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Cover photo: The exterior of the Flint Water Plant tower. © Ehrlif | Dreamstime.com



# LET US LEARN FROM THIS CRISIS

BARBARA MARCZAK, P.E.

f any of you reading this saw me give my speech at the Michigan Section Annual Conference last September, which began my year as Chair of the Michigan Section, I ended by saying that people had been asking me all week if I was ready for my year as Chair. I ended my speech in fun by crowning myself "Queen of Water" and yelling out "Yes, I am ready!" The crown has afforded me the opportunity to bring a little fun to our Section activities and a lot of teasing has been directed back at me. Anyway, as I ended my speech back in September, I really did think I was ready. Little did I know that one of the most serious water crises in modern U.S. history would unfold right here in Michigan. Because Michigan is surrounded by the Great Lakes and the largest supply of fresh water at our borders, we are not used to worrying about water as people in many other parts of the country

I REALLY DID THINK I WAS READY. LITTLE DID I KNOW THAT ONE OF THE MOST SERIOUS WATER CRISES IN MODERN U.S. HISTORY WOULD UNFOLD RIGHT HERE IN MICHIGAN.



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and the world are, due to drought, lack of good quality water supplies, and the means to treat and deliver this water to people safely and affordably.

As those of us who work in the water industry have watched the events surrounding the City of Flint water crisis unfold, I am reminded of other crises involving public water systems. The London cholera outbreak in 1854 killed 500 people in ten days. A shallow well on Broad Street was found to have been contaminated by human sewage disposed near the well. London, at the time suffered from lack of sanitation facilities and treatment of human waste. This incident defined the need for adequate isolation and protection of water supplies. In 1993, an outbreak of Cryptosporidiosis made 400,000 people in Milwaukee ill and caused over 50 deaths. At the time, the Cryptosporidium parasite was not something that water treatment plants even looked for. Water suppliers learned that additional filtration and disinfection procedures were needed. An E. coli outbreak in Walkerton, Ontario in May 2000, caused almost half the population of 5,000 to become ill and seven died as a result. The circumstances surrounding this incident defined the need for vigilant monitoring and reporting of test results. As water travels swiftly though water distribution systems, so do outbreaks travel swiftly through the populations that use the water. We learned lessons from each of these incidents that have made our water systems stronger and more reliable. We also learned the importance of working together with public health professionals

to quickly identify when something has gone wrong.

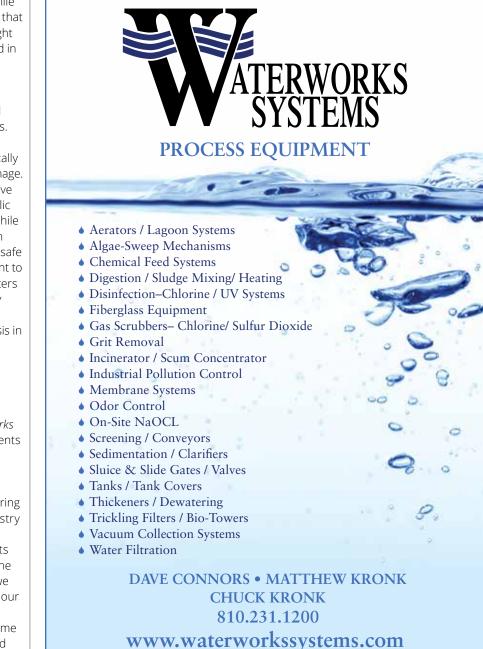
In an eerily similar situation to the Flint crisis, a change in treatment in the Washington DC water supply in 2002, led to increased corrosion of lead service lines and release of lead into the tap water from them. It was estimated there were over 20,000 lead service lines at the time. Although many of these lead service lines have been replaced at a cost of many millions of dollars, lead and its impact to the population, especially in children exposed at the time, are still being researched and discovered. While there are many other sources of lead that people are exposed to, there is thought to be no safe level of exposure to lead in young children.

With the advent of public drinking water systems, the incidence of waterborne diseases have decreased dramatically and saved countless lives. The fire protection that comes along with these systems has also dramatically reduced loss of life and property damage. And yet all of the incidents noted above remind us of the impact that our public water supply has on our daily lives. While we are fortunate to be able to turn on our faucets and have plentiful, clean, safe drinking water, we must remain vigilant to keep it so and to prevent other disasters from occurring. As discussed in many reports, our infrastructure has aged beyond its useful life. The current crisis in Flint reminds us of this daily.

So let us learn from this crisis. We need to restore confidence in safe drinking water and we need all those working in the profession to help. As you will read in this issue of *Water Works News*, and see in various announcements from the Michigan Section and the Association, we intend to become stronger as an industry by working together, sharing knowledge and offering high quality training for all water industry professionals.

While I was not ready for the events that have taken place this year, with the support of all of the volunteers that we have working in the Section, I believe our profession will emerge stronger than ever. I encourage each of you to become involved, stay vigilant in your work and promote SAFE DRINKING WATER!







# UNDER PRESSURE

BRIAN STEGLITZ, DIRECTOR

he Poisoning of an American City", "Beleaguered Residents Scrounge for Water", "A **Ouestion of Environmental** Racism in Flint"... have I got your attention? These are just a sample of the headlines in January 2016 from major news outlets such as Time Magazine, the Wall Street Journal and the New York Times. Our State and our industry are at the forefront of the national media. When, in our history, has the water industry garnered so much media attention? It has even been a topic discussed in the presidential campaigns.

The bad news is that the coverage has been primarily negative and has put our industry on the defensive. The good news is that this provides us an opportunity to take control of the conversation and talk about those issues that are most important to us. The situation in Flint, MI has highlighted several issues that are of critical importance to our industry: reinvestment in infrastructure, affordability, and the protection of public health. AWWA's Buried No Longer Report on infrastructure indicates that the cost to repair and expand drinking water systems will top \$1 trillion over the next 25 years. Means for funding these projects is a challenge for communities and utilities around the nation. The passing and eventual implementation of the Water Infrastructure Finance and Innovation Act (WIFIA) is a small step toward addressing this significant need. Developing sustainable water rates

that support infrastructure needs is paramount. While this seems obvious, the majority of utilities through the country are not funding depreciation of their assets and therefore do not have the financial resources to reinvest in the aging and failing infrastructure. But, how do you raise rates in communities where a significant percentage of the population lives below the poverty level? In concert with developing sustainable rates, utilities must be developing affordability plans for those customers in need. AWWA's publication "Thinking Outside the Bill" provides guidance for utilities on assisting low income water customers.

The third item of critical importance, which really is at the top of the list, is protection of public health. Water utilities around the country produce over 400 billion gallons of treated water each day of exceptional quality. Community water supplies serve approximately 200 million people in the United States and in the last recorded year of data from the Center for Disease Control, there were approximately 400 cases of waterborne illness. This rate is at a record low and sets the standard for the world. Lead poisoning is a serious health issue that deserves attention. While the overwhelming majority of lead poisoning comes from lead paint and dust, primarily in residential homes, lead in water surely should be part of the conversation. These are the challenges that we face

as professionals in the water profession. It is our role to steer the conversation. I encourage you, as leaders, to spread these messages, for the benefit of our future.

The situation in Flint is tragic. Without exception, people across the State and Country support Flint in their quest for safe drinking water. AWWA has tried to be at the forefront of the support for Flint by funneling members interested in providing aid to the well-organized relief efforts put in place. The Michigan Section of AWWA has hosted a Water Utility Summit in January, which was attended by 48 people representing 21 utilities from around the State to talk about media challenges, technical challenges, and sampling procedures, and to receive an update of the revision of the Lead and Copper Rule by AWWA's regulatory expert Steve Via from Washington, DC. The Michigan Section plans on hosting additional events in the Spring/Summer of 2016 in response to members' requests on how to develop a lead service line replacement program and alternatives for funding and implementing such a program. The situation in Flint is dynamic, with new issues arising almost daily. The focus of AWWA has been, and will continue to be, helping to pave the way for a sustainable, reliable, and qualityfocused future for the water industry. We will get through this crisis, as we have others, and the water industry will be the better for it.

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# COLLABORATING TO SIGNIFICANTLY IMPROVE

BONNIFER BALLARD, EXECUTIVE DIRECTOR

have come to love the water industry. I feel privileged to be a part of this community. Part of my learning about the industry was the role that water professionals play in safeguarding public health. (If you haven't watched the video on the history of AWWA, I highly recommend it – very inspirational. *http://www. awwa.org/about-us/history.aspx*) So for months, I have watched the situation in Flint unfold with a sense of surreal disbelief. I would bet that most of you know that our industry will never be guite the same.

Rest assured, the Section and the Association have been busy on your behalf. You'll read from the Director and Chair about some of the actions AWWA has taken. Our focus has been and will remain laser focused on advancing water knowledge to help water professionals protect public health. There are a number of trainings being offered throughout 2016 to help enhance all of our understanding of corrosion control and the rules around lead and copper. But another function of AWWA, one of the more remarkable aspects I think, is the power of collaboration.

Being a part of AWWA provides water professionals access to a vast about of resources including publications, standards, trainings, and research. What I find most compelling though is the coming



together of water professionals to learn from each other, to share their experiences, and to collaborate to create an environment most conducive to providing clean, safe drinking water.

In January and again in March, the Section held Water Summits revolving around the LCR and lead line replacement. These were half-day forums that used proven best practices in adult learning: providing some delivery of content with facilitated discussions to help participants learn from each other. (These Summits were in direct response to the lead in drinking water issue, and resulted in the Workshop scheduled for May 6.) We're still working out the kinks, but it was inspiring to hear the discussions onsite and to read the feedback from these sessions. You will definitely be seeing more Water Summits in the future.

These are turbulent times. As communities across the country grapple with how best to address infrastructure needs, customer concerns, and a lack of confidence in their water supply, we as water professionals come together to support one another through lively discussion, pointed challenging, and collaborative sharing. This collaboration through our existing and growing professional networks is what leads to significant improvement.

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# MEMBER RECRUITMENT & ENGAGEMENT

By Tina Pawlak, Vice-Chair, Member Recruitment & Engagement Council

Our group was invited to give a presentation in Berrien Springs to the Berrien Regional Education Service Agency (RESA)'s joint meeting of its Career Technical Education Directors and Counselor Academy on October 22, 2015. Shane Peters, Superintendent of Bridgman Public Schools worked with the task force (consisting of myself and Gary Wozniak, MDEQ Kalamazoo District Engineer) during the summer to develop a PowerPoint presentation on careers as an operator at a water/ wastewater plant. Gary volunteered to give the presentation to the group, emphasizing that a four year college degree is not required for the job. He pointed out that it is the type of job that appeals to students who like to work with their hands and not be tied to a desk. Many of these jobs are municipal, offering long-term employment with good benefits. Also available to counselors was a handout detailing the wide variety of careers in the water industry, from pipe fitters to hydrologists! This group seemed to be an ideal target audience so the task force will attempt to set up a presentation to a similar group in another area of the state. Gary has graciously made his presentation available to anyone in our organization who would like to modify it to present to another group (anyone interested can email me at *tpawlak@hollandbpw. com* and I will send you a copy of the presentation). Many students don't realize the variety of careers available in the water environment industry and our task force hopes to increase such awareness in both high school and college students.

# MICHIGAN SECTION AWWA NEEDS YOU! Nominations Solicited for the Michigan Section Board of Trustees

he Nominating Committee is seeking candidates for terms beginning in September 2016 (in conjunction with the Annual Conference) for the following positions:

- Trustees two each for three-year terms
- Trustees one for one-year term

• Secretary Treasurer – three-year term Self and peer nominations are both

encouraged. Please also note the bylaws of the Section indicate that one of the Board members should be from the Upper Peninsula of Michigan and one should be either from the area of the Lower Peninsula north of Town Line Fifteen or from any district, area, or community in the Lower Peninsula maintaining water service



to a population under 10,000 persons at the most recent Federal Census. The representation of the Board members is intended to reflect the diverse membership of the Section, including, but not limited to, geographical locations, membership categories, utility size, gender, and ethnic origins.

A nomination should include a short statement of interest and a brief summary of industry and AWWA activities. Interested members are encouraged to contact any of the Nominating Committee members with any questions; committee members are Mark Coleman (chair), Brian Steglitz , John Willemin, three trustees, and two at-large members to be named by the Board.

Nominations are due by May 1, 2016, and should be submitted to:

Mark Coleman

Nominating Committee Chair, MI-AWWA c/o Wade Trim Associates Inc. 500 Griswold St Ste 2500 Detroit, MI 48226 E-mail: *mcoleman@wadetrim.com* Phone: (313) 961-3650 Those who have submitted nominations

in previous years are reminded to please reconfirm their interest for the coming year.

