



MI-AWWA's 85th Annual Conference & Exhibits Presentation Schedule

Wednesday, September 13

8:05 am - 8:20 am

1.1

Welcome and Awards

Come celebrate those receiving tenure awards.

8:20 am - 9:00 am

1.2

Water 2050

Christine Spitzley, *OHM Advisors*

AWWA's Water 2050 initiative seeks to establish a long-term vision of the future of water. Ultimately, Water 2050's influence will extend beyond the water community, fostering partnerships and cross-sector collaboration for mutual and global benefit. Water 2050 explored Sustainability, Technology, Economics, Governance and Social Demographics. Learn the conclusions of this exploration and begin the discussion of how we can apply Water 2050 to the challenges and opportunities in Michigan.

9:00 am - 9:30 am

1.3

A City Manager's Perspective

James Freed, *City Manager Port Huron*

Most community water supplies have a decision making person or body that governs the water budget. Hear from the host city about the challenges they face and the choices they've made to ensure clean safe water for everyone in Port Huron.

9:30 am - 10:00 am

1.4

Michigan Water Infrastructure Condition and Future Needs - Water Asset Management Council

Carrie Cox, *Oakland County Water Resources Commissioner's Office*

The presentation will outline the current condition of water assets across the state and the future water infrastructure needs along with tools and training available to assist utilities on their asset management journey.

10:20 am - 10:50 am

1.5

MiWARN: A Necessary Option in an Emergency

Wayne Jernberg, *City of Grand Rapids Water Systems*

Tim Neumann, *Michigan Rural Water Association*

10:55 am - 11:25 am

1.6

Safe Water In Ecuador Updates

Mark De Haan, *Life Giving Water International*

Julie Wildschut, *Calvin University*

A new water quality method was developed by a local organization in Ecuador to consistently improve water quality for rural communities in Andean countries of South America. Many of these communities with distribution networks are not chlorinated, increasing the risk of water-borne pathogens. This new technique builds on the strengths of traditional subterranean spring captures while employing several design improvements that will be highlighted in the presentation. Case studies were performed and water quality data was collected that supports this new method that consistently provides high-quality water with substantially reduced levels of water-borne pathogens compared to the traditional spring capture methods.

1:00 pm - 1:30 pm

2.1

Operational Challenges at the Lake Huron Water Treatment Plant while Isolated from the GLWA Water Transmission System

James Messineo, PE, *Arcadis*

Andrea Miller, *Great Lakes Water Authority*

The Lake Huron Water Treatment Plant (WTP) was isolated from the GLWA water transmission system due to a 120-inch water main break, creating a need for new operational procedures to be quickly developed and implemented to maintain water quality.

1:35 pm - 2:05 pm

2.2

Multi-sector Coordination to Maximize Water System Improvements

Lindsey Kerkez, *Southeast Michigan Council of Governments*

Rachael Barlock, *Southeast Michigan Council of Governments*

The coordination of infrastructure projects across public and private sectors is a long-standing challenge. It is critical for these different asset owners to coordinate infrastructure projects to leverage funds, save on long-term costs, and minimize disruptions to local residents. SEMCOG is working across infrastructure owners to develop a planning framework for early coordination and project selection. Institutionalizing this process in alignment with existing public transportation planning process will identify early opportunities for water infrastructure systems to leverage strategic investments. Water utilities can take advantage of that construction process to inspect, repair, and replace their infrastructure at the same time.

2:10 pm - 2:40 pm

2.3

Microplastics: Human Health Impacts and Source Reduction

Mala Hettiarachchi, *Environmental Resources Group*

Microplastics are plastic particles ranging in the size from 1 micrometer to 5 millimeters. They enter the aquatic, terrestrial, and atmospheric environments thru various transport mechanisms. Microplastics enter human bodies via ingestion or inhalation or dermal contacts and may create negative human health impacts. Recent peer reviewed studies demonstrate the detection of microplastics in human blood, vascular tissues, placenta, and lung tissues. Reduction of macro and microplastics that enter the environment is one of the best methods available to protect the human health.

2:45 pm - 3:15 pm

2.4

Affordability Update

Jaime Fleming, *City of Wyoming*

This presentation will highlight the legislative landscape, policy activities, education opportunities, and partnership building that MI-AWWA has engaged in this year.

