

MICHIGAN water works

WINTER 2019

NEWS



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2019 PREVIEW • FEBRUARY 5-6, 2019

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The Michigan Water Works News is a quarterly publication of the Michigan Section, American Water Works Association.

The deadline for submitting articles for the Spring 2019 issue is February 8, 2019. Material may be submitted to the Editor.

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contents

WINTER 2019



FEATURES

JOINT EXPO & OPERATORS DAY: 2019 PREVIEW	15
LEAD AND COPPER RULE COLLABORATION CONTINUES	27
50 MICHIGAN WATER SYSTEMS AWARDED NATIONAL FLUORIDATION QUALITY AWARD	28
KEY POINTS FROM PFAS ROUNDTABLE	29
KEEPING WORKERS SAFE DURING NIGHTTIME REPAIRS	30
FLINT'S PATH FROM CRISIS TO DISTRIBUTION SYSTEM OPTIMIZATION: PART II	33
TIPS FOR STAYING IN COMPLIANCE WITH TTHM & HAA5 MONITORING REQUIREMENTS	37

DEPARTMENTS

Editor's Note	7
Chair's Message	8
Director's Report	11
Executive Director's Message	13
MDEQ Update	37
Member Update	38
Call for Abstracts: MI ACE 2019	40
News & Notes	41
Volunteer News	42
Training	45
Professional Directory	49
Ad Index	50

ARCADIS GUIDES BREAKTHROUGH

Innovations in Utility Management

Water and wastewater utilities are facing escalating infrastructure costs and service level expectations while meeting emerging challenges, including water scarcity, flattening revenues, resistance to rate increases, and changes in the workforce.

While over 90% of water utilities believe that innovation is critical to overcoming these issues, less than 40% believe their organizations have implemented innovative ideas.

Arcadis, a leading design and consultancy firm, and the Water Research Foundation have developed a framework for fostering innovation practices in tandem with detailed case studies from utilities across the globe.

The project created a simple roadmap that equips utilities to evaluate their current maturity level for innovation, share best practices with others, and create a sustainable innovation strategy to address their most pressing industry challenges.

Specific practices to accelerate innovation include: linking innovation to strategic

planning, developing challenge statements to promote targeted innovative thinking, allocating 'seed' budgets to initiate idea development, incentivizing employees to engage through rewards and recognition, leveraging partners (such as technology accelerators, academic professionals or manufacturers to reach beyond their organizational anchoring), and continuously communicating the achievements of the innovation program to gain further support and shift organizational culture.

For more on empowering water utilities, visit
www.arcadis.com/en/united-states/our-perspectives/empowering-water-utility-innovation.



Jason Carter



Joanna Brunner



REFLECTING ON THE PAST AND PLANNING FOR THE NEW YEAR

KELLY GLEASON

Welcome to the winter issue of *Michigan Water Works News*! Since I last wrote, fall was just settling in and the new leadership was taking its place. The Section held the annual leadership retreat this past October. I had the privilege of attending for the first time and, with others, had time to reflect on the past and plan for the new year. There is a quick update on page 38.

I'm happy to report the 2018 Regional Pipe Tapping Competition was held in Illinois also this past October. The Lansing Lethal Ladies set a new record this year – read about the results on page 41.

Speaking of pipe tapping, the state competition is held during the Joint Expo & Operators Day at the Lansing Center. In addition to pipe tapping, catch the meter madness and hydrant hysteria competitions, along with some great training. The two-day conference held in February is always filled with information and valuable networking opportunities.

Find more details on page 15 and mark your calendar.

As always, I'd love to hear about what you've been up to in the water world. The deadline for the Spring 2019 issue is February 8. Send pictures, stories, and updates to kelly.gleason@lbwl.com with the subject line *Water Works News*. I hope to see your submission soon. 💧

"THE TWO-DAY CONFERENCE HELD IN FEBRUARY IS ALWAYS FILLED WITH **INFORMATION AND VALUABLE NETWORKING OPPORTUNITIES.**"

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LIVE TODAY WITH TOMORROW IN MIND

BILL FRITZ, CHAIR

Welcome to 2019! We have a new Governor, construction season is finally over, and the Lions are in the playoffs.

Well, at least one of these predictions will be true. As I write this article in late October, I am reminded of how this is an exercise in the 'future-self' philosophy. The future-self concept is centered around today's choices and actions, and how these will affect your life in the future. The hope is we make good choices now, perhaps paying short-term costs and making sacrifices that will reap long-term benefits. Another approach is to look at your life and realize that where you are now is because of the choices and actions of your 'former-self.' How did your former-self do? Would you thank them, or scold them?

Asset managers spend their careers acting in the present for benefits gained by their utility's future-self. They may be long gone by the time the assets they planned, designed, built, and maintained expire (just ask Marcus Agrippa about the aqueduct he built in 19 BC that is still in use today). It can be difficult to make decisions without having all data in-hand. You must be willing to take a risk and possibly make mistakes along the way. Making a wrong decision can still be better than making no decision at all. Studies have shown that people (and organizations) who are



"DO SOMETHING TODAY THAT YOUR FUTURE SELF WILL THANK YOU FOR."

– SEAN PATRICK FLANERY

mindful of their future-self when making decisions tend to spend more efficiently and operate with less waste.

The current state of the Michigan Section is a result of the actions taken by members' former-selves. I think we have, on the whole, performed admirably and positioned ourselves as leaders and the authoritative source on clean, safe drinking water. For this we must thank our former section officers, staff, and countless volunteers on their strategic planning and forethought.

We have a strong, vibrant section, loaded with thousands of talented member-volunteers. These individuals have participated, and even influenced national conversation on many topics, including lead, the value and affordability of drinking water, and PFAS, to name only a few recent examples. It is inspiring to watch individuals step forward and take action every time there is a call to do so. My own experience with other volunteer organizations has taught me that most people are good and are willing to help others, if needed.

They sometimes just need a gentle nudge to get them into motion.

In my previous article, I challenged you, the reader, to make a change and volunteer your time and talents. If you haven't yet made a change that will benefit your future-self, here are a few suggestions:

- Attend Joint Expo coming February 5 and 6 to Lansing Center. In addition to the training and continuing educational opportunities afforded by Operator's Day, Joint Expo offers access to vendors, consultants, suppliers, colleagues, etc.
- Connect with the section's 'seasoned veterans' and listen to their stories. You will likely be inspired to make a change (hint: they are listed in the back of the Membership Directory).
- Contact section staff to align your interests with opportunities to volunteer.

I've read that people who live today with tomorrow in mind tend to feel more empowered and in control of their lives. So, go out there and do something today for which your future-self will thank you. 💧

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ASSOCIATION ANNUAL CHECK-UP

MARK COLEMAN, DIRECTOR

The AWWA Executive Committee of the Board of Directors, composed of the Association Presidential Officers, Vice Presidents and Council Chairs, met on October 23 and 24 in Denver. It was an excellent, interactive meeting and I am delighted to report that the health of AWWA is A-OK!!

There are many metrics that may be used to assess and track the health of our organization. There are four, however, that I believe cut to the chase in terms of AWWA long-term viability and health: membership, financial stewardship, current initiatives, and future strategic activities.

In terms of membership, we are currently bouncing around 52,000 members. This represents a healthy average annual increase of approximately 1.5% per year for the last five years. This is a significant increase from our 2012 membership number of approximately 45,000, when we changed the status of AWWA Life Members (the year that your Director became a Life Member, just sayin'!!). The Association's YP, student, and membership teams are fired up and have solid plans to keep the number trending upward with innovative initiatives and ideas.

The Association financials are solid. We are on track to hit our 2018 Year End revenue and expense goals. A few years ago, one of our strategic initiatives was to develop and track a five-year look-ahead budget, which continues to serve the organization well in terms of long-term projections and aspirations. We are on track with that projection – even using a conservative eye. One of the areas where we are different than many other large, non-profit organizations is the fact we don't rely on a singular revenue source for our funding. We are nicely



Front entrance of the AWWA headquarters in Denver.

revenue balanced between member dues, conference exhibits and events, and publications. Each represents approximately a third of our annual budget revenue, meaning a hiccup in one tends to be absorbed by the other two.

In terms of current activities, ACE Las Vegas was a huge success. We had over 12,000 attendees, a 6.5% increase over ACE 2017! Our YP program continues to impress and expand, and the Innovation Lounge had over 30 organizations participate. We are on track implementing the 27 defined activities from the 2018 Business Plan, with 14 completed and another 12 in progress and expected to be completed on schedule. Only one action has been delayed due to the realization it cannot be completed until after the website update is complete.

Where we are heading is very exciting. Our 'Transformative Issue Symposium,' cohosted with WEF last August in DC, was very well attended and highlights one of our future directions. The symposium

isn't a one and done conference. Nor is it a continuing topical conference such as the Utility Management Conference. Rather, it is intended to be an emerging issue symposium designed to address member needs relative to new emerging issues.