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# GOVERNMENT AFFAIRS COUNCIL UPDATE

# Need for volunteers has never been greater

By Molly Maciejewski, Chair, Government Affairs Council

A flurry of proposed legislation, the Flint water crisis and annual planning and budgeting has kept the Government Affairs Council busy these last few months! To help achieve our mission, we have put together a summary spreadsheet of proposed legislation. This is merely an overview of relevant proposed legislation; although there is a column titled "primary impact", the document is not meant to be a detailed analysis of individual bills or a position paper. We'll update this as needed as a way to keep our members informed, and will develop position papers on issues if they gain traction. You can find the document at

http://www.mi-water.org/?page=LegReg.

Another goal of the Council is advocacy at the state and federal level. We'll send delegates to Washington in April to participate in AWWA's National legislative "Fly-In", where individual meetings are held with members of Congress to discuss draft legislation and challenges and opportunities facing drinking water systems.

Our goal in the coming year is to solidify a list of members who are willing to assist in making legislative visits at the local level and to our position on legislative issues facing the drinking water industry. At no time in recent history has our need for volunteers been greater. Currently there are many drinking water issues that either have proposed legislation or where legislative action is anticipated in the very near future, and we need to be prepared to speak with our legislators about these issues.

Please consider helping by volunteering to meet with your state representative or state senator. Training and talking points will be provided so little advance preparation is needed. If you are interested in helping out, please contact Bob Veneklasen veneklasenr@ wyomingmi.gov or Molly Maciejewski mmaciejewski@a2gov.org



# **REVENUE STRUCTURE IN ASSET MANAGEMENT**

By Asset and Infrastructure Management Committee member, Tom Traciak, Umbaugh Associates

The Asset and Infrastructure Management (AIM) Committee, a joint committee of MI-AWWA and the Michigan Water Environment Association (MWEA), has as one of its goals to provide information and training related to the development of Asset Management programs. In accordance with MDEQ guidance documents, asset management is comprised of five core components: 1) Asset inventory 2) Level of service 3) Critical assets



4) Revenue structure

5) Capital improvement project plan

In this series of articles we have been discussing the various stages of asset management. In many cases a substantial amount of effort will be invested in areas such as asset inventory, infrastructure evaluation, and project criticality. After this information is fully developed, the intention is to produce an Asset Management Financial Plan. In the long term, this financial plan will be used to set rate and fund management policy. In the short term, it will be used to fulfill certain requirements of the SAW grant program including funding the "gap" in rates by identifying the potential shortfall in revenue support for asset investment.

Rate and fund management over a forecasted period of time is the objective of the Financial Plan. The Asset Management data developed by the community's staff and consulting engineers must be transformed into a strategic business plan designed to sustain the utility in the most efficient and cost effective manner. One of the primary results of the engineering review and compilation for the Asset Management System will be identifying the estimated asset investment cost by year. This becomes the key element of the Financial Plan. Other information needed to develop a Financial Plan includes financial reports, customer data, current rate structure, and fund balances.

Historical operating expenses are reviewed using audit and budget information. A "Test Year" is developed that reflects a baseline operating cost. The customer base must be reviewed, including the number of billable customers and volumetric sales. The accuracy of this data is verified by applying it to the current rate structure and compared to "Test Year" revenue. In addition, there are other

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various revenues, which will be taken into consideration.

Assumptions must be made regarding the customer base through the forecasted period. The operating cost must be projected, in part based on anticipated inflation by expense category. Existing annual debt service by debt issue is input. Finally, the annual asset investment cost identified by the Asset Management System is added to the forecast. The annual asset investment cost will need to be evaluated and scenarios developed for cash funding and debt financing. Funding asset investment from cash balances must be weighed against potential efficiency of grouping certain cost together for purposes of financing. A critical aspect of planning is solving, not just to user rates, but to a targeted cash and investment balance.

Successful rate management can be accomplished with more than one approach as to rate structuring and rate adjustment timing. The elements of a rate structure, including the proportion of revenue generated from ready to serve and commodity charge may be determined by allocation of fixed and variable cost, and other customer base characteristics. It will be necessary to develop scenarios that meet policy goals as well financial objectives.

For many communities, this final process of forecasting will mean multiple meetings with policy makers due to decision making as to the timing, degree, and type of funding over a lengthy forecasted period. Unlike capital improvement plans that usually project 5 years, the Asset Management Financial Plan may be as much as 20 or 30 years or more. This forecasting is not intended to give definitive rates for that entire period, but rather it provides the basis for policy making in relation to user rate, utility fund, debt issuance, and cash balance management in addressing asset investment.

The AIM Committee goal is to build

upon the guidance of the MDEQ with their Asset Management Guidance for Water and Wastewater Systems, which can be found on their website at: http:// www.michigan.gov/deq/0,4561,7-135-3307\_3515\_4143-10784--,00.html. If you are interested in joining the AIM Committee, please contact Sally Duffy at *sduffy@hrc-engr.com*, Jennifer Drinan at *jennifer.drinan@ ohm-advisors.com*, or Deann Falkowski at *defalkowski@ftch.com*. ▲





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David Bal City of Norway member since 2003 Norway, MI 906-563-9961 ext 300

Michael Thomas Baldwin Benton Charter Township member since 2015 Benton Harbor, MI 269-925-0616

Jeff Balkema Balkema Excavating, Inc. member since 2002 Kalamazoo, Ml 269-345-5289

Ralph O. Balkema Landfill Management member since 2015 Watervliet, MI

Edward P. Balko City of Holland BPW member since 1995 Holland, MI 616-786-2252

Bonnifer J Ballard MI-AWWA member since 2014 Howard City, MI 517-292-2912

Doug Ballard City of Clawson member since 2013 Clawson, MI 248-288-3220

Jim Balma Village of South Range member since 2002 South Range, MI 906-482-8833 Bruce Banks City of Manistee member since 2004 Manistee, MI 231-723-3641

Archie Barkman New Buffalo Township member since 1998 New Buffalo, MI 269-469-3112

Rachael Barlock OHM Advisors member since 2014 Livonia, MI 734-466-4518

Corey J. Barr City of Manistique member since 1999 Manistique, MI 906-341-4176

Robert Barrett City of Oak Park Water Department member since 2010 Oak Park, MI 248-691-7580

Mike Barricklow Allendale Township Water member since 1999 Allendale, MI 616-895-5142

John M. Barszewski FTC & H member since 1992 Grand Rapids, MI 616-575-3824

Kimberly Bartell Eastern Research Group, Inc. member since 2015 Novi, MI 517-515-1721

Terry A. Bartels Wade-Trim, Inc. member since 1998 Grand Rapids, MI 616-956-3304

Phil Bartle City of Brown City member since 2008 Brown City, MI 810-414-1944

Bruce Bartley Bartley Water Associates LLC member since 1996 Plymouth, MI 734-883-3639

Gerald Bartoszek City of Norton Shores member since 1993 Norton Shores, MI 231-799-6803

Nicolette Bateson Detroit Water & Sewerage Department member since 2012 Detroit, MI

Theodore Batkie Layne member since 2015 Lansing, MI 517-323-4931

Daniel E Bauder Byron -gaines Utility Authority member since 2012 Byron Center, MI 616-971-0002 Troy Baughman City of Ann Arbor - Public Services member since 2012 Ann Arbor, MI 734-323-8428

Joseph K. Baxter B & B W Consultants, Inc. member since 2006 Moline, MI 616-877-4196

Mark C. Beauchamp Utility Financial Solutions member since 1998 Holland, MI 616-392-2555

Jared Beaudoin City of Sterling Heights Wtr. member since 2014 Sterling Heights, MI 586-446-2440

Chad Beckett City of Grayling member since 2011 Grayling, MI 989-348-2131

Paul A. Belcher Grand Rapids Water Department member since 2010 Grand Rapids, MI

**City of Belding** member since 1965 Belding, MI 616-260-2319

Roger A. Belknap Village of Spring Lake member since 2011 Spring Lake, MI

Theresa Bellish NSF International member since 2011 Ann Arbor, MI 734-913-5773

Charles B. Bellmore Clinton Township Water & Sewer Dept. member since 1993 Clinton Township, MI 586-286-9300

Alec Belson Village of Middleville member since 2016 Middleville, MI 269-795-3385

Samuel Bender Fleis & Vandenbrink Engineering, Inc. member since 2014 Grand Rapids, MI 616-977-1000

Cory Bendick City of Rochester member since 2011 Rochester, MI 248-651-5165

Lorinda S. Beneteau Grosse Ile D.P.W. member since 2005 Grosse Ile, MI 734-676-4422

Todd Bennett City of Brighton member since 2002 Brighton, MI 810-227-2968 Dennis J. Benoit Hubbell Roth & Clark, Inc. member since 1990 Grand Rapids, MI 616-432-6195

Kyle Bentley Peterson and Matz, Inc. member since 2012 Farmington Hills, MI 248-476-3204

Benton Charter Township member since 2010 Benton Harbor, MI 269-925-0616

Richard E. Benzie Michigan Dept. of Enviornment Quality member since 1976 Lansing, MI 517-284-6512

Gordon H. Berkel member since 1991 Alpena, MI 989-356-1075

Ray W. Berkin member since 1987 Allegan, MI 269-355-0850

Berlin Township member since 1994 Newport, MI 734-586-8680

Jay A. Best Village of Onsted member since 2006 Onsted, MI 517-467-2158

Tommy Beuatic Holland Board of Public Works member since 2007 Holland, MI 616-566-0584

Scott Bevier Summit Township member since 2010 Jackson, MI 517-788-4113

Sam D. Bibler City of Mason member since 2006 Mason, MI 517-857-3849

John Bidigare Bidigare Contractors Inc member since 2015 Plymouth, MI 248-735-1113

Terry E. Biederman member since 1989 Flushing, MI 810-280-6636

Thomas E. Biehl Hubbell Roth & Clark member since 1980 Bloomfield Hills, MI 248-454-6365

Steve Biela PAC Engineering LLC member since 2015 Monroe, MI 734-777-5686

**Big Rapids Water Plant** member since 1989 Big Rapids, MI 231-796-6231 David W. Bissell City of Frankfort member since 2001 Frankfort, MI 231-352-7117

Latoya Black Grand Rapids Water Department member since 2016 Grand Rapids, MI

Luther D. Blackburn JR Ypsilanti Community Utilities Authority member since 2012 Ypsilanti, MI

Jeffery Dean Blackmer Mead Johnson Nutrition member since 1996 West Olive, MI 616-748-7132

Edward P. Blanchard member since 2004 Wayne, MI 734-721-0685

**Terry Blaniar** *City of Springfield* member since 2015 Springfield, MI

Nick Blasko Village of Kalkaska member since 2013 Kalkaska, MI 231-258-9191

**Gerald A Bleau** *Alpena Township* member since 2014 Alpena, MI

Tom Bliss Indian Lake Nazarene Comp member since 2015 Vicksburg, MI 269-649-2281

**Jon Bloemker** member since 1975 Midland, MI

Michael G. Blom City of Grand Blanc member since 1985 Grand Blanc, MI 810-694-5420

Bloomfield Township member since 1976 Bloomfield Hills, Ml 248-594-2800

**Christopher Blough** *Plante Moran* member since 2015 Southfield, MI 248-223-3209

James Blum City of Stanton member since 2016 Stanton, MI 989-831-9332

Kimberly Blythe City of Reading member since 2015 Reading, MI 517-283-2604

Donald G. Boase Village of Millford member since 2002 Highland, MI 248-685-8502 Chuck Boes City of Monroe member since 2014 Monroe, MI 734-243-0700

Brian Boesel Ann Arbor Charter Township member since 2007 Ann Arbor, MI 734-663-3418

Rusty Boeskool City of Fremont member since 2009 Fremont, MI 231-924-2101

Scott W. Boeve HD Supply Waterworks member since 1996 Kentwood, MI 616-916-4126

S. Mark Bogdanik Plainfield Township Water Plant member since 1990 Grand Rapids, MI 616-364-7174

Gregory J. Boggs II Grand Blanc Township member since 2007 Grand Blanc, MI 810-424-2640

Phillip C. Boman Village of Benzonia member since 1998 Benzonia, MI 231-882-9981

Theodore V. Bomba JR Saginaw Water Treatment Plant member since 2009 Saginaw, MI 989-759-1645

Peter J. Bommarito City of Rochester Hills Water Department member since 2015 Rochester Hills, MI 248-656-4685