1:00 pm - 1:30 pm

3.1

Finances, Affordability, and Rate Setting for Small Communities

John A. Sullivan, *Michigan Technological University*

Financial basics for the small community, the Utility Financial Statement, the balance sheet, and cash flow statement. A discussion and comparison of depreciation of assets versus asset management planning. Discussion of utility budget preparation, water and wastewater rate analysis, and reserve fund contributions. The use of financial ratios to track financial viability. The sources of funding for major infrastructure projects.

1:35 pm - 2:05 pm

3.2

Conscientious Communication with Community

Samarhia Giffel, *City of Grand Rapids Water Systems*

Izamar Contreras, *City of Grand Rapids Water Systems*

This presentation will give you a guide to creating a communication and engagement program for your community. The City of Grand Rapids will show you how the conscience nature of past practices can disrupt innovation. Are you prepared to go through steps to help you break away from past practices and build steps that will instill trust? Be prepared for an interactive, high-energy session intended to move you to impact your community. Come prepared to share innovative ideas and obstacles to avoid.

2:10 pm - 2:40 pm

3.3

Trends In Project Finance and Funding

Andy Campbell, CPA, *Baker Tilly Municipal Advisors*

In-depth discussion of project funding possibilities including the State Revolving Fund, USDA Rural Development, Broker and Banks. Pros and cons of each option, interest rates, financial differences, process differences, grants, etc. In addition, discussion regarding proactive planning in terms of user rates and financial cash flows to best position your community for funding and stability going forward. Lastly, a discussion as to how to better cash fund the utility system to avoid debt, when possible.

2:45 pm - 3:15 pm

3.4

OSHA Safety Compliance Training

David Maloney, *CGS Safety Training, Inc.*

Get you Supervisors and Operators up to date on OSHA and MIOSHA requirements. PPE, Lockout, Ladder Safety and more will be covered in gruesome detail. Be prepared for that MIOSHA inspection....because it's coming.

1:00 pm - 1:30 pm

4.1

In The Loop - Corrosion Control Evaluation for the City of Saginaw

Susan McGrattan, *Hazen and Sawyer*

Tia Sova, *City of Saginaw Water Treatment*

In response to the Lead and Copper Rule (LCR) revision that will take effect in 2025 and lower the lead action level (AL) from 15 ppb to 12 ppb, the City of Saginaw plans to target a trigger level of 5 ppb in the future and is exploring strategies to achieve this. The City is also interested in learning whether transitioning from the current pH and alkalinity adjustment strategy to an orthophosphate-based approach could reduce lead levels even further below the action level (AL) than they currently observe. The corrosion control study was arranged using equipment

available at the Saginaw WTP and focused on observing the potential impacts of adding an orthophosphate corrosion inhibitor to the current treatment process, with the goal of reducing 90th percentile lead levels to 5 ppb or less. An existing pipe loop apparatus at the Saginaw WTP was modified by plant staff to incorporate an additional loop harvested in February 2023 from the distribution system for testing to observe changes in the amount of lead and copper transferred from the loops to the effluent as a result of simulated adjustments in the treatment process and plant conditions. Preconditioning was followed by weekly lead and copper sample collection and analysis under three conditions: 1) one month of baseline testing to establish metrics for comparison, 2) one month of orthophosphate addition at varying doses, and 3) two months of pH adjustment.

1:35 pm - 2:05 pm

4.2

Surveying Costs on the PFAS Roadmap

Daniel Farley, *Black & Veatch*

This presentation will present the results of the cost model developed as part of AWWA's Water Infrastructure and Technology Action Fund Project 56. It will explore costs of individual and national treatment costs using several scenarios based on actual PFAS contamination cases and validated by actual treatment costs. Capital, annual recurring, and life-cycle costs will be presented for each technology reflecting the level of treatment required to comply with the anticipated PFAS rule under each scenario. Developing methods to rapidly assess and compare the best performing adsorptive media, and important non-monetary factors affecting technology selection for a particular water source will also be reviewed.