Our international strategy is evolving. We currently have approximately 950 international members from 95 countries. We have increased the composition of the International Council to include business leaders in the international arena, including representatives from the World Bank, Inter-American Development Bank, utilities, and private sector leaders. These significantly broader points of view and resources will greatly enhance our international knowledge and best practice sharing, while providing value to AWWA's international and North American members.

Thanks for your attention! Give me a shout if you would like additional information or simply want to chat. 💧

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ADAPTING TO WIN

BONNIFER BALLARD, EXECUTIVE DIRECTOR

I love college football season. Born and raised in Ann Arbor, I'm a U of M fan (I'm pretty sure it's in the water). Yeah, I know. I've just lost a bunch of you, but keep reading. I promise this isn't going to be rival bashing.

As I write this, I'm looking back over the last four years of Michigan football. It's been a humbling four (more like 11) years. When Jim Harbaugh was first announced as head coach for U of M, the media blitz was intense, and Harbaugh had the personality to play it up. He talked smack and had at least a few players that could help him back it up. Still, he lost key rival games that year.

The story continues, with each year being not an all-out failure, but a disappointment to Michigan fans. When the team won, it was ugly. When they lost, it was even uglier. Then, the 2018 season happened. Harbaugh dialed back the rhetoric and the team got serious about the game and wanting to win (yeah, the game with that team down south still hurts). What struck me most though was that Harbaugh, and likely the rest of his coaching staff, seemed to have changed his coaching style right down to the plays he called. The coaches had learned how to lead the players they had to maximize their current players' skills. They adapted.

Harbaugh is a good coach (I haven't decided if he's great yet). His players are good football players. But just as smarts alone doesn't make you rich, skill alone didn't win games. During the 2018 season, we saw Harbaugh figure out that coaching meant more than skill, competitiveness, and drive. It meant adapting your style to get the most of those you are trying to lead. Those football players might have improved their skills over the last four years, but what seemed to make them a winning team was

Adaptive Leadership:

a framework that helps organizations and individuals deal with change when no clear answers are forthcoming.

when the leadership style recognized and embraced their skills and helped to create situations where they could shine. It's an important lesson for all of us.

So many of us are thrust into leadership roles. Sometimes we're lucky enough to have a mentor or formal training, some sort of preparation. Often though, many of us

find ourselves grappling with the burdens of leadership and can't quite grasp why things aren't working as well as we'd like. Perhaps a key lesson for us all is that our job as leaders is to create situations for our teams to shine, to adapt our leadership style to bring out the best in our teams, to learn new approaches so that everyone gets to win. 💧





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Co-presented by the Michigan Section – American Water Works Association (MI-AWWA) and the Michigan Water Environment Association (MWEA), Joint Expo includes Operators Day, an infrastructure finance seminar, and the premier water and wastewater exhibit show in the Midwest.

The premier water conference of the Midwest, Joint Expo & Operators Day offers half-day trainings on each day. There is no better place than the Exhibit Hall to see all the most popular products and services available in the water/wastewater sector.

RETURN TO TABLE OF CONTENTS

TRAININGS

Operators Day

Come hear the latest in technologies and approaches that best serve your customers. Designed for water and wastewater operators, this year's program will focus on PFAS, new SCADA technology, power quality in your electrical system, confined space training, MISS DIG, assessing and rehabilitating critical valves, motor testing, and GIS.

Different programs are offered Tuesday and Wednesday. Choose one or opt to attend both. You will earn 0.3 continuing education credits per session for water and wastewater operators; 3 professional development hours for licensed engineers.

Infrastructure Funding Seminar

How to pay for everything is the \$1 million question. This half-day session provides the latest in funding approaches, as well as funding source ideas for your water or wastewater system. Offered Tuesday only.

Cyber Security

If your system is connected to the internet, it's vulnerable to hacking. Attend this half-day workshop to learn how to



use the AWWA online tool to best assess your risk and develop a plan to protect your system. Offered Wednesday only.

Policy Update

With term limits, the Michigan House and Senate are experiencing massive turnover. Come hear from Midwest Strategies Group about the policies that will most effect the water and wastewater sector in Michigan. Offered Wednesday only.

Careers Roundtable

The Young/New Professionals are hosting a roundtable discussion on

careers in water. This complimentary event offers students and young professionals the opportunity to hear from and network with established professionals. All water professionals at any stage in their careers are welcome to attend. Please RSVP to info@mi-water.org to reserve your seat.



EXHIBIT HALL

Visit more than 150 companies that provide products and services to the water and wastewater sectors. You will be able to talk to consultants, compare products, try out software, and examine heavy equipment up close. Attendees walking the Exhibit Hall earn up to 0.2 CECs for water and wastewater operators.

Tuesday 9:30 am – 4:00 pm

Wednesday 8:30 am – 2:00 pm

Access to the Exhibit Hall is free, but attendees must register and have a badge to enter. Attendees of training automatically have access to the Exhibit Hall. If you want to come to only walk the Exhibit Hall, register for an Exhibit Hall Only Pass by visiting www.jointexpo.org.

COMPETITIONS

Water Main Tapping Contest – see how fast a water main can be tapped
Tuesday 1:00 pm – 4:00 pm

Meter Madness – see how fast a water meter can be assembled from a bucket of parts
Wednesday (*check website and app for times*)

Hydrant Hysteria – see how fast a fire hydrant can be assembled
Wednesday (*check website and app for times*)

BOOTHS

Host Booths

MI-AWWA and MWEA will both be on the floor. Stop by to get your CEC slip for the Exhibit Hall validated or to see what's coming in the water and wastewater sectors in Michigan.

Clean Water for All

Water For People, a WEF charity of choice, will be present in the Exhibit Hall again this year. Volunteers work year round to raise money to support clean water projects throughout the world. Stop by to find out more about the many projects going on, have a little fun, and show your support.

Safe Water in Ecuador will be in the MI-AWWA booth this year. Volunteers raise money to help bring clean, safe drinking water to indigenous communities in Ecuador. Stop by to learn how you can support this important work.

College Booths

Bay College students will be onsite Tuesday to show you what they're learning and to get better acquainted with everything water and wastewater. Make sure to stop by their booth and encourage them!

Students and instructors from Bay College and Delta College will be onsite to show you what they're learning and to get better acquainted with everything water and wastewater. Make sure to stop by their booths and encourage them!

Health & Human Services Booth

Interested in the real facts about fluoride in drinking water? Stop by the Michigan Department of Health & Human Services booth to learn more about this important public health treatment method.

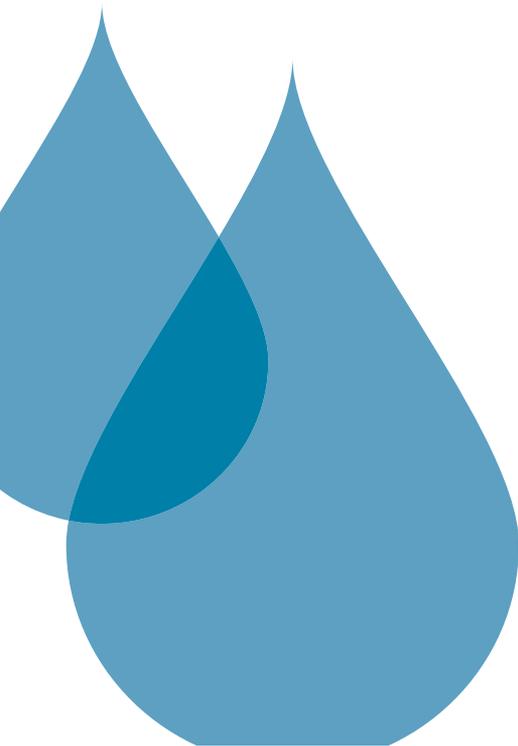
Entry into the Exhibit Hall is free but you must have a badge to enter. Register online at www.jointexpo.org.



Scavenger Hunt

Have some fun and earn a chance to win prizes while walking the Exhibit Hall. We know you are walking the floor to do some investigation for work. Why not have a little fun while you're at it? The Scavenger Hunt is easy to play and offers many chances to win a prize. All you have to do is visit participating exhibitors, earn your stamp, and check in at the Scavenger Hunt table before you leave to see if you won anything!

Thanks to our sponsors!



RETURN TO TABLE OF CONTENTS

MIXER

If you're staying in the Lansing area during Joint Expo & Operators Day, come to the Lansing Brewing Company after the Exhibit Hall closes on Tuesday to network with water and wastewater colleagues, enjoy a beverage, and maybe win a prize.

LOGISTICS

Registration

Register for trainings by using the form on page 18 or by visiting www.jointexpo.org. Your registration includes the training of your choice, entrance to the Exhibit Hall, and lunch.

Register for the Exhibit Hall Only online at www.jointexpo.org.

Badges must be worn onsite at all times. Badges required for entry to the training rooms and the Exhibit Hall.

Parking

See the parking map on page 19 and on www.jointexpo.org for information on parking lots and structures.

New this year – there will be complimentary shuttles available approximately every 20 minutes from designated parking lots to the Lansing Center. Check the app for details on the day you attend.