Eric Bondy French Town Water member since 2015 Newport, MI 734-289-1015

Joseph S. Bonhomme City of Parchment member since 2000 Parchment, MI 269-349-3785

Kenneth Bonney Village of Elberta member since 2011 Elberta, MI 231-651-9626

Andrea Boot City of Wyoming member since 2003 Wyoming, MI 616-530-7282

Ron Borgman Process Control Services member since 2009 Plymouth, MI 734-453-0620 Sean M. Borgman Process Control Services member since 2009 Plymouth, MI 734-453-0620

Robert Boron City of Rockwood member since 2007 Rockwood, MI 734-379-0414

Michael Borths Infrastructure Alternatives member since 1997 Menominee, MI 906-863-6744

Scott A. Boshart City of Bad Axe member since 1995 Bad Axe, MI 989-269-9132

Steven E. Boss Allendale Township Water member since 1982 Allendale, MI

Keith Boswell National Pipeline Services member since 2015 Mount Pleasant, MI 989-773-1747

Kyle D. Botbyl Spring Lake Township Water and Sewer Dept. member since 2010 Nunica, MI 616-842-0080

John T. Bowman Bowman Industry & Manufacturing LLC member since 1994 Flagler Beach, FL 218-529-5000

Steve Boyer Midwest Utility Sales And Marketing member since 2012 Elkhart, IN

Kathleen Boyle City of Manistee member since 1991 Manistee, MI 231-723-7132

Gary M. Bozek Delta Charter Township member since 2011 Lansing, MI

James D Bradford City of Dowagiac member since 2012 Dowagiac, MI 269-782-8200

Chad Bradley City of Petoskey member since 2012 Boyne City, MI 231-758-4868

John Bradley Spicer Group, Inc. member since 2015 Saint Johns, MI 989-224-2355

Randy L. Braeutigam City of Frankenmuth member since 1993 Frankenmuth, MI 989-652-3443 **Donald E. Brantley** *Village of Oxford* member since 1999 Oxford, Ml 248-628-8941

David P. Bratt member since 1984 Rockford, MI 616-866-3068

Jim Brayak member since 2005 Linden, MI 906-399-1844

Pierre Brazeau City of Wayland member since 1986 Wayland, MI 269-792-2265

Charter Township of Breitung member since 1980 Quinnesec, MI 906-779-2064

John M. Bresler JETT Pump & Valve LLC member since 2005 Waterford, MI 248-673-2530

City of Brighton member since 1978 Brighton, MI 810-227-9479

Peter W. Brink Prein & Newhof member since 2000 Muskegon, MI 231-798-0101

Dennis J. Brinks Village of Lake Odessa member since 1999 Comstock Park, MI 616-374-7228

Terry G. Broemer Johnson & Anderson Inc. member since 1990 Waterford, MI 288-681-7800

David Broene Holland Board of Public Works member since 2007 Holland, MI 616-355-1587

Bradley B. Brogren member since 1976 Okemos, MI 517-349-0867

Ronald H. Brondyke Spring Lake Township member since 1980 Spring Lake, MI 616-842-0080

Christopher Brothers Innovyze member since 2014 Oakland, CA

Ed Brown City of Davison member since 2013 Davison, MI 810-653-2191

Gregory L. Brown member since 1984 Eastpointe, MI 586-773-8826 Ken Brown Bloomfield Township member since 2006 Bloomfield Hills, MI 248-594-2811

Matthew S. Brown M.E. Simpson Company, Inc. member since 2002 Valparaiso, IN 800-255-1521

Omar Brown Detroit Water & Sewerage Dept member since 2014 Detroit, MI 313-675-4983

Sierra J. Brown Infrastructure Alternatives member since 2012 Cadillac, MI 517-242-7131

William Elgar Brown Mich. Dept. of Environ. Qual. member since 1971 Williamston, MI 517-241-1359

Paul Brun Del Re Michigan Dept of Enviro Quality member since 2004 Lansing, MI 517-284-5426

Clifford Troy Bryant Traverse City Water Department member since 2015 Traverse City, MI 352-978-5830

Curtis Brzyski Midwest Municipal Instrumentation member since 2013 Jackson, MI 517-764-4736

**City of Buchanan** member since 1989 Buchanan, MI 269-695-1159

Eric W. Buckman City of Gladstone member since 1992 Gladstone, MI 906-428-3460

Thomas M. Bugai Interlochen Center for Arts member since 1988 Interlochen, MI 231-276-7590

Patrick Burk member since 2015 Ann Arbor, MI

Jon E. Burke City of Wyoming Clean Water Plant member since 2002 Wyoming, MI 616-261-3576

David Burkett Village of Bellevue member since 1985 Bellevue, MI 269-763-9571

Rodney Burkholder City of Coloma member since 1989 Coloma, MI 269-468-6606 Paul Burris member since 2000 Manteno, IL 815-450-9495

Mark Burt Midland Water Department member since 1993 Midland, MI 989-835-7711

Burtchville Twp. D.P.W.-Water member since 1997 Burtchville, MI 810-385-5577

James Frederick Burton member since 2014 Macomb, MI

Lori Burton Republic Township Water Department member since 1992 Republic, MI 906-376-8827

Noel D. Bush Midland Water Department member since 1992 Midland, MI 989-837-3343

Stephen Busch member since 2013 DeWitt, MI 517-643-2314

Jim Byrd City of Wixom member since 2015 Wixom, MI

Richard J. Bysko Genesee County Water & Waste member since 2000 Flint, MI 810-600-4102

# C

Cadillac Utilities Department member since 1970 Cadillac, MI 231-775-0181

Lyle Caillouette BASF member since 2015 Wyandotte, MI 734-324-6449

Jody Caldwell Oakland County Water Resources Commissioner member since 2007 Waterford, MI

Matthew Calkins City of Monroe Water Filtration Plant member since 2012 Monroe, MI

Robert E. Calley Village of Milford member since 2007 Milford, MI 248-684-1515

Scott A. Cambensy City of Marquette member since 2006 Marquette, MI 906-225-8977

Dan Campbell Allegan County Facilities Management member since 1998 Allegan, MI 269-686-4612

Ellen R. Campbell Nitrate Elimination Co., Inc. member since 1995 Lake Linden, MI 906-296-1000

Eric J. Campbell member since 1995 Mackinaw City, MI

Hugo Cardenas Waterford Department of Pubic Works member since 2011 Waterford, MI 248-618-7456

Brian K. Cardinal Cadillac Utilities Dept. member since 1988 Cadillac, MI 231-775-7671

Matthew J. Carey Culligan Water Conditioning member since 1991 Lansing, MI 517-393-1900

Gerald H. Caron member since 1981 Holland, MI

Mike Carr Therma-Stor, LLC member since 2001 Madison, WI

Ronald E. Carr City of Grandville member since 1991 Grandville, MI 616-538-1990

James M. Carroll East Lansing Meridian Water Auth. member since 1991 East Lansing, MI 517-337-7535

Carrollton Township member since 2000 Saginaw, MI

Scott Carruthers City of Troy, Mich. member since 2014 Troy, MI

David Carson Village of Boyne Falls member since 1988 Boyne Falls, MI 231-675-7430

Randy Allen Carter Sparta Water Department member since 1996 Sparta, MI 616-887-0854

Warren A. Carter Energenecs member since 1987 Cedarburg, WI 262-377-6360

Thomas A. Casari Northville Township Dept. of Public Services member since 1993 Northville, MI 734-394-5153 Andrew C. Case member since 1997 Saint Clair Shores, MI

City of Caseville member since 1989 Caseville, MI 989-856-4407

James Cassel EJ member since 2015 East Jordan, MI 248-240-0515

Jeff Castro Ypsilanti Community Utilities Authority member since 2006 Ypsilanti, MI 734-484-4649

Wayne Caverly City of Rose City member since 2016 Rose City, MI 989-942-6261

Tony Cecchini member since 2015 Ann Arbor, MI 908-801-0383

City of Cedar Springs member since 2013 Cedar Springs, MI

Nolan Chapman City of Portland member since 2008 Portland, MI

Alando V. Chappell Lansing Board Water & Light member since 2013 Lansing, MI 517-242-6797

Joseph Charles II *City of Monroe* member since 1997 Newport, MI 734-755-6442

**City of Charlotte** member since 1965 Charlotte, MI 517-543-8858

Siying Chen Masco Corp. member since 2014 Taylor, MI 313-792-4359

Michael Chesher member since 1981 Grandville, MI 616-456-4096

Chesterfield Township Water member since 1966 Chesterfield, MI 586-949-0400

James Cheyne City of Novi member since 2003 Novi, MI 248-735-5640

Victor H. Chichester member since 1981 Midland, MI

Chikaming Township Water Dept. member since 1978 Harbert, MI 269-469-1676 Alex Chimpouras MHOG Water Treatment Plant member since 2002 Howell, MI 517-545-5098

Glenn M. Chinavare City of Owosso Water Department member since 1997 Owosso, MI

Thomas Chinchak member since 2004 Dearborn, MI 313-943-2395

Kevin Christian McWane Ductile member since 2015 Dexter, MI

Laura Ann Chuhran member since 2000 Jackson, MI 517-769-3694

Bradley B. Cittel Bridgeport Charter Township member since 1991 Bridgeport, MI 989-777-0940

City of Clare Water & Wastewater member since 1996 Clare, MI 989-386-2321

Bruce Clark Addison Water Department member since 1980 Addison, MI 517-517-4650

Dale R. Clark City of Clare Water & Wastewater member since 2014 Clare, MI 989-386-2321

Ken Clark ClarkTech, Inc. member since 2005 Fenton, MI 810-632-9280

Patsy S. Clark Patsy S. Clark & Associates member since 1987 Grand Rapids, MI 616-954-3825

**City of Clawson** member since 2013 Clawson, MI 248-288-3222

James K. Cleland Michigan Dept. of Environ. Qual. member since 1969 East Lansing, MI 517-241-1287

Timothy J. Clement Plainfield Township Water Plant member since 1999 Grand Rapids, MI 616-364-7174

Gail Clow Hillsdale Bd. of Public Utils. member since 2014 Hillsdale. MI

Donald M. Coddington Chesterfield Township Water member since 2012 Chesterfield, MI 586-949-0400 Coldwater Board of Public Utilities member since 1971 Coldwater, MI 517-279-9531

**Stephen J Cole** Great Lakes Commission member since 2015 Ann Arbor, MI

Mark M. Coleman Wade Trim Associates Inc member since 1981 Detroit, MI 313-961-3650

Martin C. Collins Village of Beverly Hills member since 1996 Beverly Hills, MI 248-644-6404

Michael Collins United Water - City of Alpena WTP member since 2009 Alpena, MI 989-356-0757

Kevin Collins member since 2015

City of Coloma member since 1977 Coloma, MI 269-468-6606

Michael E. Comstock Kochville Township member since 2014 Saginaw, MI

Salvatore Conigliaro City of Sterling Heights member since 2009 Sterling Heights, MI 586-446-2441

Karen Converse DWSD member since 2008 Taylor, MI

Colleen Coogan City of Walled Lake member since 2015 Walled Lake, MI 248-624-4847

Christopher James Cook Abonmarche Consultants, Incorporated member since 1995 Benton Harbor, MI 269-927-2295

Patrick Cook Michigan DEQ member since 1988 Lansing, MI 517-284-6514

Ray Cook Silversmith Inc. member since 2015 Gavlord. MI

Rob Cook Lime and Gypsum Products, Inc. member since 2014 Vermontville, MI 517-726-1492

William J. Cook Zeeland BPW member since 2011 Zeeland, MI 616-772-6212 Alisha Cooley Fluid Equipment Development

Company (FEDCO) member since 2015 Monroe, MI 734-241-3935

Roger Cooley Wade-Trim member since 2004 Taylor, MI 734-947-9700

Brad M. Cooper City of Petoskey member since 2007 Petoskey, MI 231-348-0368

Victor I. Cooperwasser Tetra Tech member since 1992 Ann Arbor, MI 734-320-1878

Aaron Coppersmith Holland Charter Township member since 2007 Holland, MI 616-396-1891

William Corsaut O. O. Corsaut Inc. member since 2001 Oak Park, MI 248-541-1117

Jason Coslow Theroux Dev. Co. member since 2008 Holt, MI 517-694-0414

Mindy Costello NSF International member since 2001 Ann Arbor, MI 734-769-0109

Harland D. Couillard U.P. Concrete Pipe Company member since 1990 Escanaba, MI 906-786-0934