2:10 pm - 2:40 pm

4.3

PFAS Contamination in Michigan: Impact of Regulation and What Utilities Can Do

Michael DiGiannantonio, *SL Environmental Law Group PC*

Harmful PFAS substances are an urgent public health and environmental issue. The EPA is actively implementing its Strategic Roadmap, including the release of federal standards for PFAS in drinking water. This presentation will discuss the impact of the new regulation on Michigan water suppliers, what recourse utilities have to cover clean-up costs, updates on current legal action that many water systems are already taking to shift costs to PFAS manufacturers, and the implications for other water providers who may be interested in it.

2:45 pm - 3:15 pm

4.4

Planning your Future Workforce

Pat Staskiewicz, *Ottawa County Road Commission - moderator*

Molly Maciejewski, *Ann Arbor Public Services*

Dan Sorek, *Prein & Newhoff*

Join Pat Staskiewicz as he leads a discussion with Molly Maciejewski of Ann Arbor and Dan Sorek of Prein & Newhoff about their respective approaches to helping build their future workforce. Building both an informal and program to raise awareness about careers in public works and the water sector takes a bit of vision and a lot of patience. Listen to the discussion to gain ideas for how you might be able to improve your organization's workforce development success.

3:30 pm – 4:35 pm

5.1

From a Global to Community Perspective

Paul Rush, *New York City Department of Environmental Protection – Bureau of Water Supply*

Paul Rush, AWWA Board member, will provide an overview of trends happening in the water sector around the world and will provide a synopsis of research being conducted by the Water Research Foundation. Then, he will dive into the details of a large repair project happening in New York City, which delivers more than 1 billion gallons of water per day.

Thursday, September 14

8:30 am - 9:00 am

6.2

Lessons from the Great Lakes News Collaborative

Lester Graham, *Michigan Radio - The Environment Report*

Through a grant, a unique partnership between Michigan Radio, Bridge Magazine, Great Lakes Now and Circle of Blue was created to focus on stories in the Great Lakes Region around water affordability, water quality, aging infrastructure, and source water protection. Reporter Lester Graham will share highlights as well as lessons learned from stories done through the Collaborative.

9:00 am - 9:30 am

6.3

Hot Topic

MI-AWWA Leadership

The MI-AWWA leadership join together to discuss the latest challenges facing the water sector in Michigan. A game show style session, listen as the moderator throws rapid fire questions to members of the MI-AWWA leadership

9:35 am - 10:05 am

7.1

Detroit River Phytoplankton

Balvinder Sehgal, *Great Lakes Water Authority*

Phytoplankton communities are sensitive bioindicators of change in aquatic systems, so they can be used as a measure of aquatic ecosystem health. The challenges Harmful algal blooms (HABs) pose has increased interest in studying phytoplankton in regions such as the Great Lakes. This study generates an update on the Detroit River phytoplankton community, compares recent findings with published historical Detroit River phytoplankton records and identifies possible Detroit River abiotic factors that may cause shifts in Detroit River phytoplankton communities.

10:20 am - 10:50 am

7.2

GLWA Pilots New Opportunities at Lake Huron for Research, Training, and Innovation

Dienye Tolofari, *Great Lakes Water Authority*

Denise Funk, *Brown and Caldwell*

The Great Lakes Water Authority (GLWA) has built a new water innovation center/pilot plant at the Lake Huron Water Treatment Plant (LHWTP) for training, research, and innovation. This project was delivered through a fixed-price design build contract with Brown and Caldwell. The presentation will share how this facility was developed, designed, constructed, and commissioned and the utilization of the facility for applied research, operator training, and innovation purposes. It will also share the initial pilot testing that will be embarked upon by GLWA.

10:55 am - 11:25 am

7.3

LBWL Dye WCP Lime Slaker Upgrade 2023 – DWSRF Compliance – It Takes a Village

Emily Schlanderer, *Black & Veatch*

Dwayne Loper – *Lansing Board of Water and Light*

The Lansing Board of Water & Light (BWL) secured funding support through the Drinking Water State Revolving Fund (DWSRF) program to complete to upgrade the lime slaking equipment at the John F. Dye Water Conditioning Plant. BWL retained Black & Veatch to complete design and bid phase services associated with this critical capital improvements project. By working closely

and collaboratively, BWL and B&V went from kickoff to 90% deliverable to EGLE in 2.5 months and are looking forward to construction this fall.