Lodging

For those staying in Lansing, the Lansing Radisson Hotel has a block of rooms at a reduced rate for attendees of Joint Expo & Operators Day. Call 517-482-0188 to make your reservations. Remember to use promotional code AWWA19 to receive the conference rate.

Coat Rack

There will be coat racks available. These are offered for attendee convenience. MI-AWWA and MWEA are not responsible for lost or stolen articles.

Inclement weather

Keep an eye on www.jointexpo.org for any weather-related information pertaining to Joint Expo & Operators Day.

Event App

New this year – Attendify, the event app for Joint Expo & Operators Day. Download Attendify and search for Joint Expo. Log in and have all the event information in the palm of your hand. 💧



JOINT EXPO

— & OPERATORS DAY —

ATTENDEE REGISTRATION

Joint Expo • Operators Day Training • Infrastructure Funding • Cyber Security • Policy Update

Attendee Name: _____ Title: _____

Company/Employer: _____

Attendee Email (Required): _____

(Registration confirmations can only be sent via email)

Address: _____

City: _____ State: _____ Zip Code: _____

Cell #: (_____) _____ Work #: (_____) _____

Yes, I want CEC Credit! (check all that apply)

- Drinking Water CECs – Operator ID #** _____
 Wastewater CECs – (no ID # required)

Event(s) attending: (Agendas and CEC information available online at www.jointexpo.org)

• **TUESDAY, FEBRUARY 5TH**: (select no more than **ONE** option)

- Joint Expo Attendee, Exhibit Hall Pass ONLY**, show hours 9:30am-4:00pm – **(FREE)**
 Operators Day Training, 7:30am-11:30am – **(\$110.00)**
 Infrastructure Funding Seminar, 8:00am-11:15am – **(\$110.00)**

• **WEDNESDAY, FEBRUARY 6TH**: (select no more than **ONE** option)

- Joint Expo Attendee, Exhibit Hall Pass ONLY**, show hours 8:30am-2:00pm – **(FREE)**
 Operators Day Training, 7:30am-11:30am – **(\$110.00)**
 Cyber Security Workshop, 7:30am – 11:15am – **(\$110.00)**
 Policy Update, 9:00am – 11:00am – **(\$35.00)**

TOTAL: \$ _____

PAYMENT:

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Please Note: Registrations received by mail or FAX without payment (check, money order, credit card or purchase order no.) will be processed only after the registration deadline, January 23, 2019, space permitting. All trainings include access to the Exhibit Hall and lunch. Joint Expo Exhibit Hall passes provide access to the Exhibit Hall only and do **NOT** include lunch.

Parking

With more than 1,000 people visiting the Lansing Center each day of Joint Expo & Operators Day, parking is a challenge. Please allow extra time to find parking and make your way to the convention center. For your convenience, a parking map is included. City of Lansing and Lansing Convention & Visitors Bureau staff will be available near the Lansing Center to help direct attendees to available parking.

Lansing Center Event Parking

Directional parking signs will be nearby, and any parking assistant wearing a neon yellow vest can answer additional questions. Thank you for coming to Greater Lansing!



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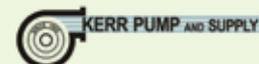
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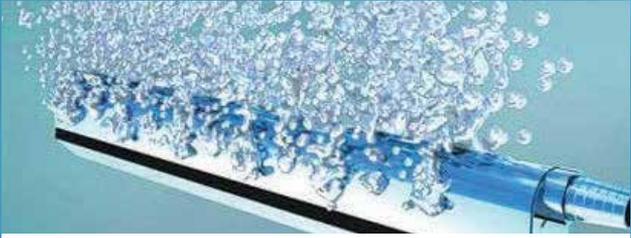
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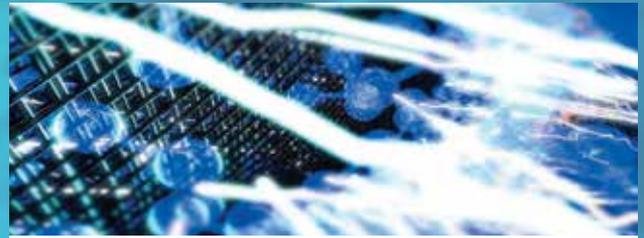
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LEAD AND COPPER RULE COLLABORATION

Michigan's Lead and Copper Rule (LCR) went into effect on June 14, 2018. MI-AWWA had collaborated with numerous organizations to try to affect changes in the proposed rule to ensure a sound, rational approach to this update. Unfortunately, not many of our suggestions were heeded. Once the rule took effect, this collaborative continued to work throughout the summer

and fall to deliver the best information and understanding of the rule to all those affected.

Collaborating partners included the Michigan Section of the American Water Works Association, the Michigan Chapter of the American Public Works Association, Michigan Rural Water Association, Michigan Township Association, Michigan

Municipal League, and Southeast Michigan Council of Governments. Events included a webinar, three topical networking events, and two half-day workshops.

It is expected the DEQ will be making detailed trainings available in the coming weeks and months to ensure all water systems have the information they need to comply with the new Rule. 💧



50 MICHIGAN WATER SYSTEMS

Awarded National Fluoridation Quality Award

The Michigan Department of Health and Human Services (MDHHS) Oral Health Unit is recognizing 50 Michigan public water systems for being awarded the Water Fluoridation Quality Award from the US Centers for Disease Control and Prevention (CDC).

The award recognizes those communities that maintained a consistent level of optimally fluoridated water throughout 2017. A total of 1,499 water systems in 30 states received the award, including the following Michigan systems:

Adrian	Great Lakes Water Authority	Monroe
Baraga	Hartford	Muskegon
Battle Creek-Verona System	Hillsdale	Northwest Ottawa Water Treatment Plant
Belding	Holland Board of Public Works	Otsego
Benton Township	Huron Shores Regional Utility Authority	Plainfield Township
Boyer City	Jackson	Saginaw
Carson City	Kalamazoo	Schoolcraft
Charlevoix	Lake Bella Vista	Sparta
Charlotte	Linden	St. Johns
Clare	Ludington	St. Joseph
Dexter	Manchester	St. Clair Water and Sewer Authority
East Jordan	Marshall	Standish
Elk Rapids	Mason	Summit Township
Escanaba Water Department	MHOG Sewer and Water Authority	Traverse City
Fremont	Michigan State University	Union City
Gladstone Water Department	Midland	Wakefield
Grand Rapids	Milford	

Fluoridation is the adjustment of fluoride in the water to a level that is optimal for preventing tooth decay. According to the CDC, drinking fluoridated water keeps teeth strong and reduces cavities (also called tooth decay) by about 25% in children and adults.

"Michigan consistently exceeds the CDC recommendations for community water supplies by having 90% of our population on community water systems accessing fluoridated water," said Karen MacMaster, MDHHS acting deputy director of Population

Health Administration. "These awards demonstrate the commitment to quality by these community water systems."

Community water fluoridation has been recognized by CDC as one of 10 great public health achievements of the 20th Century. It is estimated that every dollar invested in fluoridation saves at least \$38 in costs for dental treatment.

For more information about community water fluorination, visit the CDC website at www.cdc.gov/fluoridation/index.html. 💧



Pictured is Sandy Sutton, the Oral Health Community Water Fluoridation Coordinator and Samuel Bender, a Drinking Water Operator from the Holland Board of Public Works.



KEY POINTS FROM PFAS ROUNDTABLE

In October, the EPA visited Michigan to conduct site visits and hold a roundtable discussion about PFAS in Michigan.

Jaime Fleming of the City of Wyoming and Brian Steglitz of the City of Ann Arbor represented MI-AWWA at the meeting, helping give voice to the utility perspective in this ongoing investigative process.

Some key points MI-AWWA made during the meeting included:

- There is a lack of standardized and approved methods for sampling and testing of all of the compounds.
- Will there be a certification for laboratories? How does a water system choose a good lab?
- There needs to be a platform to share data throughout the state? We need to understand what's already available and leverage that information in order to share what we know and communicate effectively.
- We also need to review what's been done and what's outstanding. We know there has been no comprehensive survey of private wells. We need that to get better understanding of whole problem.
- There are two parts to the solution: separation of PFAS from water and destruction of PFAS.
- There are two approaches to take – end of pipe or the source.
- We need to also look at the source of the contamination as part of the

solution – locating, identifying, and removing PFAS from the source.

- Landfill leachate is a large source of PFAS contaminants; more than PFOS and PFOA. Leachate goes to wastewater treatment plants, but since traditional WWTP don't remove PFAS, it is contributing to the cycle of PFAS from product, to waste, to treatment where it either isn't treated and therefore released back to source waters, or it ends up in a residual (e.g. spent GAC media, or biosolids) and back to the landfill.
- Solution must go beyond water. These chemicals are pervasive in society and so we need a holistic approach to solutions. We need various industries are working together. We don't want to move the problem from one industry to another. This will require a partnership approach.

