to show novel ways of tackling water problems. It explores developments in areas such as water reuse, nutrient recovery, energy generation, decentralized treatment, and the digitization of water. The film includes interviews with a variety of water experts, as well as high-profile advocates Matt Damon and Jaden Smith.

Brave Blue World also includes a segment with Tom Kunetz, Immediate Past President of WEF, at the world’s largest nutrient recovery facility, the Stickney Water Reclamation Plant operated by the Metropolitan Water District of Greater Chicago.

WEF and its Member Associations plan to hold numerous screenings of the film across the country in 2020.

For more information, visit [www.wef.org/braveblueworld](http://www.wef.org/braveblueworld).

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## **Message from MSAWWA's National Director ~Greg Lukasik~**



Hi All! Hopefully you all enjoyed the early winter weather that blessed the state of Montana and, if you are a hunter, your season was a great experience! Below is an update on certain issues AWWA is working on at the Association level:

In Washington DC, AWWA staff have been working with legislators and their staffs on the issues related to PFAS (per and polyflouroakyl substances). PFAS chemicals have been used since the 1940's and their "staying power" in the environment has raised some concerns regarding public health issues. AWWA has released a guide to assist with educating the water systems and the public on the issues related to PFAS, which is available on the AWWA website. The report includes the sources a history, where you can expect to find these compounds, and treatment options if your system begins to encounter them.

The Association is continuing to provide support regarding source water protection funding. Currently, the funding is going to go through the State Conservation Office in each state. If you have source water protection needs, the first step is to talk with your Local Conservationist, then the Area Conservationist. Check with the Local and Area Conservationist Office for their meetings and agendas to get the process started.

LCR (Lead and Copper Rule) proposed changes were published in the Federal Register on October 13. The public comment period is currently underway and expires on October 13. A recent webinar was held on November 21 discussing the proposed changes. This webinar is available for archived viewing until around December 21.

There are always webinars and training sessions coming up, including the Potable Reuse Symposium in Atlanta on February 10-11, and the Biological Treatment Symposium, also in Atlanta on February 12-13, the Utility Management Conference (managed by WEF this year) in Anaheim on February 25-28, and the Membrane Technology Conference in Minneapolis March 29-April 1.

Last, please consider attending the Annual ACE Conference this year, being held in Orlando, Florida in June. I have only had great experiences at ACE as it contains an outstanding educational program, great networking events, the exhibitor hall is huge, and the competitions are very entertaining to watch. The benefits of attending are well worth the investment. Also, at the spring board meeting before the ACE Conference, John Alston will take over as your Section Director. It has been a very rewarding last three years serving you and the AWWA Association and we all know John will do a great job. ~Greg



**Montana Section**  
American Water Works Association

### ***Please Support Your Association's Committees***

**Please remember that the committees cannot survive without member participation. You can sign up to be on a committee at any time during the year. Please consider participation in at least one committee. If you have questions about the committees, please contact the chair of that committee to find out more about how you can help. If you are currently serving on a committee and wish to continue serving, please be sure to sign up at each conference. The slate is wiped clean after each conference, and unless we have the new sign-up form, we do not know if you wish to continue serving. Thank you to everyone who volunteers!**



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# What Makes a Utility Resilient?

*By incorporating resilience into a risk management framework, a utility can improve its response and recovery strategies, thereby mitigating the potential for loss of service.*

## BY KEVIN M. MORLEY

Kevin M. Morley is AWWA's federal relations manager at the association's Government Affairs office ([www.awwa.org](http://www.awwa.org)) in Washington, D.C.