9:35 am - 10:05 am

8.1

Strategic Planning for Small Systems

John A. Sullivan, *Michigan Technological University*

Attendees will learn how to construct a strategic plan for their system and how to assess the capacity and strategic position of their utility. Related topics covered include Effective Utility Management, analytical tools to assess management, financial, and operational functions, and how to use benchmarking.

10:20 am - 10:50 am

8.2

Water Partners

Jaime Fleming, *City of Wyoming*

The panel will focus on topics such as: How to identify areas of convergence and tension How to lean in to "hard" conversations to build relationships and trust How sharing information and personal experiences can help build investment and shape policy How to communicate effectively about water, infrastructure, and affordability How to create meaningful community engagement and support for water.

10:55 am - 11:25 am

8.3

WaterOperator.org - Online Support and Resources for Water & Wastewater Operators

Hideyuki Terashima, *University of Illinois*

WaterOperator.org provides free resources from nearly 900 organizations (federal and state agencies, technical assistance providers, associations, etc.) that serve the water and wastewater industry. There are links to over 15,000 resources (handbooks, videos, manuals, guides, and websites) that cover every aspect of operations, compliance, capacity development, regulations, and best practices for both water and wastewater operators. The calendar provides links to every operator event in Michigan that provides continuing education credit all in one place. All information is free and publicly available for download. Additional resources include information about water industry careers, a free class about managing your groundwater supply wells and source water protection for groundwater aquifers (2 CEU's in Michigan), and a newsletter that provides useful links to vetted information every 2 weeks.

9:35 am - 10:05 am

9.1

Water and Wastewater Policy Update

Mike Compagnoni, *Midwest Strategy Group*

Hear from Midwest Strategy Group about the state of water and wastewater policy in Michigan and how factors such as term limits and the turn of the majority have impacted the legislation that effects Michigan professionals most.

10:20 am - 10:50 am

9.2

Private Well Study near Retired Power Station

Molly Reeves CPG, CPESC, HDR

A groundwater investigation has been conducted to evaluate the potential for groundwater to be impacted by the Coal Combustion Residuals (“CCR” or “ash”) impoundments at a retired power station in Lansing. Over 50 private wells were sampled with the primary focus being on boron, lithium and molybdenum as these are commonly associated with coal ash. Other water quality parameters were analyzed to compare with analyses conducted at monitoring wells on the power station site.

10:55 am - 11:25 am

9.3

Valve Exercising 101: A Key Practice for Water Utilities to Ensure Optimal Performance and Water Quality

Deryck Freudeman, *Xylem - Wachs Water Services*

Water distribution system infrastructures are aging and becoming less reliable, leading to increased costs, risks and reduced customer satisfaction. To address these challenges, many utilities are initiating asset inventory programs that use proven management strategies to improve efficiency and reduce failures. Some utilities have teamed up with experts in asset assessment to kick-start their renewal program, resulting in immediate improvements. These programs aim to document assets and improve operational intelligence to establish sustainable, predictable, and dependable system performance. The end game is to create a well-defined program that can be sustained by the utility.

1:35 pm - 2:05 pm

10.1

CSI: Fort Gratiot (GLWA’s Forensic Investigation of the 120-inch Transmission Main Failure)

Scott Jauch,

Olivia Olsztyń-Budry, *Great Lakes Water Authority*

Jerrold Wade, *Great Lakes Water Authority*

Great Lakes Water Authority (GLWA) owns one of the largest Prestressed Concrete Cylinder Pipe (PCCP) inventories in North America. Since leasing the system from Detroit Water and Sewer Department (DWSD) in 2015, GLWA has experienced multiple high-profile failures. In August 2022, GLWA experienced a main break on the largest transmission main in their system, their 120-inch PCCP transmission main, located in Port Huron Michigan and constructed in late the 1960’s. This paper will focus on both the emergency repair, as well as the forensic investigation into the failure, which included onsite investigation and assessment of more than four miles of

the 120-inch water main. In addition to physical assessment of the pipeline, GLWA completed laboratory material analyses and review of structural information to determine root cause of the failure.