Then, during the lame duck session, Jaime Fleming and Elaine Venema of Fleis and Vanderbrink testified on behalf of MI-AWWA and MWEA on proposed legislation regulating PFAS. Highlights from their testimony below:

Subsequent to the EPA meeting, MI-AWWA and MWEA convened a joint task force to develop talking points and prepare information for a possible committee hearing for legislators in Lansing. The task force members include: John Cuthbertson, AECOM

Karlin Danielson, OHM Advisors
Jaime Fleming, City of Wyoming
Vicki Putala, OHM Advisors
Rick Solle, City of Plainfield
Brian Steglitz, City of Ann Arbor
Elaine Venema, Fleis & Vanderbrink

Key points the task force put together to share with legislators are highlighted below:

- Acknowledge the work done so far by MPART to better understand PFAS and the conditions in Michigan.
- Suggest public-private partnerships across industry sectors to discover the best ways to protect overall public health.
- Call for funding for more research on permanent destruction of these chemicals.
- Encourage lawmakers and state agencies such as DEQ to develop data-driven solutions to prevention, treatment, remediation and destruction.

PFAS is getting more and more attention, and rightly so. We will all be challenged with how to address this emerging contaminant. MI-AWWA is working with MWEA and others to develop a series of informational and training events to help ensure Michigan water professionals have the best information available to make sound long-term decisions. Keep an eye on the website www.mi-water.org for details. 💧



Keeping Workers

SAFE

During Nighttime Repairs

By Doug Riseden

Working at night on pipe repairs is always more difficult than during the day. Workers are usually tired, having already worked a full day, and visibility is greatly reduced due to shadows, darkness, and poor lighting at the work site.

Throw in drivers who are also tired and perhaps driving faster than usual due to reduced traffic, and you have the makings of a high-risk situation. Your employees are your most valuable asset, so every precaution should be taken to make sure they come home safely every day.

Here are six things to ensure your nighttime workers are safe, and get the job done effectively.

1 MOVE CAREFULLY AND DELIBERATELY ON THE WORK SITE

Many times, workers will want to get the job done quickly and skip some steps.

This is understandable but it's important to remind them to slow down, and work more cautiously than they do during the day. Even if they are very familiar with performing certain repairs, dark areas and shadows can hinder their perception of risk.

Planning and communication become crucial during nighttime operations. Before the job starts, supervisors should have a brief meeting to ensure all team members understand what will take place at the work site, what their role is, and where they will be located throughout the night. Plan your work and work your plan!

Make sure everything is done with a

focus on safety. This includes wearing reflective clothing in accordance with the law, and using a trench box or shoring to ensure that the trench doesn't collapse while workers are inside. There are many who never use a trench box because it gets in the way of some repairs. At night, the use of trench boxes and shoring is even more critical. Make trench boxes a normal part of every excavation, and never put speed ahead of safety.

2 HAVE THE RIGHT REPAIR PRODUCTS ON HAND FOR EVERY POSSIBILITY

Always make sure you have repair products on hand for every situation. There is nothing worse than not having the right parts during an emergency repair. Poor planning results in the job taking longer to complete, delays in returning water service to normal, and disgruntled customers.

There are a variety of repair couplings on the market that are quick and easy to install, and are extremely useful for night conditions. Some couplings can attach to two pipes of differing diameters and materials which comes in handy when the exact material of the pipe or its diameter are not known in advance.

3 KEEP A CLOSE EYE ON THE CREW

Supervisors need to keep a close eye on workers who will be tired from working a full day and prone to making mistakes. Supervisors should patrol their work area to see how workers are doing, and offer food and drink on a regular basis. Flaggers in particular should be checked as they play a critical role in making sure nighttime operations are safe.

Crews want to make the repair and then get some rest before having to get up and do it all over again. A lack of rest or sleep accumulates over time. It's important that crews are not run down to the point where they become exhausted and unable to perform. Provide them with the proper tools and repair parts to get the job done.

4 KEEP THE WORK AREA LIT AND CLEAR

In the interests of saving time, sometimes workers will use the lights of the backhoe to do this job without auxiliary lighting and a generator. These lights will not supply enough illumination for the work site and compromise safety.

Use floodlights to illuminate any equipment crossings, and other areas

where crew members will be working. Flaggers in particular should be well lit to ensure their own safety, and the safety of the work zone. If drivers can't see the flagger, his or her ability to slow down, divert or stop traffic is hindered.

Floodlights can also blind drivers entering a work zone. Once lights are set, a worker should drive through the area to observe the lights' positioning and make adjustments as necessary. The use of self-righting work lights are a great way to provide light without causing it to shine in motorists' eyes. Keep the work area also clear of obstacles, tools, and equipment.

The use of rotating or flashing amber lights on service vehicles is necessary and required by law in most states; however, these lights can be their own hazard. They can be very bright and blind drivers who are traveling the roadways and prevent safe driving. Wherever possible, direct these lights so drivers can see properly as they drive through and ensure worker safety.

5 MANAGE TRAFFIC

If possible, close the roadway where the repairs are taking place and direct traffic away. If you can't close the roadway, place warning signs or lights in a way that will give motorists more time to react and slowdown before reaching the work area. Ensure that your signs are clean and have good reflectivity.

Make the work zone as large as possible to give employees more of a buffer and to keep them safe. After the repair is completed and the roadway re-opened, do several drive-throughs to make sure the road is clear and the road repair is safe for the public's use.

6 NOTIFY THE PUBLIC

Make every effort to contact law enforcement, fire and rescue services, emergency dispatch centers, and the general public about the nighttime operation. Notify the above organizations, and local radio and television stations, in advance by sending a concise email and following up by phone. Include information about where the repair is taking place, why it's happening and any roads that will be closed off. These agencies and media outlets will appreciate the information, and keep the community aware of the repair. 💧



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FLINT'S PATH FROM CRISIS TO DISTRIBUTION SYSTEM OPTIMIZATION

By Christopher Hill¹, Rebecca Slabaugh¹, Gwendolyn Kubacki¹, James Cooper¹, David Cornwell², Melinda Friedman³
¹Arcadis US, Inc., ²Cornwell Engineering Group, ³Confluence Engineering

INTRODUCTION

In 2016, following a very highly publicized water crisis, the City of Flint embarked on an effort to develop a Distribution System Optimization Plan. The project included a comprehensive distribution system assessment using the AWWA Partnership for Safe Water Distribution System Optimization Program (2011) and Water Research Foundation Criteria for Optimized Distribution Systems (Friedman et al., 2010), extensive corrosion control optimization study, development and implementation of an asset management plan, and water storage and distribution system hydraulic evaluation. A comprehensive assessment of the human and financial resources needed to implement the recommendations was completed, and a prioritized 20-year capital improvement plan, staffing recommendations, and training program were prepared to assist with implementation of the Plan for the City of Flint.

Part I of this article provided an overview of the Partnership program, a comparison to Partnership goals, and an update on lead levels at Flint customers' taps. This article summarizes the corrosion control optimization efforts, hydraulic modeling and system evaluation, asset management plan, and recommended capital improvements included in the Plan.

OPTIMIZATION OF CORROSION CONTROL TREATMENT

The City receives treated water from the Great Lakes Water Authority (GLWA), which contains an orthophosphate residual of approximately 1 mg PO₄/L and has a pH of approximately 7.5. The

City boosts the orthophosphate residual to maintain a minimum 3.1 mg PO₄/L residual throughout the distribution system. The City targets a pH of 7.5 ± 0.2 in the distribution system.

Corrosion coupon testing was performed for 12 weeks. Six different orthophosphate dosages were tested at two different target pH levels, with the goal of determining:

- 1) if orthophosphate would be more effective at a target pH of 7.2 or 7.5, and
- 2) what range of doses should be considered for pipe loop testing.

Based on t-test analysis of the data, there was no statistically significant difference between orthophosphate performance at pH 7.2 and pH 7.5. However, a relationship was established between orthophosphate dose and lead release, and doses of 2.5, 3.0, 3.5, and 4.0 mg/L as PO₄ were recommended to be analyzed during pipe loop testing.

The initial phase of loop testing includes four pipe rigs each with four lead service lines (16 pipes total) and includes a range of orthophosphate doses consistent with the results of the coupon study. In addition, testing is being conducted to ensure there will be no upsets to corrosion control treatment when the City's backup

supply (provided by Genesee County Drainage Commission) is available. The City is also actively replacing all lead service lines in its service area, and as such will not have any lead service lines in two to three years. As a result, future loop testing will also include evaluation of lead release from galvanized piping, brass meters, and fixtures.

BENEFITS OF LEAD SERVICE LINE REPLACEMENT

The City is actively conducting full lead (and galvanized) service line replacements throughout its service area. In April 2017, the Michigan Department of Environmental Quality (MDEQ) initiated the Confirming Lead Elimination After Replacement (CLEAR) program. The goal of this program was to recruit at least 200 households to participate in tap water monitoring prior to and after replacement of a lead or galvanized service line. The initial sampling round was to be conducted within 90 days prior to replacement of the service line, with six subsequent sampling rounds to be conducted monthly following replacement of the service line.

Table 1 presents a summary of tap lead concentrations from 94 homes that participated in all seven rounds

Table 1. CLEAR Dataset Lead Concentrations (94 locations).