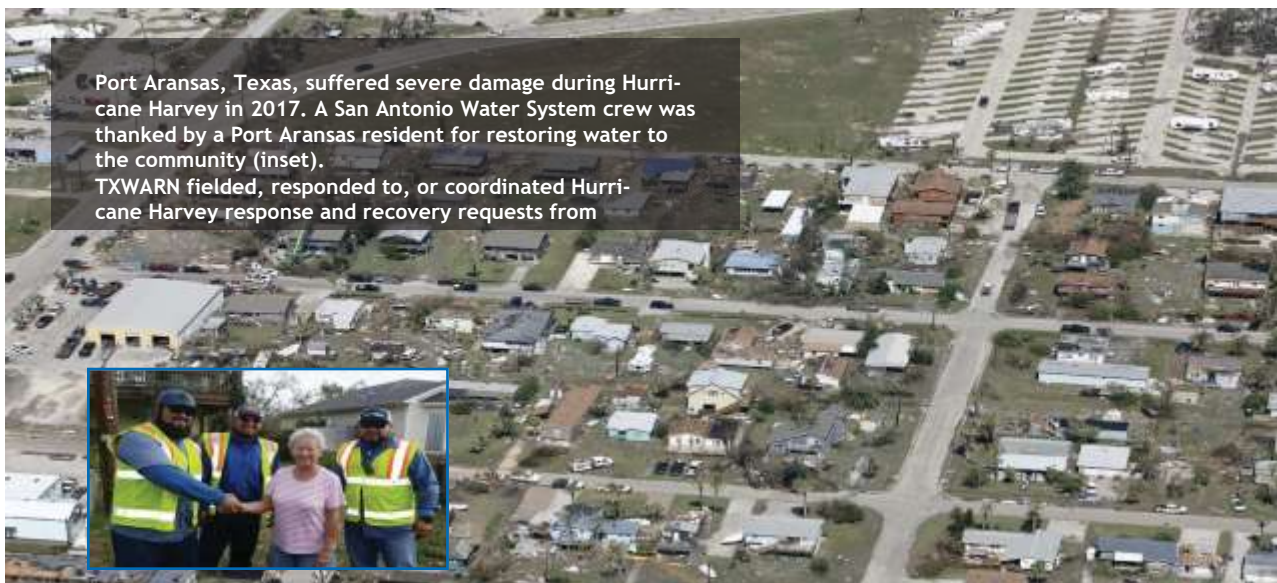
Resilience is defined by an array of indicators that characterize a desired end state or goal. According to Section 2013 of America's Water Infrastructure Act (AWIA) of 2018, resilience is the "ability of a community water system or an asset to adapt to or withstand the effects of a malevolent act or natural hazard without interruption to the asset's or system's function, or if the function is interrupted, to rapidly return to a normal operating condition." AWIA requires community water systems serving populations of 3,300 or more to perform two tasks: (1) conduct a risk and resilience assessment and (2) pre-prepare or revise an emergency response plan on a prescribed schedule every five years, starting in 2020. For more information, see Priority Action on Risk and Resilience, *Journal AWWA*, February 2019 (<https://doi.org/10.1002/awwa.1229>).

Drinking water and wastewater systems have been designed to be resilient given the critical functions they provide to the communities they serve. However, various incidents have revealed the need for a more strategic perspective to resilience that goes beyond some of the tactical actions typically defined in an emergency response plan. This need led to the development of the Utility Resilience Index (URI) as a means to provide an all-hazards, system-level assessment of resilience.

## PUTTING THE URI INTO PRACTICE

The URI is based on 12 indicators of resilience that a utility can readily and quickly assess to determine where potential gaps or opportunities exist to improve its capacity to respond and recover from an incident. These resilience indicators were selected based on findings from historical records, after-action reports, best practices, and lessons learned from multiple incidents. When considered as a whole, the indicators provide a snapshot of a utility's resilience capacity. The URI includes two classes of indicators that either affect utility functions or the community served:

- *Operational (O)* indicators reflect the utility's tactical capacity to react quickly and/or cope with various incidents that have the potential to disrupt service.
- *Financial (F)* indicators reflect the utility's fiscal capacity to react quickly and/or cope with various incidents that have the potential to disrupt revenue and costs.





Let's apply the URI to a medium-size mid-Atlantic utility that is considering AWIA and what actions may be beneficial after some close calls in recent years. The utility's manager inputs the utility profile to the URI and finds the utility scored a 44 out of 100. What does that mean? It means there is a lot of opportunity for improvement, including accepting certain limitations that should inform strategies for alternatives, as it may not be feasible to "fix" all the limiting indicators. Consider the following URI inputs, as reflected in the accompanying table:

O1: *Emergency Response Plan (ERP)* shows that while the utility has a plan, it hasn't been exercised with tabletop or functional exercises. In addition, the utility hasn't prepared any resource typing for its system that could help the utility's staff determine what they may need to request from others and what they may be able to provide others during an incident. This is all about pre-incident planning and preparedness, which reduces the stress and chaos associated with an actual incident. Training, exercises, and resource typing are examples of strategies, plans, and procedures that support the intent of AWIA's ERP provisions. For more information, download AWWA's new *Water Sector Resource Typing Guidance* manual at <https://bit.ly/2G7hczw>.