Brian K. Cowham City of Battle Creek member since 2002 Battle Creek, MI 269-966-3493

Barry Cox City of Sturgis member since 2004 Sturgis, MI 269-659-7249

Carrie Cox member since 2006 Auburn Hills, MI 248-858-0678

Robert Cox City of Auburn Hills member since 2010 Auburn Hills, MI 248-391-3777

Senna Cox City of Troy member since 2016 Troy, MI

Susan Elaine Craft member since 1997 Lyons, MI 989-855-2513 Loren D. Crandell Giffels-Webster Engineers member since 1998 Birmingham, MI 248-852-3100

Jennifer Crooks U.S. EPA Region 5 member since 2011 Chicago, IL 312-886-0244

Emily Marie Crossette member since 2015 Ann Arbor, MI 215-218-8567

Croswell Water Dept. member since 2014 Croswell, MI 810-679-2120

Michael F. Crowley Michigan Pipe & Valve - Traverse member since 2006 Traverse City, MI 231-533-9072

John Crumb member since 2000 Wyoming, MI 616-355-1647

Keenan Crump Ypsilanti Community Utilities Authority member since 2006 Ypsilanti, Ml

Jerry Culman Leelanau County member since 2007 Suttons Bay, MI 231-256-8160

David Cunningham City of Ionia-Dpw member since 2012 Ionia, MI 616-527-5786

Loyd A. Cureton member since 1993 New Hudson, MI

Douglas L. Curtis Silversmith Inc. member since 2014 Gaylord, MI 877-732-8988

Charles Cushman Otsego Township member since 2015 Otsego, MI 269-694-9434

Mike Cutler Crystal Mountain member since 2004 Thompsonville, MI 231-378-2000

David W. Cyrus Holland Board of Public Works member since 2008 Holland, MI 616-355-1646

Daniel Czarnecki City of Fenton member since 2011 Fenton, MI 810-629-2261

### D

Robert Daddow Oakland County member since 2016 Waterford Township, MI

Mark Daniel Daenzer City of Frankenmuth member since 1996 Frankenmuth, MI 989-652-8987

Glen Daigger One Water Solutions member since 1980 Ann Arbor, MI 303-478-0777

James Daily American Flow Control member since 2009 Fishers, IN 317-345-8450

Dake Couplings member since 1996 Grand Haven, MI 800-866-4423

Robert L. Dalzell Northport Point Cottage Owners Assn. member since 1982 Northport, MI 231-386-7277

Mark Daneff Romac Industries member since 2000 East Jordan, MI 734-516-2860

Terry Daniel Detroit Water & Sewerage Department member since 2010 Detroit, MI 313-522-6349

Brian Dara Detroit Water and Sewerage Department member since 2015 Detroit, MI 313-926-8125

Michael Darga Hubbell Roth & Clark member since 2002 Howell, MI 248-454-6532

Aaron Davenport member since 2005 Battle Creek, MI 269-353-9650

Timothy G. Davidek Genesee County Water & Waste Services member since 2001 Flint, MI 810-732-7870

Steve Davidson Village of Shepherd member since 1997 Shepherd, MI 989-828-5062

James H. Davies Jim Davies Sales member since 1977 Grand Rapids, MI 616-942-5408 Jamie T. Davies City of Rockford member since 2011 Rockford, MI 616-866-1537

Corey M. Davis City of Chelsea member since 2005 Chelsea, MI 517-803-7763

Mackenzie L. Davis member since 2000 Okemos, MI 517-353-6487

Marie A. Davis member since 1993 Midland, MI 989-839-0723

Timothy P. Davis member since 2015 Southfield, MI 313-471-1955

City of Davison member since 2013 Davison, MI 810-653-2191

Mark De Haan member since 2016 Grand Rapids, MI

Matt Dearborn American Cast Iron Pipe member since 2007 Brighton, MI 708-947-7680

Michael B. Dearing Charter Township of Union member since 2003 Mount Pleasant, MI 989-775-5574

John DeBoyer Clay Township Water Department member since 2004 Clay, MI 810-794-3475

Scott L. Decker Village of Nashville member since 2000 Nashville, MI 517-852-1644

William Dedoe Clyde Township member since 1993 Clyde, MI 810-985-7258

Donald J. DeGrand Mead & Hunt member since 1985 Marquette, MI 906-629-1364

John A. DeKam member since 1974 Saginaw, MI 989-415-9688

Matt Delaney United Water member since 2013 Hartland, MI Thomas J. DeLaura

Delaura Consulting member since 1988 Detroit, MI

David J Delia member since 2015 Southfield, MI Kristen Dell member since 2016 Dimondale, MI

Delta Charter Township member since 1973 Lansing, MI 517-323-8540

Susan Deming MI Dept. of Comm. Hlth.-Oral Health member since 2009 Lansing, MI 517-373-3624

Robert Demyanovich member since 2006 Brighton, MI 517-546-0040

Donna Denise Village of Romeo member since 2014 Romeo, MI 586-752-2684

Catherine Derocher White Lake Township Water Department member since 1978 White Lake, MI 248-698-3300

**Derek Desgranges** *Village of Sunfield* member since 2014 Sunfield, MI 517-566-8407

Duane Desjardins NYS (DMNA) Camp Smith member since 2012 Wetmore, MI 914-788-7306

Donald L. Detemple Infrastructure Alternatives member since 1995 Menominee, MI 906-863-6744

Detroit Water & Sewerage Department member since 1968 Detroit, MI 313-224-4701

David Devlaminck Tetra Tech (Marine City MI) member since 2014 China, MI 586-255-8212

David Devos member since 2009 Caledonia, MI 616-706-8736

Donald J. DeVries Fleis & Vandenbrink Engineering member since 1988 Muskegon, MI 231-726-1000

Ross Devries Holland Board of Public Works member since 2010 Holland, MI 616-399-9410

Scott A. DeVries City of Williamston member since 1997 Williamston, MI

Richard F. Deyarmond United Water member since 2005 Gladwin, MI Adam Deyoung Moore & Bruggink Inc member since 2015 Grand Rapids, MI 616-363-9801

Rory Dickey City of St. Joseph member since 2012 Benton Harbor, MI 269-983-1240

Derek Diederich Waterford Township Water & Sewer member since 1998 Waterford, MI 248-618-7465

David Diem City of Essexville member since 2014 Essexville, MI 989-893-7192

Jeffrey Michael Dietlin Cadillac Utilities Department member since 1997 Cadillac, MI 231-775-0181

Darren R. Dimma Veolia North America member since 2001 Lansing, MI

Bob Dion City of Bay City member since 2014 Bay City, MI 989-894-8320

Michael Dittmar City of Westland member since 2013 Westland, MI 734-467-3245

William J. Dixon Dixon Engineering, Inc. member since 1980 Lake Odessa, MI

Dixon Engineering, Inc. member since 1987 Lake Odessa, MI 616-374-3221

Steven P. Dlubala Michigan American Water member since 1991 Calumet, MI 906-337-3502

Jonathon Dmitruk City of Wyoming Utilities Department member since 2012 Holland, MI 616-399-7844

David W. Dmytryka Dmytryka Jacobs Engineers member since 1995 Toledo, OH 419-380-4900

Leo E. Doan member since 1997 Fenton, MI 810-629-8757

John Dobson Mount Clemens Utility Dept. member since 2002 Mount Clemens, MI

Dean Dodgson member since 2010 Grand Rapids, MI 216-262-7775

Wayne A. Domine Bloomfield Township member since 1992 Bloomfield Hills, MI 248-594-2800

William D. Dooley City of Wyoming member since 1986 Holland, MI 616-399-6511

Chad Doornbos member since 1999 Allendale, MI 616-895-6078

Omer L. Doran Germfask Water Department member since 1996 Germfask, MI 906-586-9697

Jon H. Dowling City of Jackson member since 2001 Jackson, MI 517-788-4160

John Dowson Highland Treatment, Inc. member since 2000 Highland, MI 248-889-1922

Terry T. Drenth Village of Ellsworth member since 1988 Ellsworth, MI 231-588-6071

Michael T. Drewyor member since 1990 Houghton, MI 906-370-2984

Jennifer Drinan Greeley and Hansen member since 2014 Detroit, MI

Kris Driver East Lansing-Michigan Water Authority member since 2009 East Lansing, MI 517-337-7535

**Steve Drotoz** *City of Rochester* member since 2014 Rochester, MI

Patrick M. Droze Orchard, Hiltz & McCliment member since 2013 Livonia, MI 734-522-6711

Stephen Dubay City of Hazel Park member since 2006 Hazel Park, MI 248-542-0340

Christopher A. DuBerg City of Hazel Park member since 2006 Hazel Park, MI 248-542-0340

Kenny Dudzic Huron Township member since 2007 New Boston, MI 734-216-6890 Sally Duffy Hubbell, Roth & Clark, Inc member since 2014 Bloomfield Hills, MI 248-454-6583

Clyde R. Dugan East Lansing-Meridian Water and Sewer Authority member since 1985 East Lansing, MI 517-337-7535

Clifford A. Dunec member since 1977 Standish, MI 989-846-9360

Jeffrey A. Dunlap City of Niles Utilities Dept. member since 2014 Niles, MI 269-683-4700

Bruce Dunn City of Harrisville member since 1996 Harrisville, MI 989-724-6666

Jeffrey Duprey Village of Grosse Point Shores member since 2002 Madison Heights, MI 313-886-0020

Kevin Dupuis Ypsilanti Community Utilities Authority member since 2012 Ypsilanti, MI

James Dusenbury US Army TARDEC member since 2016 Warren, MI

### Е

Terry Eagle Springlake Condominium member since 2005 Petoskey, MI 231-348-2920

Douglas Earles North Star Water Management, LLC member since 2014 Farmington, MI 248-563-2737

Zachary Earp Oakland County Water Resources Commissioners Offic member since 2015 Waterford, MI

East China Water Filtration Plant member since 1997 East China, MI

**City of E. Grand Rapids Utility** member since 1995 East Grand Rapids, MI 616-940-4870

City of E. Jordan member since 1993 East Jordan, MI 231-536-3381

**EJ** member since 1958 East Jordan, MI 800-626-4653 East Lansing-Meridian Water and Sewer Authority member since 2013 East Lansing, MI 517-337-7535

Molly Eastman Grand Rapids Water Department member since 2016 Grand Rapids, MI

**City of Eaton Rapids** member since 1973 Eaton Rapids, MI

Steve Eberle City of Adrian Utilities-Water Dept. member since 2004 Adrian, MI 517-264-4859

Donald G. Echlin Inside Trim member since 2015 Mount Morris, MI 810-931-6157

Tony Edlebeck City of Kingsford member since 2011 Kingsford, MI 906-774-3526

Richard J. Edwards member since 2002 Portage, MI 269-544-0194

David Eilers Huron Medical Center member since 2003 Bad Axe, MI 989-803-7124

Keith Eisen City of St. Clair member since 2007 Saint Clair, MI 810-329-5276

Christopher Elenbaas City of Ann Arbor member since 2009 Ann Arbor, MI

Ron Elenbaas City of Wyoming Utilities Department member since 2011 Holland, MI 616-399-7841

Ramzi El-Gharib Wayne Engineering Department member since 1995 Wayne, MI 734-728-1770

Benoy Elias DWSD member since 1998 Washington, MI 586-786-9388

Cathy Elliott Village of Fowlerville member since 2016 Fowlerville, MI 517-223-3771

Patrick Elliott City of Charlevoix member since 2013 Charlevoix, MI 213-547-3276

Sherrie Elliott member since 2006 Petoskey, MI 231-348-0368 Dave Elston City of Monroe member since 2014 Monroe, MI 734-241-6074

Terry L. Engelhardt Village of Birch Run member since 2002 Birch Run, MI 989-624-5711

Tom Engelsma City of Wyoming member since 2004 Wyoming, MI 616-261-3568

Joseph W. Erickson Village of Ontonagon member since 2012 Ontonagon, MI 906-884-2305

Myron Erickson City of Wyoming member since 2006 Wyoming, MI 616-261-3562

Ted L. Erickson Process Results member since 1993 Saline, MI 734-657-4925

Michael P. Ermler member since 2000 Harper Woods, MI

Escanaba Municipal Water Dept. member since 1943 Escanaba, MI 906-786-3291

David L. Esch Barton Hills Village member since 1990 Ann Arbor, MI 734-222-5209

Matthew Esper United Water member since 2006 Hartland, MI 734-777-1209

Charles J. Eudy City of Farmington Water Department member since 2011 Farmington, MI 248-473-7250