Months After Replacement	90th Percentile (ppb)	Maximum (ppb)
Pre-Replacement	9	1126
1	8	135
2	4	2117
3	3	9
4	2.8	11
5	2.5	9
6	2	15

of sampling. The CLEAR data shows that even prior to replacement of the lead or galvanized steel service lines, the 90th percentile of lead data from the participating households was less than the 15 µg/L Action Level for lead. The 90th percentile of lead levels also decreased over time following the service line replacement. However, some locations did see an increase in the lead concentration after the service line replacement (Rounds 2 and 3). This is consistent with the mobilization of particulate lead during the service line replacement event. These elevated lead levels did appear to subsequently decrease as time passed (Rounds 4 to 7).

HYDRAULIC MODELING AND SYSTEM EVALUATION

A comprehensive hydraulic modeling and distribution system evaluation was conducted which included model calibration. Five separate system evaluations were also conducted: storage, water age, surge, water quality sensor placement, and criticality.

The distribution system includes two storage facilities – the 20 million gallon (MG) Cedar Street Reservoir and 12 MG West Side Reservoir. In addition, the City has 25 MG of storage (20 MG Dort Reservoir, a 3 MG clearwell and a 2 MG elevated tank) at the water plant. Multiple analyses were performed that looked at water storage configurations. It was recommended that the plant elevated tank, Dort Reservoir, and Cedar Street Reservoir be operated during the winter months (when peak demands occur due to main breaks), and only the plant elevated tank and Cedar Street Reservoir be operated in the summer months when there are lower demands, higher temperatures, and increased potential for water quality challenges. In addition to storage recommendations, several operational improvements were identified, including the use of automatic flushing devices to improve overall water age in the system.

ASSET MANAGEMENT PLAN

An asset management plan was prepared for the City in accordance with MDEQ

guidelines (MDEQ 2013a, MDEQ 2013b). The plan included both horizontal assets (distribution mains, hydrants, valves, meters, and service laterals) and vertical assets (mechanical and structural assets at the treatment plant, pump stations, and water storage facilities).

To determine critical assets, a risk analysis was performed, including an asset-level evaluation of the likelihood of failure (LOF), the consequence of failure (COF), and asset redundancy. The LOF analysis was based on the physical and performance condition, and the COF analysis was based on a triple bottom-line approach evaluating economic, social, and environmental impacts. Risk scoring was developed for horizontal and vertical assets, with five risk groupings: lowest, low, medium, high, and highest. Most assets fell in the lowest to medium risk groupings.

The highest-risk horizontal assets included distribution mains with high LOF and the ability to impact multiple customers if failure occurs. The high LOF scores were due to pipe age and results from a hydraulic model criticality assessment. (The distribution system has approximately 580 miles of pipe ranging in diameter from 2-inches to 72-inches, more than 95% of which is unlined cast iron pipe installed prior to 1960.) Overall, the system included only 0.25% of highest-risk scoring pipes with most pipes falling into the lowest-risk category. For vertical assets, the analysis showed there are approximately 24 assets that need to be replaced during the next five years. These are critical assets, such as pumps and motors, needed to ensure system reliability and customer service.

PERFORMANCE METRICS

Key performance indicators (KPIs) were developed while establishing level of service (LOS) goals during preparation of the asset management plan. KPIs will be used to evaluate the City's performance relative to implementation of the Optimization Plan and progress toward distribution system optimization. A total of 25 LOS goals and KPIs were identified by the City. Performance measurement will be implemented using a tiered approach, with the most important

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LOS and KPI goals implemented first in Tier 1. As the City progresses toward optimization, the KPI priorities may change, and this should be reflected in the annual updates to the asset management plan. Currently, targets for these measures are not defined. As the City pilots the Tier 1 measures, performance targets can be established, and adjustments may be made to the frequency and data source recommendations.

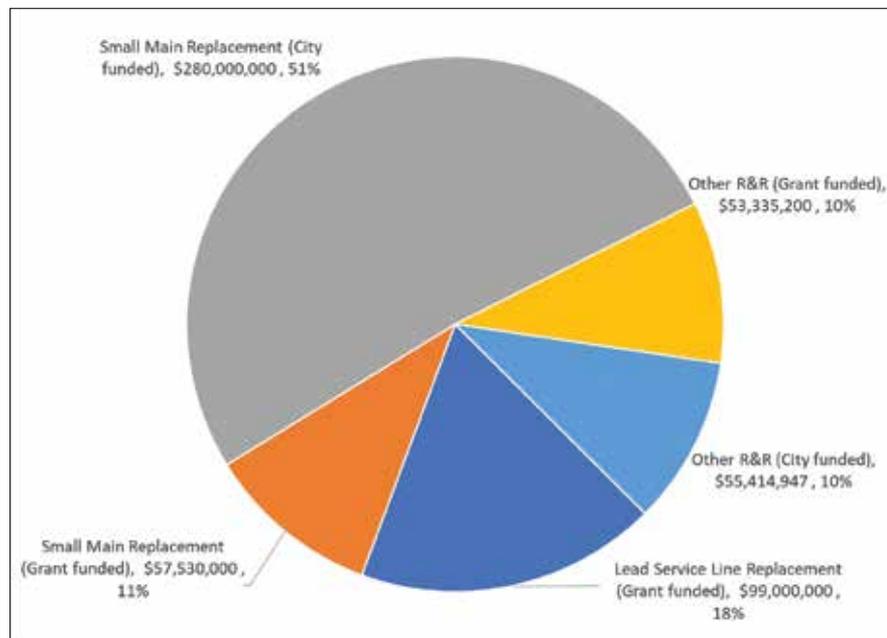
CAPITAL AND OPERATIONAL IMPROVEMENTS

The recommendations in the Optimization Plan were prioritized to guide implementation of projects most critical for maintaining regulatory compliance, providing enhanced levels of service, and preventing catastrophic failure. Projects were then organized into three main categories of capital investment:

- *Administrative* includes items such as customer service, CMMS implementation, GIS maintenance, standards development and maintenance, program development (e.g., emergency response program or water loss control program), and software and licensing.
- *Water distribution* includes items related to water distribution system capital and operational improvements that are not considered rehabilitation and replacement (R&R) projects, including hydraulic modeling, unidirectional flushing, and facility inspections.
- *Rehabilitation and replacement* includes lead service line and small main replacement, large diameter main replacement, storage facility and pump station improvements, dam improvements, new chemical facilities, valve and hydrant replacement, and vehicles.

Of these three categories, R&R accounts for approximately 98% of the

Figure 1. 20-Year Projected R&R Budget by Funding Source.



proposed capital plan. **Figure 1** provides more detail regarding the source of funds for the projected 20-year R&R capital spending. As noted previously, the City will have significant grant funding available over the next several years to address water system R&R needs. However, when the grant funding (approximately \$167 million) is removed, more than \$300 million of City-funded capital investment is still needed over the next 20 years.

SUMMARY AND CONCLUSIONS

The City is on its way to recovery. The City is in 100% compliance with the Safe Drinking Water Act and, in some ways, water quality is better than it has ever been. Lead service line replacement and other capital projects to improve the City's infrastructure are well underway. The City is also actively implementing many of the operational improvements that resulted from the optimization efforts. The next step is to develop a technical, managerial, and financial plan that will enable the City

to continue on its path to distribution system optimization. Continued planning and cooperation between the City, its stakeholders, and regulators will be key to ensuring the successful implementation of the distribution system optimization program.

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“A COMPREHENSIVE ASSESSMENT OF THE HUMAN AND FINANCIAL RESOURCES NEEDED TO IMPLEMENT THE RECOMMENDATIONS WAS COMPLETED, AND A PRIORITIZED 20-YEAR CAPITAL IMPROVEMENT PLAN, STAFFING RECOMMENDATIONS, AND TRAINING PROGRAM WERE PREPARED TO ASSIST WITH IMPLEMENTATION OF THE PLAN FOR THE CITY OF FLINT.”



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TIPS FOR STAYING IN COMPLIANCE WITH TTHM & HAA5 MONITORING REQUIREMENTS

Total trihalomethanes (TTHM) and total haloacetic acids (HAA5) are two commonly monitored disinfection byproducts. The goal of monitoring TTHM and HAA5 is to reduce potential risk of adverse health effects associated with these compounds. TTHM is the sum of four contaminants: chloroform, bromoform, bromodichloromethane, and dibromochloromethane. HAA5 is the sum of five contaminants: monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid. TTHM and HAA5 monitoring differs in several ways from many other contaminants, which can result in confusion and compliance issues. Here are a few tips to help you stay in compliance.

Where do I sample?

You must sample at the location(s) identified in your Sample Siting Plan, as these sites were selected based on specific criteria. Additionally, Maximum Contaminant Level (MCL) violations for TTHM and HAA5 are calculated as locational running annual averages (LRAA), which means they are calculated for each sampling location. For these reasons, it is important to always sample at the same locations and in accordance with your sampling plan. Failure to do so is a violation of TTHM and HAA5 sampling requirements.

When do I sample?