O2: National Incident Management System (NIMS) Compliance is voluntary, but it's an eligibility requirement for certain federal homeland security grant programs. The utility has participated in basic awareness training available from the Federal Emergency Management Agency and the US Environmental Protection Agency (USEPA). However, staff who are most likely to lead (i.e., the incident commander) would benefit from higher-level training to facilitate engagement with other stakeholders during a significant incident. Understanding the process for incident management tracking and documentation pre-incident is much better than learning it while trying to manage an emergency.

O3: Mutual Aid and Assistance has been critical to water-sector resilience for years. The value of these agreements has been demonstrated time after time, spanning myriad incidents from hurricanes to earthquakes to blizzards. This utility is part of its state's Water/Wastewater Agency Response Network (WARN), which provides state-level support and means by which interstate mutual aid can be facilitated.

O4: Emergency Power for Critical Operations is often the rate-limiting factor in recovery following an incident that affects power supply. This utility reports the ability to sustain power for critical operations for up to 24 hours, which is likely limited by fuel capacity. Regulation can also hamper investment in backup power generators, as their use during nonemergency periods often triggers stringent Clean Air Act limits. The cost of generators has made them a key shared resource among WARN utilities, especially in regions depending on multiple booster pump or lift stations.

O5: Ability to Meet Minimum Daily Demand or Treatment is at the core of a utility's function. In the case of a drinking water system, how long can typical daily demand be sustained? The answer depends on a combination of finished water storage and, where applicable, the ability to service customers with gravity. Whatever the threshold, this represents a critical planning decision point at which alternative water supply options may become necessary. This is one of the new provisions in AWIA that a utility is expected to determine. Resources such as the USEPA's report **Planning for an Emergency Drinking Water Supply** (<https://bit.ly/32zADL0>) can be used to assess options and consider how distribution would be achieved in coordination with state/local partners. In less than 24 hours this utility would be in crisis, which could be caused by source water contamination, cyanotoxins, or the plant's physical impairment from a natural or man-made incident. This low threshold suggests that some critical planning is needed to ensure options to mitigate the impacts on the community are developed and ready to be implemented if necessary. AWIA requires systems to develop alternative source water options.

O6: Critical Parts and Equipment is an important factor in recovery, especially in this era of just-in-time delivery. A robust asset management program may aid a utility considering this indicator. This utility has a moderate maintenance yard with a limited stock of critical spares, meaning it could take several weeks to locate and deliver a replacement. Mutual aid has facilitated the location and delivery of unique parts. It's important to consider these limitations within a risk and resilience assessment, and staff knowledge should support preparation of a "what if" strategy if a spare part isn't economically feasible. Resource typing can also help a utility assess the limitations of its capacity to assist others and identify resources it may need to request.

O7: Critical Staff Resilience is the percentage of response-capable staff available for critical operations and maintenance positions who have cross-trained backups. Given the size of this utility, there is a fair amount of cross-training—likely out of necessity. Utilities that have prepared for staffing outages for pandemic planning or work stoppage may have a higher level of capability in this category.

F1: Business Continuity Plan (BCP) provides an indication of the integration of risk management into the utility's culture. A BCP is often where/how a utility has addressed some level of cybersecurity risk management as part of a disaster recovery plan. In addition, a BCP is typically where continuity of enterprise functions like payroll and accounting are documented. This utility hasn't developed a BCP, suggesting there is likely a need to address critical AWIA provisions related to securing cyber assets and financial infrastructure.

F2: Utility Bond Rating indicates a utility's financial stability and capacity to repay debt. This utility has received a good rating from an independent bond agency, and the utility's fiscal health is sound.

F3: GASB Assessment entails determining how the utility has evaluated its infrastructure risk. Specifically, it determines how much of the system has undergone a condition assessment to evaluate the remaining life of its assets so rehabilitation and replacement investments can be properly considered with financial risk management plans. This utility has assessed a small proportion of its system, meaning it doesn't have a complete estimate of prospective future financial obligations.