Ruth Ann Evans Bridgeport Water Supply System member since 2015 Bridgeport, MI

City of Evart member since 1992 Evart, MI 231-734-5793

Jay Eversoll Plastic Trends Royal Pipe member since 2002 Shelby Township, MI 586-781-2700

# F

Tim Faas Canton Township member since 2013 Canton, MI 734-394-5160 Scott Fairbanks City of Linden member since 2012 Linden, MI 810-735-7980

Valerion Farr Detroit Water and Sewerage Department member since 2015 Detroit, MI 313-926-8133

Daniel Faulkner Dan Faulkner member since 2015 Benton Harbor, MI 989-370-0077

Jeff Faultersack City of St. Joseph member since 2012 Coloma, MI 269-983-1240

James G. Fausone Detroit Water & Sewerage Department member since 2011 Detroit, MI 313-224-4704

William G. Fazer Verso Paper / Quinnesec Mill member since 1981 Norway, MI 906-497-5683

Mark Fechik City of Saline member since 2004 Saline, MI 734-944-2003

Jeff Fedewa E.L.M.W.S.A member since 1996 East Lansing, MI 517-337-7535

Allen Feenstra Jenison - Georgetown Township member since 2015 Jenison, MI 616-457-2340

**Todd J. Feenstra** *Tritium, Inc.* member since 2003 Elkhart, IN 574-266-5300

Geoffrey Feit member since 2007 Linden, MI 517-546-5309

Vern Feldpausch Village of Fowler member since 2004 Fowler, MI 989-593-2768

Patrick J. Fellrath Charter Township of Plymouth member since 2011 Plymouth, MI

Jason Felty Plainfield Township Water Department member since 2015 Grand Rapids, MI

Joe Felty Plainfield Township Water Department member since 2015 Grand Rapids, MI David Ferguson Grand Rapids Water Department member since 2016 Grand Rapids, MI

David Fierstien City of E. Jordan member since 2013 East Jordan, MI 231-536-3381

Steven Fink Muskegon County Public Works member since 2009 Muskegon, MI 231-724-6522

Rick Finke Eagle Harbor Township member since 2001 Eagle Harbor, MI 906-289-4407

Thomas A. Fishbaugh Ohio Rcap member since 1975 Fremont, OH 419-332-2032

Christopher P. Fitch Weiss Construction Company member since 1997 Detroit, MI 313-567-4500

Debra Fitch Caldwell Holiday Village of Scottville, Inc. member since 2013 Sarasota, FL 941-957-0397

Ken Flagstadt member since 2006 Oscoda, MI 906-280-2971

Gary D. Flannigan Lexington Water Treatment Plant member since 1982 Lexington, MI 810-359-5901

Jaime Fleming City of Wyoming WTP member since 1997 Holland, MI 616-401-8618

Aly Flood member since 2015 Grand Rapids, MI 248-345-0132

Martin Flynn City of Petoskey member since 2012 Petoskey, Ml 231-347-9270

Trisha L. Foerster Kochville Township DPW member since 2013 Saginaw, MI 989-710-0181

Kevin Foley member since 2015 Cleveland, OH 216-548-8720

Kevin Forbes Beecher Metropolitan Water District member since 2015 Flint, MI 810-787-6526 Randal L. Ford Hubbell, Roth & Clark, Inc. member since 1987 Bloomfield Hills, MI 248-454-6338

Guy Forstrom Charter Township of Breitung member since 1985 Quinnesec, MI 906-779-2064

Sue L. Foune City of Kalamazoo Public Services member since 1995 Kalamazoo, MI 269-337-8440

Marc H. Fournier II Eagle Mine member since 2011 Negaunee, MI 906-203-7688

Mark Fowler City of Boyne City member since 2007 East Jordan, MI 231-944-8073

Village of Fowlerville member since 2016 Fowlerville, MI 517-223-3771

Jeffrey E. Fox City of Rochester Hills member since 2012 Rochester Hills, MI 248-852-2677

Malcolm L. Fox II City of Mt. Pleasant member since 1981 Mount Pleasant, MI 989-779-5426

Donald A. Fralick City of Fenton Water Department member since 1999 Fenton, MI 810-919-9680

Eric Francik Grand Rapids Water Department member since 2016 Grand Rapids, MI Joshua L Frazee

City of St. Joseph member since 2014 Saint Joseph, MI 269-983-1240

Paul L. Freedman Limno-Tech., Inc. member since 1996 Ann Arbor, MI 734-332-1200

George R. Freiberg Hazen and Sawyer, PC member since 2008 Harrison, MI 313-961-3050

**City of Fremont** member since 1987 Fremont, MI 231-924-2101

Donald R. French member since 1984 Escanaba, MI 906-786-6026

Michael J. Friedhoff member since 2015 Novi, MI William A. Fritz Waterford Township member since 1995 Waterford, MI 248-618-7464

Bob Fry Ypsilanti Community Utilities Authority member since 2006 Ypsilanti, MI 734-485-7562

# G

Ira M. Gabin Dixon Engineering, Inc. member since 1985 Dewitt, MI 616-374-3221

Carrie Gabrielse Evoqua Water Technologies member since 2015 Holland, MI 616-772-9011

Mary Gaedt member since 2001 Waterford, MI

Mark D. Gahry Brownstown Township member since 1999 Brownstown Twp, MI 734-675-4000

Derek Gajdos City of Norton Shores member since 2000 Norton Shores, MI 231-799-6804

Troy R. Gallagher Mead & Hunt member since 2002 Escanaba, MI 906-273-1568

James P. Gallogly City of Northville Pub. Wks. D member since 1996 Northville, Ml 248-349-3271

Pete Gallus Trenton Corporation member since 2015 Ann Arbor, MI 208-618-9876

Heather Gardner Sigma Associates member since 2015 Detroit, MI 313-463-4723

Drew A. Gariepy member since 1995 Redford, MI 313-532-4140

Geoff Garman member since 2015 Madison Heights, MI 248-585-3700

Catherine A. Garnham F&V Operations and Resouce Management member since 1998 East Tawas, MI 989-362-0050

Grant A. Gartrell member since 2002 Detroit, MI 313-926-8139 Stephen Gasteyer Michigan State University -Dept. of Sociology member since 2002 East Lansing, MI 517-355-3505

Douglas Gay City of Grand Rapids member since 2007 West Olive, MI 231-780-3415

Christopher Geiger Holland BPW member since 2012 Holland, MI 843-364-4632

Ken Gensterblum City of Portland member since 2006 Portland, MI 517-647-2948

Daniel Geyer Village of Manchester member since 2008 Manchester, MI 734-428-7171

David A. Geyer member since 1976 Muskegon, MI 231-798-7241

Mike Gibson Village of Climax member since 2008 Climax, MI 269-746-4174

Allen Gill Waterford Township Dept. of Public Works member since 2012 Waterford, MI 248-431-0484

Craig Gill Village of Springport member since 2001 Springport, MI 517-857-2510

Sanpreet Gill A 107 Engineering Research Complex member since 2016 East Lansing, MI

Doug Gillean City of Grand Rapids member since 2005 Grand Rapids, MI 616-456-3881

Amy Gilson City of Charlotte member since 2005 Charlotte, MI 517-543-8858

Mark Gladieux City of Monroe member since 2014 Monroe, MI 734-240-6074

**City of Gladstone** member since 1987 Gladstone, MI 906-428-3460

Timothy Glass member since 2011 Marcellus, MI 269-506-7015 Kelly Gleason

Lansing Board of Water & Light member since 2014 Lansing, MI

Wayne E. Gleiber Great Lakes Scientific member since 1995 Stevensville, MI 269-429-1000

Mark Glessner City of Three Rivers member since 1998 Three Rivers, MI 269-273-1845

Paul Glinski Huron Charter Township DPW member since 2000 New Boston, MI 734-753-3442

Michael Glowinski Alpena SUEZ member since 1987 Alpena, MI 989-354-1400

Ron Gobler Wolverine Water Works, Inc. member since 2001 Waterford, MI 248-673-4310

Joseph M. Goergen Genesee County Div. W&WS member since 1989 Montrose, MI

Kristin K. Goetze Johnson & Anderson, Inc. member since 1996 Waterford, MI 248-681-7800

Robert F. Goodheart Pathfinder Engineering, Inc. member since 1989 Byron Center, MI 616-531-7422

Philip A. Goodlock member since 2000 Hudson, MI 517-403-9216

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Thomas N. Gordon member since 2008 Iron Mountain, MI 906-779-0166

John P. Gorney City of Kentwood member since 1999 Kentwood, MI 616-554-0825

Gerald Goshorn member since 1960 Alma, MI 989-463-4580

Daryl J. Gotham member since 1999 Saginaw, MI 989-450-8146

Thomas Gott City of Mount Clemens member since 2007 Mount Clemens, MI

Michael P. Grabbe Village of Lawton member since 1992 Lawton, MI 269-624-6406

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Joe Graf member since 2012 Clarkston, MI

Judy E. Graham City of Portage member since 2014 Portage, MI 269-329-4424

Grand Haven Water Treatment Plant member since 1970 Grand Haven, MI 616-847-3487

City of Grand Haven Dept. of Public Works member since 2011 Grand Haven, MI 616-847-3493

Grand Rapids Water Department member since 1987 Grand Rapids, MI 616-456-4238

Grand Traverse County Dept of Public Works member since 1977 Traverse City, MI 231-995-6054

James H. Granger Granger & Associates Inc. member since 1968 Cheboygan, MI 231-627-2763

Thomas A. Gray member since 1990 Saginaw, MI 989-791-8099

J. Warren Green Lockwood Andrews & Newnam member since 1990 Oakbrook Terrace, IL 630-495-4199

Roy Green Powell Fabrication & Manufacturing, Inc. member since 2009 Saint Louis, MI 989-681-2158

City of Greenville member since 1975 Greenville, MI 616-754-5098

Richard Greenwell member since 2014 Walled Lake, MI 248-875-4620

Donald J. Greiner member since 1973 Big Rapids, MI Michael D. Grenier City of Muskegon member since 1993 Muskegon, MI 231-724-4104

> Peter F. Greiner NSF International member since 1993 Ann Arbor, MI 734-769-5517

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Kevin L. Gritters Prein & Newhof member since 2006 Grand Rapids, MI 616-364-8491

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Herb Grunwell Saginaw Charter Township member since 2005 Saginaw, MI 989-791-9870

David E. Guastella Alfred Benesch & Company member since 1992 CANTON, MI 313-963-0612

**Greg Gucwa** Johnson & Anderson member since 2008 Waterford, MI

Robert E. Guerin City of Dearborn member since 2007 Dearborn, MI 313-943-2308

**Lennard Gumaer** *Brilliant Systems, LLC* member since 2015 Bloomfield Hills, MI

Gary Gunsell City of Linden member since 2012 Linden, MI 810-735-7980

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Brad Gurski City of St. Johns member since 2015

Geoff Guss McWane Ductile-Ohio member since 2005 Coshocton, OH 800-800-6013

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Stephen D. Guy City of Fenton member since 2005 Fenton, MI 810-614-1761

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### I, I

Elton Hackenberg Village of Marcellus member since 2010 Marcellus, MI 269-646-3310

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Bruce R. Hamlett Hamlett Environ. Technologies member since 1978 Howell, MI 517-545-2500

Steve Hammond City of Montague member since 2011 Montague, MI 231-893-2235

Hampton Township member since 2014 Essexville, MI 989-893-7541

David W. Hand Michigan Tech. Univ., Dept. Civil Eng. member since 1981 Houghton, MI 906-487-2777 Dean Hand Marenisco Township Hall member since 2013 Marenisco, MI 906-787-2463

Joel Hanenburg Georgetown Township member since 1999 Jenison, MI 616-457-2340

Jeffrey R. Hansen LAN member since 2006 Flint, MI 810-333-3201

Raymond Hansen City of Rogers City member since 2009 Rogers City, MI 989-734-2880

Paul Hanson DIPRA member since 2015 Valparaiso, IN 219-464-4075

**City of Harbor Beach** member since 2012 Harbor Beach, MI 989-479-6730

**City of Harbor Springs** member since 2013 Harbor Springs, MI 231-526-0604

Robert R. Harbron member since 1986 Farmington, MI 248-539-0724

Kendra Harding member since 2014 Auburn Hills, MI

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Benston D. Harris B.D. Harris, Inc. member since 2003 Madison Heights, MI 248-291-5392