Depending on your specific TTHM and HAA5 sampling schedule, you may be required to sample quarterly, annually, or triennially. What makes this sampling unusual, is that sampling must be conducted during a specific month each monitoring period. The specific month was selected based on the month likely to represent higher risk. For those on quarterly, sampling must occur during the same month of each quarter (first, second, or third month of each quarter) to ensure sampling is evenly spaced throughout the year. For those on annual and triennial, sampling must occur during the specified month of the year due. Your specific sampling month(s) is identified in your sampling plan. If you sample outside of the assigned month(s), it is a monitoring violation.

What samples do I collect?

Make sure you are collecting the right samples in the right locations. Many supplies must sample for both TTHM and HAA5 samples from every site. However, some supplies sample for TTHM at one location and HAA5 at another. Be sure to check your sample siting plan to ensure you take the correct samples at each site.

What is the deadline to submit results to the MDEQ?

All results are due to the MDEQ no later than 10 days after the end of the

monitoring period in which the samples were collected. Failure to report by the deadline is a violation of regulatory reporting requirements.

What constitutes an MCL violation? An MCL violation occurs if any site exceeds the MCL. MCLs are calculated as a locational running annual average. The MCL for TTHM is 0.080 mg/L and the MCL for HAA5 is 0.060 mg/L.

What are the thermal preservation requirements and how do I ensure my samples meet them?

Samples need to be received at the lab within 24 hours of collection or be at a temperature of less 6° Celsius (42.8° Fahrenheit) when they arrive at the lab to meet the thermal preservation requirements. For more information on how to meet these requirements, go to the DEQ website at www.michigan.gov/drinkingwater. Then select 'Community Water Supply Homepage,' then 'DEQ Water Sampling 101 – Thermal Preservation.' There you will find a video showing you how to pack your samples and some additional information to help you meet thermal preservation guidelines.

What if I have additional questions?

Contact your district analyst or engineer. They are happy to answer questions about this sampling process. See the updated district map in this issue of the WWN to find your current analyst and engineer! 💧

LCR TRAININGS FORTHCOMING

Trainings covering Michigan's updated Lead and Copper Rule are being finalized. Keep your eyes on your email for details in late Winter or early Spring for a MDEQ LCR training near you.





LEADERSHIP RETREAT

Members of the Board and Councils who make up the leadership of the Michigan Section gather each fall to reflect on the activities for the year and begin to plan for the coming year. The retreat is always a lot of work, as well as a lot of fun.

This year, speaker Edward Woods III introduced the concept of adaptive leadership to participants. The group went through the various aspects of the theory and did a couple of exercises to assess their own leadership approach.

The group also went through a future-casting exercise: a way to try to forecast what events may impact the Section and the water sector as a whole. Not surprisingly, emerging contaminants and public trust were at the top of the list.

All of the work done at the retreat helped to shape work plans for next year and will inform as the Section begins updating its strategic plan in late 2019.

If you have thoughts about what is most effecting the water sector, or what the Section can or should do to better serve members, email info@mi-water.org to share your thoughts. 💧



WELCOME NEW MEMBERS OF AWWA

Members who joined between Aug 1, 2018, and Nov 30, 2018.

- Eric Anderson**, Lansing Board of Water & Light
- Jonathon Barancik**, City Of Fenton
- Sandra Barlass**, City of Walled Lake
- Andy Biddle**, City of Saginaw
- William Bohlen**,
Bay County Dept. of Water & Sewer
- Ashley Brendel**, Wightman
- Keosha Brooks**, City of Flint
- Brigid Cain**
- Adrienne Conigliaro**
- Jacob Donahoe**, Infrastructure Alternatives
- Duane Flaska**, Leelanau County
- Rocco Fortura**, City of Huntington Woods
- Melissa Frierson**
- Munassar Ghaleb**
- Kathleen Gillespie**
- Jonathan Greene**, City of Jackson
- Melissa Herbert**, Neogen Corporation
- Chad Houck**, Meridian Township
- Joshua Hough**
- Keon Johnson**
- Garrett Kern**
- Paul Korte**
- William LaRose**, City of Cedar Springs
- Craig Lewis**, Bloomfield Township
- Raymond Nelson**
- Neogen Corporation**
- Bob Nieuwenhuis**, City of Plainwell
- Terese Olson**, University of Michigan
- Marc Rasmussen**
- JT Reno**
- Paul Ripple**
- Ryan Russell**, Prein and Newhof
- Nicole Selais**, Hubbell, Roth & Clark, Inc.
- Jean Talanda**, City of Kalamazoo
Department of Public Services
- Nathan Thomson**, Alpena Township
- Thomas Township**, D.P.W.
- Michael Vanderploeg**,
Fleis & Vandenbrink Engineering 💧

ON THE MOVE

Retirement of Jon Bloemker

Jon started with the state in 1977 and worked for the state his entire career. He held many positions, including district engineer, lab auditor, district supervisor, and engineering unit supervisor. His last two locations worked were in the Saginaw-Bay and Cadillac Districts. Congrats on your retirement!



Tony Cecchini

Tony Cecchini from Infrastructure, Water and Wastewater Sales Specialist at Victaulic to Sales Engineer at Waterworks Systems & Equipment.



Do you have a recent career change to announce? We'd like to feature you! Send promotions, job changes and retirements to Michigan Water Works News Editor Kelly Gleason. 💧

GET SOCIAL WITH MI-AWWA

The Section has a presence on social media including LinkedIn, Facebook, Twitter, and Instagram. Look there for news, share water facts with your social networks, and see photos from Section activities.

And throughout 2019, promotions will be running on our social media channels. Follow us on your platform of choice to save money on trainings, branded items, and more. 💧

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 FROM
American Water Works Association

WHY AWWA UTILITY MEMBERSHIP?

By Andy Chase, AWWA Utility Relationship Manager

Utility membership in AWWA comes with many benefits that are not included with an individual membership. In addition to the benefits individuals receive, AWWA provides utilities with resources to help manage a utility – tools for assessing infrastructure needs, rate-setting, training and certification programs, communicating the value of water service to the public, and opportunities to craft regulatory policy.

I'm Andy Chase, and I'm incredibly proud to be the first Utility Relationship Manager in the 137-year history of AWWA. I joined the Member Engagement & Development team in January 2015, and I was charged with developing AWWA's utility recruitment process. I realized, early on, the power of partnering with AWWA Sections and recruiting volunteers to join me in meetings with utilities and municipalities. Our process: We identify non-member utilities through a variety of sources and group them geographically. I reach out to Section leaders and ask for volunteers to commit one day to visiting utilities with me.

When meeting with utilities, we discuss how each water utility benefits from its AWWA membership differently; for most, at least three areas of value rise to the top.

First, AWWA is the pre-eminent forum for knowledge and solutions to help water professionals – and water utilities – do their jobs better and more efficiently. Through its international and local conferences, peer-reviewed

journal and other publications, and online training and webcasts, AWWA helps its members discover the right technologies, management strategies, and operational tactics to ensure each customer dollar is being spent efficiently and in a way that best protects public health.

Second, AWWA is the entity that produces water industry standards for materials, equipment, and practices used in water treatment and supply. AWWA members have a voice in the creation of these standards, and utility members always have access to the full, updated set. AWWA also produces a robust set of manuals of practice to complement the standards. Members further enjoy substantial discounts on a vast collection of handbooks, reports, and other tools created through the intellectual capital of AWWA's members.

Third, AWWA provides the water sector with a critical voice in Washington, DC, where legislative and regulatory decisions can dramatically affect each of America's more than 52,000 community water systems. Working closely with its utility members, AWWA's Government Affairs group and Water Utility Council bring sound science and the real-life experience of water utilities to the public policy dialogue. AWWA brings critical technical information to the regulatory process and frequently testifies before Congress on legislative and other matters. Utility members stay informed

through regular public affairs, legislative, and regulatory advisories, and a bi-weekly *Water Utility Insider* newsletter.

We've recently had substantial success in AWWA's Southwest Section. The AWWA Membership Engagement & Development Team has been working closely with the Section to recruit new utility members. I've had the pleasure of meeting with 12 utilities with Executive Director Don Broussard, and we are excited to welcome Baton Rouge Water Company, the City of Shreveport, and the City of Monroe, LA, as new utility members. From Arkansas, we welcome Benton/Washington Regional Public Water Authority as new utility members. We also hosted a luncheon in Oklahoma City, an active utility member, and we welcomed the City of Norman and the City of Broken Arrow, OK, as new utility members. Utilities benefit from their utility membership and the Section benefits as well, since a portion of membership dues is returned to the Section for operations to maintain member services locally.

Successes such as these help maintain AWWA as the largest nonprofit, scientific, and educational association dedicated to managing and treating water, the world's most important resource. With its 51,000 members, AWWA provides solutions to improve public health, protect the environment, strengthen the economy, and enhance our quality of life. 💧



CALL FOR ABSTRACTS AND PRESENTATION IDEAS

MI-ACE 2019

The Michigan Section of AWWA is now seeking abstracts and presentation ideas for MI-ACE 2019.