### Utility Resilience Index (URI) Worksheet

The URI is the product of the weighting developed for each indicator ( $V_{ij}$ ) and the maximum value indicated in the utility profile ( $w_j$ ).

Utility Resilience Indicators (j)	Utility Profile	$w_j$	$V_{ij}$	$MAX w_j \cdot V_{ij}$	Utility Resilience Indicators (j)	Utility Profile	$w_j$	$V_{ij}$	$MAX w_j \cdot V_{ij}$	Utility URI
<b>O1: Emergency Response Plan (ERP)</b>			<b>0.1389</b>	<b>0.0347</b>	<b>F1: Business Continuity Plan (BCP)</b>			<b>0.0463</b>	<b>0.0000</b>	
No ERP		0.00			No BCP	x	0.00			
ERP developed and/or updated	x	0.25			BCP under development		0.25			
Staff training on ERP (i.e., Tabletop)		0.50			BCP completed		0.50			
Resource typed assets/teams defined and inventoried		0.75			BCP fully implemented		0.75			
Functional exercises on the ERP conducted		1.00			Annual commitment of resources and BCP exercised		1.00			
<b>O2: National Incident Management System (NIMS) Compliance</b>			<b>0.1561</b>	<b>0.0781</b>	<b>F2: Utility Bond Rating</b>			<b>0.064</b>	<b>0.0480</b>	
No ICS/NIMS training		0.00			Caa, less than or equal to		0.00			
ICS 100/200 provided to key staff	x	0.25			B-Ba		0.25			
ICS 700/800 provided to key staff	x	0.50			Baa-A		0.50			
ICS 300/400 provided to key staff		0.75			AA	x	0.75			
Utility certified as NIMS compliant		1.00			AAA		1.00			
<b>O3: Mutual Aid and Assistance</b>			<b>0.1868</b>	<b>0.1401</b>	<b>F3: GASB Assessment</b>			<b>0.0176</b>	<b>0.0044</b>	
None		0.00			Less than 20% assessed		0.00			
Mutual aid/intramunicipal (within own city/town agencies)		0.25			20—40% assessed	x	0.25			
Mutual aid/local-local (with adjacent city/town)		0.50			41—60% assessed		0.50			
Mutual aid/intrastate (e.g., Water/Wastewater Agency Response Network [WARN])	x	0.75			61—80% assessed		0.75			
Mutual aid/interstate and intrastate		1.00			Greater than 81% assessed		1.00			
<b>O4: Emergency Power for Critical Operations</b>			<b>0.0595</b>	<b>0.0149</b>	<b>F4: Unemployment</b>			<b>0.0459</b>	<b>0.0115</b>	
None		0.00			>5% national average		0.00			
Up to 24 hrs	x	0.25			>2—4% national average	x	0.25			
25—48 hrs		0.50			±2% national average		0.50			
49—72 hrs		0.75			<2—4% national average		0.75			
Greater than or equal to 73 hrs		1.00			<5% national average		1.00			
<b>O5: Ability to Meet Minimum Daily Demand (Water) or Treatment (Wastewater)</b>			<b>0.0966</b>	<b>0.0483</b>	<b>F5: Median Household Income</b>			<b>0.04</b>	<b>0.0100</b>	
None		0.00			<10% state median		0.00			
Up to 24 hrs		0.25			<5—10% state median	x	0.25			
25—48 hrs	x	0.50			±5% state median		0.50			
49—72 hrs		0.75			>5—10% state median		0.75			
Greater than or equal to 73 hrs		1.00			>10% state median		1.00			
<b>O6: Critical Parts and Equipment</b>			<b>0.0878</b>	<b>0.0220</b>						
3—4 weeks or greater		0.00								
1—<3 weeks	x	0.25								
3—<7 days		0.50								
1—<3 days		0.75								
Less than 24 hrs		1.00								
<b>O7: Critical Staff Resilience</b>			<b>0.0605</b>	<b>0.0303</b>						
<10%		0.00								
10—25%		0.25								
>25—50%	x	0.50								
>50—75%		0.75								
>75—100%		1.00								
<b>44.2%</b>										
Source: Morley, Kevin. Evaluating Resilience in the Water Sector: Application of the Utility Resilience Index (URI). PhD diss. George Mason University, 2012.										