Kevin J. Harrison member since 1989 Burtchville, MI 810-984-9770

Perry Hart City of Battle Creek member since 2006 Battle Creek, MI 269-966-3481

**Diane Harte** *MWEA* member since 2015 Saint Johns, MI Jerry Harte Michigan Water Environment Assoc.

member since 2013 Bath, MI 517-641-7377

Nick Harteau member since 2009 Farmington, MI 734-260-0152

Hartland Township member since 2011 Hartland, MI

Ken Hartwig Tnemec Company, Inc. member since 1999 Howell, MI 517-540-0038

Mike Harvey member since 2006 Crystal Lake, IL 312-405-7965

Robert M. Harvey Village of Paw Paw member since 2005 Paw Paw, MI 269-657-3169

Aaron Haskin City of Allegan member since 2003 Allegan, MI 269-686-1115

City of Hastings member since 2015 Hastings, MI 269-945-2468

Bruce A. Hauch Village of Three Oaks member since 1988 Three Oaks, MI 269-756-2020

David Haut City of Owosso Water Dept member since 2016 Owosso, MI 989-725-0560

Antoinette Hawkins City of Monroe Water Plant member since 2012 Monroe, MI 734-241-5947

Bruce L. Hawkinson Mead and Hunt, Inc. member since 1977 Norway, MI 906-563-1310

Ronald E. Hayes Detroit Water & Sewerage Department member since 1989 Detroit, MI 313-999-3395

Yvette A. Hayes-Johnson Great Lakes Water Authority member since 2002 Detroit, MI

Stan S. Hazan NSF International member since 1989 Ann Arbor, MI 734-769-5105

James Heath Heath Consulting Services member since 1983 Detroit, MI 313-342-9680

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Don Heck Wolverine Engineers & Surveyors member since 2000 Mason, MI 517-676-9200

Michael Helder Holland Board Public Works member since 1996 Holland, MI 616-834-1431

Al Henderson Argonics, Inc member since 2012 Gwinn MI 906-315-4128

David C. Henry City of Monroe Water Dept. member since 1998 Monroe, MI

David W. Hensley member since 1999 Grosse Pointe Woods, MI 313-737-0609

Kevin M. Herbert Muskegon Water Filtration Plant member since 1998 Muskegon, MI 231-724-4105

Jeffrey D. Herczeg City of Auburn Hills member since 2013 Auburn Hills, MI 248-391-3777

**Christine Herndon** Herndon Solutions Group member since 2008 Las Vegas, NV 866-487-3895

Robert Hesse Grand Rapids Water Department member since 2016 Grand Rapids, MI

Brian W. Hettinger City Of Fremont member since 2000 Fremont, MI 231-924-2101

**Brian Hewlett** MHOG Sewer and Water Authority member since 2016 Howell, MI

Mike Hielkema Grand Rapids Water System member since 2011 Wayland, MI 616-456-4170

Howard Higlev Bear Lake Village member since 2003 Bear Lake, MI

**Bill Hildebrand** Carlon Meter, Inc. member since 2012 Grand Haven, MI 616-842-0420

Christopher Hiltunen Ira Township member since 2012 Ira, MI 586-725-7231

Iohn Hines Houghton Lake Sewer Authority member since 2015 Houghton Lake, MI

Jefferey S. Hinojosa Huron Charter Township DPW member since 1989 New Boston, MI

Joseph T. Hoban Dixon Engineering, Inc. member since 2006 Menasha, WI 800-327-1578

Richard R. Hobgood member since 2015 Romulus, MI 734-466-4492

David M. Hobson Charter Township of Grand Blanc member since 1991 Grand Blanc, MI 810-424-2640

lennifer A. Hodges Gourdie-Fraser, Inc member since 2010 Traverse City, MI 231-946-5874

John R. Hodges Village of Sparta member since 2006 Sparta, MI 616-887-3788

Tracy Hoff member since 1998 Deckerville, MI 810-376-9505

Edward Hogan Wade Trim member since 2005 Farmington Hills, MI 313-610-5398

William R. Hogan City of Trenton member since 2001 Trenton, MI 734-675-8251

Steve Hohensee member since 1980 Washington, MI

Kraig R. Hohf City of Marysville member since 2007 Marysville, MI 810-364-8340

Holland Charter Township member since 1971 Holland, MI 616-396-1891

David R. Holmgren C2AE member since 1995 Grand Rapids, MI 906-474-6716

Scott G. Homminga City of Grosse Pointe Farms member since 2003 Grosse Pointe Farms, MI 313-343-2328

# Eric Hoogerhyde

member since 2014 East lordan, MI 231-536-2261

Richard L. Hopper Jr. Thomas Township member since 2009 Saginaw, MI 989-781-0150

Jaymee E. Hord Village of Webberville member since 2011 Webberville, MI 517-521-3984

Mark H. Horgan Genesee County Water & Waste Services member since 1996 Flint, MI 810-732-7870

Tom Horrocks City of Onaway member since 2014 Onaway, MI 989-733-6548

Scott A. Houghtaling City of Norton Shores member since 2010 Norton Shores, MI 231-798-2156

Brian Oliver House Spicer Group member since 1999 Saint Johns, MI 989-224-2355

Scott House City of East Lansing member since 2015 East Lansing, MI 517-337-9459

James W. Houska member since 1988 Elsie, MI 989-862-5090

Brock Howard member since 1983 East Lansing, MI 517-323-3645

lessica Howard Orchard, Hiltz, & McCliment member since 2013 Livonia. MI 734-522-6711

Shane Howard South County Water System member since 2012 Temperance, MI , 734-847-0579

City of Howell member since 1998 Howell, MI 517-546-5309

George E. Hubbell member since 1979 Milford, MI 248-338-924

lames W. Hubbell member since 1961 Bloomfield Hills, MI 248-852-6123

John Hudak Hvdro Designs, Inc. member since 2009 Trov. MI 248-250-5005

Robert S. Hudson Adams Township member since 1992 South Range, MI 906-482-8395

Darrick Huff Spicer Group Inc. member since 2012 Saginaw, MI 989-754-4717

lack Hughes Holland Board of Public Works member since 2012 Holland MI

Glenn T. Hummel HESCO member since 2004 Warren, MI 586-978-7200

**Charline Hunt** Parjana Distribution, LLC member since 2015 Detroit, MI 855-727-5262

John A. Hunter member since 1997 Fast lordan, MI 248-546-2004

William Hunter City of Grand Haven Dept. of Public Works member since 2011 Grand Haven, MI 616-847-3493

**City of Huntington Woods** member since 1989 Huntington Woods, MI 248-547-1888

Craig A. Hupy Ann Arbor Public Services member since 1990 Ann Arbor, MI

Norman I. Hurren member since 2007 Carsonville, MI 810-622-9811

lason Hvde Kimball Township member since 2014 Kimball, MI

### Tom Idema

Ι

member since 1988 Madison Heights, MI

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Tony D. Ippoliti Sherwin-Williams member since 1988 Indianapolis, IN 317-594-0083

Ira Township member since 2013 Ira. MI 586-725-7231

Charles W. Ireland Orion Township Dept. of Pub. Wks. member since 1983 Lake Orion, MI 248-393-7018

Iron Mountain Water Department member since 1952 Iron Mountain MI 906-774-1794

City of Iron River member since 2013 Iron River, MI 906-265-4719

City of Ironwood Water Utility member since 1996 Ironwood, MI 906-932-5050

Cynthia C. Irving FTCH member since 2013 Grand Rapids, MI 616-464-3848

Warren I Isaacson Mead & Hunt Inc. member since 1977 Felch MI 906-399-0532

Douglas T. Iseler Iseler Demolition Inc. member since 1992 Port Hope, MI 800-338-8396

Matt Iseler Village of Mayville member since 2015 Mayville, MI 989-843-6621

Ishpeming Township member since 2014 Ishpeming, MI 906-485-5411

Younes Ishraidi Meridian Charter Township member since 2001 Okemos, MI 517-853-4440

Michael Itrich Marine City Public Works member since 2015 Marine City, MI 810-765-9711

**Robert Ivanovic** Tetra Tech member since 2015 Ann Arbor, MI 734-213-5067

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Robert M. Jackovich Southeastern Oakland County Wtr Authority member since 1992 Royal Oak, MI 248-288-5150

Zachary E. Jackson member since 1988 Detroit, MI 313-273-9176

City of Jackson member since 2011 lackson, MI 517-788-4160

Justin Jaime member since 2014 Saginaw, MI 989-752-7911

Ionathan laime member since 2014 Saginaw, MI

Jim James City of Hastings member since 2016 Hastings, MI

Eric Jancsi Forsyth Township Water member since 2012 Gwinn, MI

David M. Jansen Genesee County Water & Waste Services member since 1996 Elint MI 810-732-7870

Brian Jeffries City of Monroe Water Plant member since 2013 Monroe, MI 734-241-5947

Daniel O. Jenkins City of Fennville member since 1984 Fennville, MI 269-722-3075

Al lensen City of Southfield member since 2012 Southfield MI 248-796-4857

Daniel Jernagan Village of Homer member since 2015 Homer, MI 517-568-4321

Wayne Jernberg Grand Rapids Water Department member since 2007 Grand Rapids, MI 616-456-4055

Bruce D. Jerome member since 1980 Novi. MI 248-658-3490

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Loren Johnson member since 2012 Benton Harbor, MI 269-925-4057

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Paul Johnson City of Novi DPS, Water and Sewer Division member since 2015 Novi, MI 248-727-7763

Stephanie Johnson Michigan DEQ member since 2015 Warren, MI 586-506-6137

William Johnson Detroit Water & Sewerage Department member since 2014 Detroit, MI

Jeffrey A. Jones member since 2012 Ferndale, MI 248-259-1964

Brent Jones Village of Grass Lake member since 2013 Grass Lake, MI 517-522-4530

**Brieland** Jones University of Michigan member since 2015 Ann Arbor, MI 708-227-0868

W. Barnett Jones Detroit Water & Sewerage Department member since 2014 Detroit, M

Mark Joseph member since 2005 DeWitt, MI 517-290-0170

Richard K. Judkins Ann Arbor Charter Township member since 1989 Ann Arbor MI 734-663-3418

Tom Judy QED Environmental Systems, Inc. member since 2016 Ann Arbor, MI

Joshua Juhl City Of Wyoming member since 2013 Grand Rapids, MI 231-742-0922

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City of Harbor Beach member since 2012 Harbor Beach, MI 989-479-6730

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616-430-0324

City of Kalamazoo -Dept. of Pub. Svcs. member since 1970 Kalamazoo, MI 269-337-8660

Kalamazoo Lake Water & Sewer member since 1979 Saugatuck, MI 269-857-2709

Steven A. Kalinowski Wade Trim & Associates member since 1987 Taylor, MI 734-947-9700

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Paul Kanaski Huron Township Water System member since 2014 Port Hope, MI

Catherine Kane City of Fenton member since 2016 Fenton, MI 810-629-2261

Jon Kangas City of Ishpeming member since 2010 Ishpeming, MI 906-486-9371

Pawan K. Kapila member since 2003 313-928-0204

Michael T. Karll Charter TWP. of Plymouth member since 1997 Plymouth, MI

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Phil Karwat City Of Saginaw member since 2004 Saginaw, MI 989-759-1728

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lon Keim Grosse Ile D.P.S. member since 2000 Grosse Ile, MI 734-676-5959

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Chris A. Kenyon City of Ionia WWTP member since 1997 Ionia, MI 616-523-0165

Iohn Keyes Dow Corning member since 2014 Midland MI

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Terry Kilburn City of Bay City member since 2014 Bay City, MI 989-891-1202

**Kimball Township** member since 2001 Kimball, MI

Ashley Kimble Holand Board of Public Works member since 2013 Holland MI 616-355-1576

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**Catherine Kirkland** member since 2015 Lansing, MI 248-622-6729

Novi. MI

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Michael Jurosek Water & Sewer Authority

# $\mathbf{K}$

member since 1989 Bridgman, MI

> Douglas W. Kadzban Village of Sparta member since 1991 Jenison, MI

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Larry Knowles member since 2015 269-945-5083

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Robert J. Koehn City of Jackson Water Dept. member since 1986 Jackson, MI 517-788-4073

Edward Koenig Macomb Twp Water/Sewer Dept. member since 2005 Macomb, MI 586-598-0687

Michael J. Koluder member since 2000 Wyandotte, MI 734-775-9323 Kevin Koning Holland Board of Public Works member since 2012 Holland, MI 616-355-1564

Barry D. Korhorn Byron-Gaines Utility Authority member since 2006 Byron Center, MI 616-971-0002

Mike Kortman Byron-Gaines Utility Authority member since 2013 Byron Center, MI 616-971-0002