2:10 pm - 2:40 pm

10.2

How GLWA is Using Applied Science and Innovation to Improve and Extend the Life of Their Linear Assets

Susan Donnally, *HDR*

Graham Bell, PhD, PE, *University of Tennessee*

John Norton, PhD, PE, *Great Lakes Water Authority*

The Great Lakes Water Authority (GLWA) strives to be an industry leader when it comes to management of their buried infrastructure. This is evident based upon the recent implementation of their Linear System Integrity Program (LSIP) which is focused on maximizing the life of their water transmission and wastewater collection piping through proactive assessment and repair. For the past five years, GLWA has been partnering with the University of Michigan (UM) and Wayne State University (WSU) to advance the pipeline management industry through a collaborative research effort through the LSIP. The effort has included piloting of several non-invasive techniques for managing their transmission system, which will allow them to collect important data on the condition of their buried infrastructure, while minimizing the impact to their member partners. This paper will discuss how the collaborative research efforts by GLWA with UM and WSU may result in overall cost savings for the LSIP, as well as additional reliability within their transmission system.

2:45 pm - 3:15 pm

10.3

Evaluation of Tank Mixing for Water Quality Improvements for the City of Saginaw

Ariana Wade, *Fishbeck*

The use of tank mixing systems for improved water quality will be discussed, including mixing types and applications. Evaluation of tank mixing for TTHM reduction for the City of Saginaw will be discussed for both ground storage and elevated storage. Consideration was given to location of mixing relative to various water plant treatment processes for mixing of tanks located on the treatment plant site. Constructability and cost were other factors considered. Estimated impacts to TTHM reduction will be presented.

1:35 pm - 2:05 pm

11.1

Lansing Board of Water & Light Wellfield Condition Assessment Program - Data Wrangling and Tool Development

Matthew Coulthard, PE, *Black & Veatch*

Lansing Board of Water & Light continues to prioritize condition assessment and implementing measures to ensure their water production assets are maintained and water is provided to their

customers. Black & Veatch has proudly been a partner in these efforts since 2019, including the latest phase of evaluating BWL's supply wells. This phase culminates with development of tools to organize the myriad of data and present in digestible and meaningful ways to assist BWL in planning and improvement efforts now and into the future.

2:10 pm - 2:40 pm

11.2

The Deep End: Learning to Swim not Sink in Water

Rachel Zywiczyński, *City of Grand Rapids Water System*

Are you a manager who wants to invest in your new hire's water knowledge base, but can't seem to find the time to teach them the basics? Are YOU a new hire wishing your boss would throw you a life ring to save you from drowning in the deep end that is the learning curve of this industry...consider this session your own personal life jacket.

2:45 pm - 3:15 pm

11.3

Inflation Reduction Act (IRA) Project Funding Opportunities

Andy Campbell, CPA, *Baker Tilly Municipal Advisors*

The Inflation Reduction Act (IRA), signed in August 2022, brought sweeping changes to how water and wastewater utilities evaluate project opportunities as United States continues to push the energy transition. The IRA is the largest energy incentive legislative effort in U.S. history, providing unique opportunities for public and private utilities. These tax credits can total as much as 50% or more of the qualifying project costs. Examples of qualifying projects are solar for water or wastewater treatment plants, waste energy recovery for wastewater treatment plants, and more. This presentation will provide an overview of the IRA, the utility sector's approach and general trends as it relates to the IRA in the early stages

1:35 pm - 2:05 pm

12.1

TBD

2:10 pm - 2:40 pm

12.2

Effectively working with underserved communities

Bonnifer Ballard, *MI-AWWA*

Damon Garrett, *Metro Consulting Associates*

A discussion about the unique factors of working with underserved communities.

2:45 pm - 3:15 pm

12.3

Tapping into the Urban Water Cycle for Youth Education Initiatives

Hillary Caron, *City of Grand Rapids Water System*

The MI-AWWA/MWEA Youth Education Committee is dedicated to making access to water education equitable and engaging for all. Post-pandemic, the Committee has designed and implemented several water education materials and tools for water professionals to utilize. These include educational posters, a virtual water classroom, and a traveling water festival kit!