Are you working on an interesting or challenging project? Have you found a way to solve a problem that you think others could benefit from? Did you just save your community money with a chance you've made? The Annual Conference Program Committee is now accepting abstracts and would love to hear from you.

Topic ideas include:

- Emerging Contaminants
- Financial planning and rate setting
- Management issues
- Asset management
- Water quality and sampling methods
- Operations and maintenance
- Water Treatment Processes
- Distribution practices
- Pump and valve maintenance
- Customer service
- Information technology
- Research
- Safety procedures
- Source water or wellhead protection
- Storm water management
- Workforce development
- Or your own fresh idea

Please visit the Section's Annual Conference page to submit your abstract or presentation idea.
www.mi-water.org/?page=MIACE

MARK YOUR CALENDAR

MI-ACE 2019 • September 10-13, 2019
Grand Traverse Resort and Spa • Acme, MI

THE ONE AWWA OPERATOR SCHOLARSHIP

Kyle Tryan, Jack Hughes, Jeff Keown, *The One AWWA Operator Scholarship Committee*

We were proud to award the One AWWA Operator Scholarship again! The recipient of the scholarship was Mike Vukmirovich from the Great Lakes Water Authority. Mike will be using the scholarship to aid him in his pursuit of an F1 water treatment license.

As always, we received many great

applications. The passion of these water workers is always apparent in their essays and recommendation letters and we wish them well in their careers!

For anyone unfamiliar with this scholarship, it is meant to aid water operators in paying for continuing

education and training. Aspiring water operators are encouraged to apply as well. Info and applications can be found on the www.mi-water.org website under the 'Resources' tab in 'Scholarships.' Updated deadline and application info for 2019 should be available by spring. 💧

GREAT LAKES CUP – REGIONAL TAPPING COMPETITION

Each fall, pipe tapping teams from any state bordering one of the Great Lakes are invited to the Great Lakes Cup Regional Pipe Tapping event. This event began in 2013 to bring the Midwest competitors together to help improve the competition and give the teams practice for the national competition held each June. This year's event was held in Tinley Park, IL.

During the competition, teams simulate the installation of a new house water service, which includes installing a copper line and adding an on-off valve at the water main and curb stop. This is all timed, and penalties are assessed for various violations from minor leaks to any safety violations that might occur.

This year's Great Lakes Cup saw some impressive times from many of the teams. On the men's side, the returning champion team from Columbus, OH, defended its title and took the win with a time of 1:18:37 over the second place Michigan Tappers (Lansing, MI, 1:25:28) and third place 4 Horsemen of Arlington Heights (Arlington Heights, IL 1:33:16).

On the women's side, the defending champion team Lansing Lethal Ladies set a new record for the competition, winning with a 2:08:62 run over second place Cranky Bits (Arlington Heights, IL, 2:39:07), who continue to up the ante each year.

Next up for the Michigan teams will be the Joint Expo & Operators Day on February 5 and 6 at the Lansing Center in Lansing, MI. The winners of the competitions will then compete in Denver, CO, for the national titles in June. 💧





GOVERNMENT AFFAIRS UPDATE

The New Year has brought a new Governor, Attorney General, Secretary of State, and a large turnover in the legislature due to term limits. During Summer 2018, MI-AWWA partnered with MWEA to bring on Midwest Strategy Group to provide government relations services. This partnership will help us stay more connected to the ever-changing politics in Lansing.

Two lobbyists at Midwest Strategy Group that we'll be working closely with are Dusty Fancher and Mike Compagnoni. Below you'll find Dusty and Mike's background and contact information, should you have questions about any legislation in Michigan.

Dusty Fancher

Prior to joining Midwest Strategy Group, Dusty had a variety of experience in Lansing tackling infrastructure issues. Her background includes time as a Legislative Director for a Governor,



liaison for MDOT, and as a Senate Policy Analyst on Infrastructure issues.

Dusty has served on several

transition teams for both local and state elected officials and has been listed as one of Lansing's most effective lobbyists by MIRS News Survey. She was instrumental in passage of the last major changes to infrastructure funding.

Dusty received both her Bachelor's Degree in Community Relations and Master's Degree in Resource Development from Michigan State University. She can be reached at 517-853-0537 or at fancher@midweststrategy.com.

Mike Compagnoni

Before joining Midwest Strategy Group, Mike was a Legislative Director in the Michigan House of Representatives.



He worked extensively in several House committees, including Transportation and Infrastructure, Local Government,

and Natural Resources, covering issues relating to water infrastructure.

Mike Compagnoni is known for his expertise related to business development, transportation and infrastructure, local government, insurance, and the auto industry. Mike also has broad campaign experience, having previously staffed elections at every level, from federal to state and local.

Mike attended Albion College and has a degree in Political Science with a concentration in Public Policy from the Gerald R. Ford Institute of Public Policy and Service. He can be reached at 517-853-0537 or at compagnoni@midweststrategy.com. 💧

ENTER THE TASTE-OFF – YOU CAN'T WIN IF YOU DON'T PLAY

By Aaron J. Davenport

Are you tired of negative press about our industry? Me, too. Here's the thing: every one of you reading this works tirelessly to provide safe, reliable drinking water. I know it and you know it. But, do the people in the communities we serve know it? Nope. They take you, and your utility, for granted. Our industry is a victim of its own success ... great water has just always been there, right? It's easy. It's not their fault – no-one takes the time to remind them how precious water is and how hard you work to bring it to them. I can feel you nodding as you read this. Here's the thing: if you really want to get some attention in a positive way, you need to make a little noise. So, what are you going to do? You're gonna win the MI-AWWA State Taste-Off. But where do you start? Simple, begin at the beginning: Spring Regionals. Now, I know what you're thinking...

- *Our water isn't anything special:* WRONG ... chances are it isn't special to you because you have it every day.

You might be surprised to find out that you have great water that even you take for granted.

- *But So-and-So always wins:* C'MON ... that's your excuse, someone else seems unbeatable so you won't even suit up? That's weak ... you're better than that.
- *It's probably hard to enter:* NO, NO, NO ... it's as easy as bringing a mason jar of your finest room-temp H₂O (straight from the plant tap) to your AWWA Spring Regional Meeting – a place you are already going.



Simple Equation For Competition: Mason Jar + Your Awesome Water = A Chance At Glory.

- *But we've never competed before:* WELL, WHY NOT START THIS YEAR... Look, it's easy to compete, takes place at a meeting you are probably already attending, and you have nothing to lose. Plus, the Regional Champion plaques are cool looking, and the State Champion trophy is epic. Who knows, you might just win your first championship in 2019. After all, every championship starts with one first win. Be proud of the water you make and join in the competition. You can't win if you don't play, so get in the game! 💧



The State Champ Trophy...Admit It! YOU WANT ONE OF YOUR OWN!

YOUNG PROFESSIONALS UPDATE

The Young Professionals have been extremely busy over the past few months. They have participated in sports outings, plant tours, MI-ACE, member retention and placement mixers, as well as being involved with planning a holiday party.

In September, the YPs hosted a joint event with MWEA and attended a Detroit Tigers game. There was a networking mixer prior to the game to give everyone a chance to introduce themselves and hear about upcoming opportunities for involvement in the section. These events are a great way to relax and meet other professionals in the field. Everyone had an excellent time, and it was great to include MWEA members as well.

The YPs were also extremely active at MI-ACE this year. There was a YP/ New Member breakfast to kick off the conference, with record-breaking attendance. Attendees were able to put faces to names, learn about upcoming events and ways to get involved, and introduce themselves to other members. In addition to the breakfast, the YPs also present at every conference. In the past, we have presented 'News From the Field,' which was a compilation of construction projects completed over the past year. While the YPs loved this segment, it became difficult to obtain submissions for the project. This year, we tried something new. One of the main issues facing the industry is the aging workforce. The YPs touched on this subject and highlighted ways to attract young professionals, as well as how to develop and retain them. If anyone has an interesting topic and would like to present at 2019 MI-ACE, please contact Jenna Karazim at jenna@karazim.us.

A large number of members and non-members recently toured the South Haven Water Plant. Attendees learned about the history of the plant, the treatment process, the daily laboratory testing that is done, and even earned CECs for attending. Following the tour, the group headed to a local brewery for a brewery tour and a chance to ask questions about their water and wastewater treatment processes. Attendees really enjoyed this



event, and were particularly interested in routine testing done at the brewery, as well as specific qualities they look for in their source water. We are looking forward to the next tour in Spring 2019! If you would like to volunteer your plant as our next destination, please contact Jenna Karazim at jenna@karazim.us.

The YPs have hosted three member retention and placement mixers across the state over the past few months. Mixers were held in Grand Rapids, Lansing, and Detroit, with the overall goal of member recruitment and retention, as well as placement of non-active

members into a committee or council. Members and non-members were invited to attend and learn about available committees, councils, ways to get involved, or general information about the section and benefits for joining for those that weren't members yet. Each of these events produced new volunteers and individuals interested in getting more involved with the section!

As always, all members are welcome at all YP-hosted events. Also, thank you to all of our sponsors throughout the year, we wouldn't be able to host many of these events without your support. 💧



WHAT IS THE MICHIGAN WATER ASSET MANAGEMENT COUNCIL?