Zach Kortz Allegan Water Plant member since 2015 Allegan, MI

Alan G. Koski Republic Township member since 2010 Republic, MI 906-376-2303

David J. Koss member since 1983 Macomb, MI 586-610-1031

David G. Koster Holland Board of Public Works member since 2007 Holland, MI 616-355-1562

John E. Koster member since 2004 Wyoming, MI 616-257-6628

Nadine Kotlarz University of Michigan member since 2012 Ann Arbor, MI 734-334-6628

Keith Kotsch Village of Brooklyn member since 2008 Brooklyn, MI 517-592-5873

Yao Kouassi member since 2010 Livonia, MI 313-690-5422

A. Dusty Kowalski Burtchville Twp. D.P.W.-Water member since 1995 Burtchville, MI 810-385-5577

James Kowalski City of Grosse Pointe Woods member since 2002 Grosse Pointe Woods, MI 313-343-2460

Preston J. Kragt member since 1994 Holland, MI 616-399-5345

David B. Kramer Hydrosource Inc. member since 1987 Chagrin Falls, OH 440-247-9150

Lloyd J. Kramer member since 1989 Harbor Beach, MI 989-551-9257 Barry A. Kreiner *City of Marysville* member since 2004 Marysville, MI 810-364-8340

Holly Kremers Wade Trim member since 2015 Tampa, FL 813-882-4373

Richard Kroll United Water - City of Alpena WTP member since 2016 Alpena, MI

Charles L. Kronk member since 1978 Lakeland, MI 810-231-1200

Martin T. Kroon member since 1995 White Cloud, MI 231-689-6093

Arthur Krueger Traverse City Water Department member since 2012 Traverse City, MI 231-922-4920

Tim C. Krugh City of Brighton member since 2000 Brighton, MI 810-227-3063

Tim Kruse Eramosa International, Inc. member since 2014 Detroit, MI 313-350-3123

Walt Krzeczkowski City of Livonia member since 2008 Livonia, MI 734-466-2633

Roy W. Kuennen Amway MC 31-3A member since 1987 Ada, MI 616-787-7824

Dennis Kuhn II Village of Buckley member since 1996 Buckley, MI 989-350-0448

Tim Kuhns DWSD member since 2014 Novi, MI 248-735-5647

Kenneth W. Kunka Sumpter Township member since 2007 Belleville, MI 734-787-7244

Louis Jay Kwiatkowski City of Grandville member since 2005 Grandville, MI 616-538-1990

# L

James G. Labell City of Trenton member since 1989 Trenton, MI 734-676-6621 Howard L. Lacossee City of Rose City member since 2013 Rose City, MI 989-685-2646

Michael Lacroix member since 2015 White Lake, MI

Steve LaFave Green Oak Water Company member since 2004 South Lyon, MI 248-486-8110

Rebecca Lahr Michigan State University member since 2016 East Lansing, MI

James W. Lahti member since 1994 Dewitt, MI 517-668-6061

Jennifer Lai Michigan State University member since 2015 East Lansing, MI 517-355-6640

Lake Township Water System member since 1975 Bridgman, MI 269-465-3850

Jeff Lampi Escanaba Municipal Water Dept. member since 2012 Escanaba, MI

Jason A. Laney Village of Quincy member since 2007 Quincy, MI 517-639-9065

William Lang City of Utica DPW member since 2006 Utica, MI 586-731-6110

Wayne E. Langeland member since 1984 Grand Rapids, MI 616-682-0832

Anthony Langhann City of Litchfield member since 2008 Litchfield, MI 517-542-2103

Lansing Board of Water & Light member since 1929 Lansing, MI 517-702-6812

City of Lapeer member since 1996 Lapeer, MI 810-664-6887

Kelly Lapointe City of Troy, Mich. member since 2016 Troy, MI

Timothy J Lapointe Thornapple Manor member since 2012 Hastings, MI

Thomas W. Larder Process Results member since 1988 Saline, MI 734-475-7122 Barry LaRoy City of Monroe member since 2004 Monroe, MI 734-384-9122

Cory Larson member since 2003 Gladstone, MI 906-428-3631

Darryl Latimer Detroit Water & Sewerage Department member since 2004 Detroit, MI 313-224-4784

Jim Lavelle Lake Bella Vista member since 2011 Rockford, MI 616-874-6777

Steven P. Lawry member since 1984 Marquette, MI 906-249-1448

Kerry Laycock D. Kerry Laycock, LLC member since 2014 Ann Arbor, MI 734-222-0584

Josh Leach City of Farmington member since 2014 Farmington, MI 248-473-7250

William E. Leafdale City of Rochester Hills member since 1987 Rochester Hills, MI

Brad Lear Charter Townhip of Canton member since 2012 Canton, MI

Mark Lease City of Eaton Rapids member since 2013 Eaton Rapids, MI

Gregg E. Lebster member since 1997 Caledonia, MI 616-974-9943

Craig S. Lehan City of Norton Shores Water Department member since 2007 Norton Shores, MI 231-798-2156

Michael Lehtonen member since 2007 Okemos, MI 517-702-6814

Allen D. Lemieux West Michigan Instrumentation Systems, Inc. member since 1987 Nunica, MI 616-837-6148

Rod Lesko Wyandotte Municipal Services member since 2014 Wyandotte, MI 734-324-7111

Tim LeTourneau F&V member since 1992 Grand Rapids, MI 616-490-5346

Ashely Levin City of Troy, Mich member since 2016 Trov, MI

Daniel Eli Lewis Indian Lake Nazarene Camp member since 2015 Vicksburg, MI 269-808-0727

Daniel G. Lewis Prein & Newhof member since 2002 Kalamazoo, MI 269-372-1158

Gary Lewis Little River Band of Ottawa Indians - Utilities member since 2009 Manistee, MI 231-398-2299

Tom H. Lewis Energy United Water Corporation member since 2001 Carmel, IN 317-566-0723

Steve Liehrecht Rockwell Automation member since 2009 Troy, MI 419-340-6873

Marvin Liggins City of Kalamazoo Dept. of Pub. Svcs. member since 2010 Kalamazoo, MI 269-337-8388

Tae Lim University of Michigan, Ann Arbor member since 2015 Oak Park, MI 734-834-4578

Patrick F Lindemann County of Ingham member since 2004 Mason MI 517-676-8395

David Linderman Village of Roscommon member since 2015 Roscommon, MI 989-275-8222

Robert W. Lindh Urban Land Consultants member since 1996 Shelby Township, MI 586-731-8030

Donald A Link member since 1982 Monroe, MI 734-289-2200

Mark Lipovsky City of Harrison member since 2015 Harrison, MI 989-539-7145

Bob Lisenko NSF International member since 2015 Ann Arbor, Mi 203-915-8495

Scott Michael Little member since 2015 Traverse City, MI 231-632-1000

> Little River Band of Ottawa Indians - Utilities member since 2009 Manistee, MI 213-398-2285

Keith Lockie Superior Township Utility Department member since 2013 Ypsilanti, MI 734-480-5502

Gary S. Logsdon member since 1964 Fairfield, OH 513-860-2021

Robert A. London member since 1990 Bay City, MI 989-450-7834

Dwayne Loper East China Water Filtration Plant member since 2011 East China, MI

Chervl Louden Lansing Board of Water and Light member since 2014 Lansing, MI 517-702-6396

Drew Lovaasen member since 2015 Harbor Springs, MI 231-526-7460

Tyler Loveday City of Monroe member since 2016 Monroe, MI

Paul Lozen member since 2007 Alpena, MI 989-354-2798

Robin E. Lucas City of Jackson WTP member since 2015 Jackson, MI 517-788-4075

Leon Luedeman City of Rochester Hills member since 2010 Rochester Hills, MI 248-656-4685

Todd Luks Elhorn Engineering Company member since 1991 Mason, MI 517-676-3786

Keith Lumma Spalding DeDecker Associates, Inc. member since 2004

Mahesh Lunani member since 2015 Rochester Hills, MI

Dawn Lund Utility Financial Solutions, LLC member since 2014 Leland, MI 231-218-9664

M. Lunn

City of Grand Rapids member since 1995 Grand Rapids, MI 269-682-0678

Luc Lupien Sanexen Environmental Services, Inc. member since 2012 Brownstown, MI 734-250-7874

Nancy Lux OHM Advisors member since 2015 Livonia, MI 734-466-4527

Randall Lybarger City of lackson member since 2011 lackson, MI 517-788-4170

Timothy J. Lynch BHSJ WWTP member since 2003 Saint Joseph, MI 269-983-7719

Craig A. Lyon Pittsfield Township Utilities member since 2006 Ann Arbor, MI 734-822-2109

Neil D. Lyons City of Alma member since 1990 Alma MI 989-681-3206

### M

M.E. Simpson Company, Inc. member since 1997 Valparaiso, IN 800-255-1521

John M. MacDonald Martin Control Service, Inc. member since 2000 Farmington Hills, MI 248-476-7660

Michael MacDonald Hubbell, Roth & Clark, Inc. member since 1999 Bloomfield Hills, MI

Thomas MacDonald member since 1995 Wayne, MI 734-721-0397

Molly Maciejewski City of Ann Arbor member since 2001 Ann Arbor, MI 734-794-6000 ext 43328

Greg Macintosh Village of Roscommon member since 2015 Roscommon, MI 989-808-5002

Thomas J. MacKenzie member since 1990 Brighton, MI 810-231-3976

Mackinac Public Works Department member since 1978 Mackinac Island, MI 906-847-6130

Roerv MacLean

Dubric Industries member since 2015 Comstock Park, MI 574-286-6930

Nicole Macmillan City of Troy, Mich. member since 2016 Troy, MI

Macomb Township member since 1985 Macomb, MI 586-598-0687

James W. MacQuarrie Mancelona Area Water & Sewer Authority member since 1988 Mancelona, MI 231-587-0744

Alfred Joseph Maddix City of Fenton member since 2005 Fenton, MI 810-280-2490

Jay Mader City of Huntington Woods member since 2012 Huntington Woods, MI 248-547-1888

Trout Creek Condo Association member since 1993 Harbor Springs, MI

Richard G. Mahoney Village of Jonesville member since 1988

William F. Maier member since 1989

Bay County Department of Water and Sewer member since 2011 Bay City, MI

Amber Malmstead member since 2013 Escanaba, MI

member since 2015 East Jordan, MI

231-843-8830

member since 2005 Manistique, MI 906-341-2281

City of Manton member since 2004 Manton, MI 231-824-6731

Barbara F Marczak Prein & Newhof, Inc member since 1986 Muskegon, MI 231-798-0101

Craig Marietti Ishpeming Township member since 2014 Ishpeming, MI 906-869-0330

Marine City Public Works member since 1987 Marine City, MI 810-765-9711

Michael Markham OHM Advisors member since 2014 Hancock, MI 906-482-0535

Michael Marks Georgetown Charter Township member since 2006 lenison. MI 616-457-2340

City of Marlette member since 2001 Marlette, MI 989-635-7448

City of Marshall member since 1994 Marshall, MI 269-781-3985

David Marshall Village of Pinckney member since 2002 Pinckney, MI

Dave Marshke City of Burton member since 2007 Burton, MI

David Grant Marszalec Emerson member since 2010 Saint Joseph, MI 269-932-8134

John P. Martin City of Sylvan Lake member since 1989 Svlvan Lake, MI 248-682-1440

**Robert Martin** City Of South Lyon member since 2002 South Lvon, MI 248-437-4006

**Ronald Martin** Village of Capac member since 2006 Capac, MI 810-395-4355

Scott D. Martin Scio Township member since 1995 Ann Arbor, MI 734-369-9350

# City of Manistique

Stewart J. Maggrett 231-526-9655 Jonesville, MI 517-849-9450 Bradd D Maki

989-684-3883

James Malpass ΕI

> 231-536-2261 Kurt K. Malzahn City of Ludington member since 1994 Ludington, MI

Mancelona Area Water & Sewer Authority member since 2014 Mancelona, MI 321-587-0744

Mathew A. Mangatt DWSD, Springwells member since 1997 Dearborn, MI 810-385-4040

William J. Martin Plainfield Township member since 1991 Grand Rapids, MI 616-363-9660

Joel Martinez East Lansing Meridian Water Auth. member since 2001 East Lansing, MI 517-204-4961

Joey Maruskin JGM Valve Corporation member since 2009 Commerce Township, MI 248-926-6200