F4: Unemployment and F5: Median Household Income are included to reflect the capacity of the community to react quickly and/or cope with various incidents that have the potential to disrupt utility revenue and/or influence operational response. Research has demonstrated that communities with high levels of unemployment and low median household income are more vulnerable. Although a utility can't directly alter such measures, it can provide key indicators of the potential impact a loss-of-service incident may have on the population served.

## LOOKING AHEAD

Collectively, the URI provides a utility with a high-level assessment of its general resilience status. Preparing the URI is also a good opportunity to consider risk and resilience management options to ensure AWIA compliance. Also, AWWA has developed free training on AWIA and offers resources that facilitate compliance, all of which are part of the association's Utility Risk & Resilience Certificate Program ([www.awwa.org/risk](http://www.awwa.org/risk)).



### **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 2020 Willems Scholarship. March 15, 2020 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: [www.montanawater.org/awards-scholarships/scholarships-available/](http://www.montanawater.org/awards-scholarships/scholarships-available/)*

*A \$1500 scholarship can be awarded each year. This is a joint MSAWWA-MWEA Scholarship. Please pass the word!*

### ***Best Tap Water Taste Test Congratulations Bozeman Water!***

AWWA Section Services Representative Katie Koch, Immediate Past President Brenda Lennox, and MSAWWA Vice Chair Jeff Jensen with City of Havre (shown above) served as judges for the Montana Section's 6th Annual Best Tap Water Taste Test. Bozeman Water System (pictured right) won the contest AGAIN and competed at the national competition at ACE19. Way to go Bozeman on yet another victory!



**Contact**  
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## A Call To Arms (& Volunteers): Source Water Protection In The Farm Bill



In the 1930s, the Soil Conservation Service, the predecessor to the modern Natural Resources Conservation Service (NRCS), was formed to combat the impacts of the dust bowl and help prevent similar future occurrences. In the decades that followed, NRCS has focused on addressing a wide variety of resource concerns – not just soil erosion but also wildlife habitat, air quality, soil health, water quality, and others. But throughout this history, even though there has long been a goal of improving water quality (and quantity where applicable), until recently source water protection was never a specific focus.

In the 2018 Farm Bill, this has changed. Congress established source water protection as a goal for the NRCS conservation programs and has dedicated considerable resources towards it.

Ultimately, all source waters come from somewhere – often from surface waters or groundwaters that receive inputs from agricultural and forested areas. Working with NRCS and agricultural producers to reduce nutrients, sediments, chemicals, and animal waste entering source waters represents a proactive, effective, and cooperative approach to source water protection.

Over the past few years, the Water Utility Council has led an advocacy and education campaign to increase awareness of source water protection, build source water protection into the core of conservation programs, follow-up on NRCS rules and policies, and to work with utilities on engaging with these programs. The efforts have met with some success as we've built the knowledge and gotten several AWWA members involved in projects across the country.

But, there's much more to be done, and you have the power to help tackle it! We are looking for interested volunteers who can build relationships with NRCS locally, help gain utility involvement, sit on the NRCS technical committees, and participate in (or create) activities that benefit source water protection.

For anyone interested, AWWA will provide information and support to those willing to work with their NRCS programs to enhance source water protection. With the NRCS having an office in nearly every county, there is almost certainly one close to you where you can open the conversation about your source water needs, your goals, what resources you can bring, and so forth. Your state's NRCS State Conservationist is a key point of contact for all state-level conservation programs, and there are many collaborative partnering opportunities available. Through the state technical committee, there's also opportunity to help set the criteria which determine how, where, and on what conservation funds will be spent.

If you're interested in learning more, reach out to [Adam Carpenter](#), Manager of Energy and Environmental Policy, at 202-326-6126.

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## 2019—2020 Committee Chairs

Below is a list of the members of MSAWWA and MWEA that volunteered to chair each committee at the 2019 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 [Info@montanawater.org](mailto:Info@montanawater.org) or (406) 546-5496.

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

To all of the volunteers who helped to make the 2019 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:

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

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