By Kelly Green, Infrastructure Coordinator, DEQ
MWEA/MI-AWWA Joint Asset and Infrastructure Management (AIM) Committee

In June of this year, *Public Acts 323 and 324* of 2018 were signed into law by Governor Snyder, creating the Michigan Infrastructure Council (MIC) and the Water Asset Management Council (WAMC), respectively. The vision of the creation of the MIC and WAMC stemmed from the 21st Century Infrastructure Commission's idea of leading the nation in creating infrastructure systems that include a collaborative and integrated asset management and investment approach to enhance the quality of life in Michigan.

Per the legislation, the WAMC is housed under the MIC, with support being provided by the Department of Environmental Quality (DEQ). Not wasting any time given impending legislative deadlines, both the MIC and WAMC have gotten off the ground running. The initial nine WAMC voting member appointments were made by MIC at their first two meetings held in September. Charged with advising the MIC on statewide water asset management strategy and processes, the WAMC held their first successful meeting on October 18, 2018, where Sue McCormick, Great Lakes Water Authority, was elected council chair and Scott House of East Lansing elected vice-chair.

As the discussions of asset management in water infrastructure continue around the state, the role of WAMC will be to lead, guide, and assist communities in the development and/or enhancement of their drinking water, wastewater, and stormwater asset management programs. By October 1, 2019, the WAMC is charged with developing a template(s) that contains requirements for information to be included in an asset management plan, as well as establishing a schedule for submission of those local asset management plans to the council. Similar to the DEQ's existing asset management program guidance, the WAMC asset management template must, at a minimum, contain the following items:

- Asset Inventory.
- Level of service analysis.
- Anticipated revenues and expenses.
- Performance outcomes analysis.
- Description of plans to coordinate with other entities.
- Proof of acceptance by local governing body.

Other tasks of the WAMC include submittal of an annual report to MIC on asset condition and investment including a summary of asset management plans received, recommendations

on water infrastructure goals, and a discussion on how local utilities are meeting these goals. Additional council responsibilities include identifying training needs to develop proficiency in using a multi-asset management system for asset owners and developing a statewide asset condition measure. These goals are especially important when considering the coordination and collaboration that will be required with the already established Transportation Asset Management Council (TAMC). Speaking the same 'asset management' language was a recommendation cultivated by the experiences and observations of the regional infrastructure pilot program created by the 21st Century Infrastructure Commission.

Further information on both the MIC and the WAMC including a list of appointed voting members and future meeting dates can be found at www.michigan.gov/mic.

If you would like more information on the joint MI-AWWA/MWEA AIM Committee, please contact Committee Secretary Maureen Wegener (maureen.wegener@c2ae.com) or Co-Chairs Deann Falkowski (defalkowski@ftch.com) and Lindsey Kerkez (lindsey.kerkez@ohm-advisors.com). 💧

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MI-AWWA 2019 TRAINING REGISTRATION FORM

Course Date _____ Course Name _____ Course Location _____

First Name _____

Last Name _____

Organization _____

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*Email _____ AWWA Member Number _____

** Pre-event information is only sent via email.*

(Required to receive member discount)

Please check this box if you would like to receive exhibit or sponsoring company materials via email.

Registration and Cancellation Policy

You must login or include your member number to receive your member discount. Refunds will not be issued for individuals registering for an event at the non-member rate who would have otherwise been eligible for the member discount. Refunds will not be issued for individuals registering for an event at the full rate who would have otherwise been eligible for a promotional discount. Registration substitutions within the same organization are allowed; however, registration rates will be calculated according to AWWA membership status. Written cancellations received at least seven days prior to the start of the event will be eligible for a refund less a \$35 processing fee. Cancellations received less than seven days from the start of the event will receive no refund. Attendance at, or participation in MI-AWWA Trainings, Conferences, Social Events and other Section activities constitutes consent by the registrant to permit American Water Works Association – Michigan Section to use and distribute both now and in the future the attendee's image and/or voice in photographs, videos, and audiotapes in print or electronically of such events and activities for any purpose consistent with the mission of the Section without limit or liability.

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MICHIGAN WATER ACADEMY® UPDATE



We continue the development of The Michigan Water Academy and expect classes will be scheduled beginning July 2019.

During the winter months, content is being finalized and the curriculum shaped to fit the vision of the Academy. As a reminder, the Michigan Water Academy is designed to help sharpen operator and manager skills to yield the best water professionals possible. Each class will be limited in size and taught using the latest best practice methods in adult learning, including hands on activities, group exercises, and periodic assessments to gauge learning. We are confident that students who go through the Academy will be ready to take on the challenges and responsibilities of today's water professional.

Look for details in the Spring issue of *Michigan Water Works News*, along with dates of scheduled classes.

Thank you to all of those who have contributed their knowledge and expertise to the development of this exciting new training program. 💧

MI-AWWA ONLINE

There are a number of resources on the Section's website.

Under the tab RESOURCES, you will find the Section magazine *Michigan Water Works News*, a link to AWWA OpFlow, information on legislation and regulation in Michigan, information on scholarships and fellowships, the Section's online store, information on advertising, and related links.

This tab helps link you to information you might need to address a growing problem or find the latest information on an emerging issue. 💧



SPRING REGIONAL MEETINGS ACROSS MICHIGAN

Each spring, MI-AWWA holds regional meetings that focus on water treatment. These are a great way for water operators to stay current on the latest issues facing the water sector.

Register online at www.mi-water.org.

A special thank you to members of the Regional Meeting Planning Committee and the Upper Peninsula Coordinating Committee for their work in compiling these programs. 💧



SPRING REGIONAL MEETINGS
Mark your calendar
for spring regional meetings, held in **FIVE** locations throughout Michigan.

February 2019

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
				1
4	5	6	7	8
	Joint Expo & Operators Day <i>Lansing</i>			
11	12	13	14	15
18	19	20	21	22
		Cross Connection Seminar – Basic <i>Lansing</i>		
25	26	27	28	
	Water Treatment I Short Course <i>Gull Lake</i>			

March 2019

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
				1
4	5	6	7	8
	Water Chemistry <i>East Lansing</i>			
11	12	13	14	15
	Basic Math & Hydraulics Short Course <i>Gull Lake</i>			
18	19	20	21	22
25	26	27	28	29
	Distribution Short Course Limited Treatment Short Course <i>Tustin</i>			

April 2019

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1	2	3	4	5
8	9	10	11	12
	Spring Regional Meeting <i>Livonia</i>	Spring Regional Meeting <i>Kalamazoo</i>		
15	16	17	18	19
	U.P. Water Works Institute <i>Harris</i>			
22	23	24	25	26
	Spring Regional Meeting <i>Mt. Pleasant</i>	Spring Regional Meeting <i>Gaylord</i>		
29	30			

May 2019

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
		1	2	3
6	7	8	9	10
	Water Bacteriology <i>East Lansing</i>			
13	14	15	16	17
			Lab Practices Seminar with MWEA <i>Lansing</i>	
20	21	22	23	24
27	28	29	30	31



June 2019

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
3	4	5	6	7
10	11	12	13	14
AWWA ACE Denver, CO (Starts June 9)				
17	18	19	20	21
24	25	26	27	28

August 2019

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
			1	2
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
Basic Math & Hydraulics Short Course Tustin				
26	27	28	29	30

September 2019

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
2	3	4	5	6
Cross Connection Seminar – Advanced Lansing				
9	10	11	12	13
MI-AWWA Annual Conference and Exhibits Traverse City				
16	17	18	19	20
Health and Safety Seminar TBD				
23	24	25	26	27
Cross Connection Seminar – Advanced U.P. Distribution Seminar Harris				
30				

October 2019

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	1	2	3	4
Fall Regional Meeting Livonia				
Fall Regional Meeting Kalamazoo				
7	8	9	10	11
Water Distribution System Short Course Limited Treatment Short Course Gull Lake				
14	15	16	17	18
Water Treatment Short Course II Tustin				
21	22	23	24	25
Fall Regional Meeting Mt. Pleasant				
Fall Regional Meeting Gaylord				
28	29	30	31	



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From Kenny's near 100-year history, and LiquiForce's revolutionary lateral solutions, to Inliner's earned position of national prominence in the CIPP industry: the convergence of these three companies will undeniably reshape the trenchless rehabilitation market.

Granite's vertical integration allows us to bring our trenchless renewal capabilities full-circle. Our companies cover the gamut of rehabilitation technology development, design and installation—we even manufacture the CIPP products that we install. This allows us to provide **Single Source Accountability** to our clients.

Granite Inliner. Reshaping the future of CIPP and pipe rehabilitation in America and Canada, starting in 2018.

As of June 2018, Granite Inliner became a wholly owned subsidiary of Granite Construction (NYSE:GVA) as part of its Water and Mineral Services Group. Granite is one of the nation's largest infrastructure contractors and construction materials producers. Granite specializes in complex infrastructure projects, including transportation, water and federal contracting, and is a proven leader in alternative procurement project delivery. For more information, visit graniteconstruction.com.

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