3:30 pm - 4:35 pm

13.1

Constructive Conversations with Community: Learning from Experience

Jennifer Read, *University of Michigan Water Center*

Samarhia Giffel, *City of Grand Rapids Water Systems*

Kelsey Cooke, *Oakland County Water Resources Commissioner's Office*

Pastor Douglas P. Jones, *Greater Pontiac Community Coalition*

Wende Randall, *Kent County Essential Needs Task Force*

In a recent (U Michigan 2021) report examining statewide water affordability, key stakeholders representing community groups, water utilities, and municipal and state government shared their experience, expertise, and observations about water affordability and revealed often starkly differing perspectives. This panel will tackle the importance of restoring trust between community and utility -- why that trust is important, what value utility leaders and community members take from renewed/restored trust, and its overall importance to the holistic operation of the water service enterprise in a given community. Building on the affordability discussion at MI-ACE 2022, this panel session brings together utility leadership and community representatives to discuss the importance and operational value of investing scarce resources into deliberate and ongoing community engagement.

Friday, September 15

8:05 am - 9:05 am

14.1

Great Lakes Water Authority's Response to a Water Main Break on a 120-inch Water Transmission Main

James Messineo, PE, *Arcadis*

Cheryl Porter, *Great Lakes Water Authority*

Michelle Zdrodowski, *Great Lakes Water Authority*

Tod King, *Great Lakes Water Authority*

Terry Daniel, *Great Lakes Water Authority*

Biren Saparia, *Great Lakes Water Authority*

GLWA's ability to successfully manage an unprecedented 120-inch water transmission main failure connecting its Lake Huron Water Treatment Facility (WTF) to its member partner communities in the northern most section of its water service area. The obstacles, solution development, and implementation will be examined for each facet of GLWA main break

including member communities, operations of its WTFs and water system, execution of the repair and how it was all communicated with member partners and the public.

9:05 am - 9:35 am

14.2

Engineering Ethics

Bill Fritz, *City of Rochester Hills*

Michigan Licensed Professional Engineers are required to earn at least two hours of continuing education in ethics during the 24 month renewal period. This presentation will satisfy 30 minutes of that two hours.

9:35 am - 10:05 am

14.3

Building Redundancy and Reliability into the City of Flint's Drinking Water System

Jason Kenyon, *Wade Trim*

The City of Flint continues to rebound from the 2014 public water crisis with completion of needed improvements to their City-wide water system infrastructure. One major objective, to build long-term redundancy and reliability into the City's water system, was achieved in early 2022 with the construction of the Secondary Water Supply. The City, in partnership with the State of Michigan, GLWA, Genesee County and the Karegnondi Water Authority (KWA), constructed a new 5.5-mile pipeline to connect to a secondary water source. The new connection included infrastructure modifications for water blending at the City's water treatment plant as well as upgrades for flow monitoring and control, metering, instrumentation and SCADA for operations and joint monitoring by the City, County and GLWA. This presentation will highlight the history, key issues, challenges, and the stakeholder collaboration that took place over the multiple phases of the project from concept to design to construction to operation.

10:30 am - 11: 00 am

14.4

Detroit Water and Sewerage Department's Accelerated Lead Service Line Replacement Program

Bryan Peckinpaugh, *Detroit Water and Sewerage Department*

The Detroit Water and Sewerage Department (DWSD) estimates there are more than 80,000 lead service lines delivering water to homes in Detroit. It has worked aggressively to develop a plan to replace those service lines - locating the lead service lines, securing funding to replace them, and enacting a service line replacement program that simplifies the process for residents to participate. These steps will allow DWSD to be well-positioned to comply with EGLE's 2040 deadline for replacing all lead service lines in Michigan.

11:00 am - 11:30 am

14.5

EGLE Regulatory and Department Update

Brian Thurston, *EGLE*

11:30 am - 12:00 pm

14.6

The West Michigan Water Career Program: A Year in Review

Hillary Caron, *City of Grand Rapids Water System*

In 2022, Grand Rapids Community College received a \$500K U.S. Environmental Protection Agency grant focused on Water Infrastructure Workforce Development. Partnering with the City of Grand Rapids and Bay College, the Grand Rapids Public Services Departments created an innovative and equitable internship program and redesigned its K-12 education program to help build the talent pipeline for the water industry. Three major initiatives were implemented in the Grand Rapids Community, The West Michigan Water Career Program, The Water Career Camps for 6th-9th graders, and Water Pool-ooza 2023! This presentation will discuss the successes, lessons learned, and inspire water professionals across the state in ways to bring excitement to the water field in their own community!