George Marx Grosse Ile DPS member since 2015 Grosse Ile, MI 734-216-4342

Kimberly R. Mason City of Saginaw member since 2001 Saginaw, MI 989-759-1520

Chad Massel Evoqua Water Technologies member since 2015 Holland, MI 616-772-9011

Bob Masters Peerless-Midwest, Inc. member since 1999 Ionia, MI 616-527-0050

Brian W. Masterson Kinross Charter Township Water & Sewer Dept member since 2015 Kincheloe, MI 906-495-5134

Shawn Matson member since 2015 Grand Haven, MI

Samir F. Matta Lockwood, Andrews & Newnam, Inc. member since 1999 Okemos, MI 517-819-2367

Robert M. Mattfolk Osceola Township Water Supply member since 1990 Dollar Bay, MI 906-281-5578

Paul Matthews Ann Arbor Public Services member since 2010

Mark A. Mattson DLZ Michigan, Inc. member since 2009 Melvindale, MI 313-961-4040

Calvin Matz City of Wyoming Utilities Department member since 2008 Holland, MI 616-399-6511

Alex Mayer Michigan Technological University Dept. Civil & Envir. Engin. member since 2009 Houghton, MI Mark Kelly McCallum member since 2012 Clinton Township, MI

Michael L. McAdams White Lake Township Water Department member since 2015 White Lake, MI 248-698-3300

Gary McBride Village of Bear Lake member since 1993 Bear Lake, MI 231-864-3814

Shawn McBride Charter Township of Union member since 1994 Mount Pleasant, MI 989-400-4601

Tara McCann member since 2016

Bob McClenney City of Kalamazoo -Dept. of Pub. Svcs. member since 1993 Kalamazoo, Ml 269-337-8146

Shawn P. McColley City of Rochester Hills member since 1990 Shelby Township, MI 248-852-2677

Colin Glenn McCorkle Fishbeck, Thompson, Carr & Huber, Inc. member since 2015 Grand Rapids, MI

Keith D. McCormack Hubbell, Roth & Clark member since 1996 Bloomfield Hills, MI 248-454-6348

Susan F. McCormick Detroit Water & Sewerage Department member since 1987 Detroit, MI 313-224-4701

Melanie L. McCoy Sebewaing Light & Water Dept member since 2006 Sebewaing, MI

Jolisa D. McDay member since 2000 Clinton Township, MI

Ken McDonough member since 1988

Paul S. McGinnis City of Monroe Water Filtration Plant member since 2001 Monroe, MI 734-731-0471

Tony McGrath Negaunee/Ishpeming Water Authority member since 1994 Ishpeming, MI 906-486-8399

Craig McGregor City of Chelsea member since 2007 Chelsea, MI 734-475-8298 David McKee Independence Twp DPW member since 2001 Clarkston, Ml 248-625-8222

David K. McKeen City of Fenton member since 1999 Fenton, MI 810-714-9610

Joseph McKerchie member since 1999 Sault Sainte Marie, MI 906-632-5275

Stephen D. McLaren Leoni Engineerings Products & Services Inc. member since 2009 Lake Orion, MI 248-760-9656

Clif J. McLellan NSF International member since 2015 Ann Arbor, MI 517-851-8099

Timothy D. McNamara Fishbeck, Thomspon, Carr & Huber, Inc. member since 1985 Grand Rapids, MI 616-464-3811

Dan L. McVay DN Tanks member since 1987 Hilliard, OH 614-771-6577

Hal W. Mead Village of St. Charles member since 1993 Saint Charles, MI 989-865-8287

Archie Mears NHBP member since 2015 Fulton, Ml

Emily Meek member since 2015 Livonia, MI 616-334-0880

**Ajit Mehta** *DWSD* member since 2015 Plymouth, MI

Lynnette Marie Meinz member since 2011 Lapeer, MI 810-732-7870

Ronald J. Melchert City of Auburn Hills DPS member since 1996 Auburn Hills, MI 248-391-3777

John Mensinger City of Allen Park member since 2015 Allen Park, MI 313-928-4166

Steven Mepham City of St. Louis member since 1995 Saint Louis, MI 989-681-3567 Andrew Messina JR New Baltimore Water Department member since 1990 New Baltimore, MI 586-725-7300

Robin Messing City of Ann Arbor Water Treatment Plant member since 2015 Grand Blanc, MI 989-980-3331

Ronald Meszaros Colombiere Center member since 2004 Clarkston, MI

Metco Services, Inc. member since 1997 Warren, MI 313-961-4560

John C. Meyer member since 1983 Monroe, MI 734-243-2017

**Tim Meyer** *City of Midland* member since 2011 Midland, MI

Jeffrey Warren Meyers MHOG Water Treatment Plant member since 2007 Howell, MI 517-545-5098

Arnold Michael Village of Athens member since 1998 Athens, MI 269-729-4940

Andrew John Michalowski City of Battle Creek member since 2010 Battle Creek, MI 269-966-3343

Joseph M. Michalsky Jackson County Road Commission member since 1993 Jackson, MI 517-783-5870

Glen Michel Michigan Meter Technology Group Inc. member since 1985 Madison Heights, MI 248-808-7837

Michigan American Water member since 1959 Calumet, MI 906-337-3502

Michigan State University Utilities member since 1977 East Lansing, MI 517-355-3314

Mark Michling City of Auburn Hills Public Works member since 2006 Auburn Hills, MI 248-364-6931

Midland Water Department member since 1940 Midland, Ml 989-837-3327

Wally Miel member since 2012 Benton Harbor, MI 269-849-5194 Brian Milewski Plainfield Twnshp Water Dept. member since 1994 Grand Rapids, MI 269-363-9660

Bob Miller South Haven Board of Public Utilities member since 1977 South Haven, MI 269-637-0715

Craig A. Miller City of Buchanan member since 2013 Buchanan, MI 269-876-6034

Craig Miller Grand Rapids Water Department member since 2015 West Olive, MI 616-456-3700

David G. Miller Charter Township of Shelby member since 1987 Shelby Township, MI 586-731-5990

Rick G. Miller City of Sturgis member since 1994 Sturgis, MI 269-651-2879

Robert N. Miller Jr. Suez member since 2006 Portage, MI 269-324-4896

Russell J. Miller City of St. Clair Shores member since 2015 St Clair Shores, MI

Daisuke Minakata Michigan Technological University member since 2014 Houghton, MI 906-487-1830

Steve P. Mince City of Durand member since 1999 Durand, MI

Paul Mines member since 2010 Ada, MI 452-793-8798

Peter Minnich City of Wyoming Utilities Department member since 2013 Holland, MI 616-510-1752

James J. Minster C2ae member since 1998 Lansing, MI 517-371-1200

Robert Missman Amway Corp. 31-2A member since 2015 Ada, MI

Jeffry W. Mitchell Village of Union City member since 2015 Union City, MI

Timothy W. Mitosinka City of Monroe Water Department member since 1997 Monroe, MI 734-384-9153

Todd Mittag Harlan Laboratories member since 2012 Lansing, MI 517-655-2172

John Monaghan Village of Edwardsburg member since 2015 Edwardsburg, MI 269-663-8484

David Monette Warren Waste Water Treatment member since 2004 Warren, MI 586-264-2530

Abby Monroe United Water member since 2015

Scott Monroe Southwest Barry Cnty. Sewer & Water Authority member since 2006 Delton, MI 269-623-3405

Monroe Environmental Corp. member since 2010 Monroe, MI 734-242-5275

City of Montague member since 1977 Montague, MI 231-893-2235

Joseph Moore DuBois Cooper Associates, Inc. member since 2008 Plymouth, MI 734-455-6700

Kevin Moore Local 85 Training Center member since 2009 Saginaw, MI

Michael Moore City of Sterling Heights Wtr. member since 2016 Sterling Heights, MI

Tim Moore Village of Athens member since 2012 Athens, MI 269-209-2435

James A. Moreau Sault Ste. Marie Water Department member since 1986 Sault Sainte Marie, MI 906-632-3531

Michael Morehouse Home Tech Assessments, Inc. member since 2015 Ann Arbor, MI 734-677-4334

Dan Morosky Rosedale Products Inc. member since 2005 Ann Arbor, MI 734-665-8201

Thomas L. Morris II Etna Supply Company member since 1997 Wixom, MI 810-624-5000 Thomas Morrissey Delta Charter Township member since 2010 Lansing, MI

David L. Morse member since 1980 Niles, MI 269-683-0952

Jeremiah Morse Amec Foster Wheeler member since 2015 Novi, MI 616-481-0151

William R. Mortimer member since 1959 Livonia, MI

Julius Moss Michigan State University member since 2015 East Lansing, MI 517-355-6640

Rory K. Moss Northern Pump & Well Company member since 2013 Lansing, MI 517-231-5773

Katherine Mowbray member since 2003 East Jordan, MI 231-536-9544

Patrick Muczynski City of Evart member since 2015 Evart, MI

Charles W. Mudge City of Perry member since 1999 Perry, MI 517-625-6155

Michael J. Mulder member since 1990 Dewitt, Ml 517-669-6904

Sree Mullapudi Ypsilanti Community Utilities Authority member since 2006 Ypsilanti, MI

David J. Munch City of Wyoming member since 2005 Holland, MI 616-399-6511

Mark Mundt United Water member since 2009 Lowell, MI 616-897-8135

Sanjeev Mungarwadi Detroit Water & Sewerage Department member since 2005 Detroit, MI 810-385-2021

City of Munising member since 1990 Munising, MI 906-387-2419

Kim Murphey City of Rochester Hills member since 2011 Rochester Hills, MI 248-656-4685 Timothy Patrick Murphy Schneider Electric member since 2010 Broadview Heights, OH 440-746-3177

Chris Murphy Advanced Valve Technologies member since 2013 Grand Rapids, MI 877-489-4909

Belinda Murray member since 2010 Grand Rapids, MI 616-456-4077

Brian Musselman Coldwater Board of Public Utilities member since 1998 Coldwater, MI 517-279-9531

Kris Musselman City of Manton member since 2015 Manton, MI

### $\mathbf{N}$

Edward Joseph Nahan II member since 2015 Saginaw, MI 517-896-3615

Ishwar M. Naik Stantec Consulting, MI, Inc. member since 2015 Ann Arbor, MI 734-368-3112

Kevin G. Nash Monroe Water member since 1997 Monroe, MI 734-755-5847

Kim W. Nault Republic Township Water Department member since 2001 Republic, MI 906-371-0065

Manuel Navarro City of Marlette member since 2014 Marlette, MI 989-635-7448

Kevin Neeb Waterford Township Dept. of Public Works member since 2012 Waterford, MI 248-618-7493

Negaunee Township Water System member since 1979 Negaunee, MI 906-475-7869

Casey Neil Evoqua Water Technologies member since 2015 Holland, MI 616-690-0659

Keith A. Nelson Nelson Tank Engrg & Cnsltng member since 1995 Lansing, MI 517-321-1692 Neal Nelson City of Bessemer member since 2005 Bessemer, MI 906-667-0453

James Nessen Village of Edmore member since 2013 Edmore, MI 989-427-3747

Lisa Neuendorff US Army TARDEC member since 2015 Warren, MI 586-282-4161

Tim Neumann Michigan Rural Water Association member since 2008 Harrison, MI 989-539-4111

New Baltimore Water Department member since 1970 New Baltimore, MI 586-725-7300

New Buffalo Township member since 2008 New Buffalo, MI 269-469-3112

City Of Newaygo member since 1978 Newaygo, MI 231-652-7984

Thomas Newhof Prein & Newhof member since 1964 Grand Rapids, MI 616-364-8491

**Tula Ngasala** *WEES Consultants* member since 2015 Okemos, MI

Stephen C. Nichols Fishbeck Thompson Carr & Huber member since 1985 Grand Rapids, MI 616-464-3944

John A. Nickels Etna Supply Company member since 1998 Grand Rapids, MI 616-241-5414

Jorge Nicolas Detroit Water and Sewerage Dept member since 2015 Detroit, MI 313-926-8100

Kelly Nielsen City of Monroe member since 2014 Monroe, MI 734-241-6074

**City of Niles Utilities Dept.** member since 1954 Niles, MI 269-683-4700

Northville Township Dept. of Public Services member since 1973 Northville, MI 248-348-5820

**City of Northville Pub. Wks.** member since 1996 Northville, Ml 248-449-9930 Julie Norton member since 1992 Big Rapids, MI

Kevin B. Nosek member since 1998 248-689-9090

Kent Nothstine Traverse City Water Plant member since 2013 Traverse City, MI 989-289-8393

NSF International member since 1981 Ann Arbor, MI 734-769-8010

Aaron Nyboer Holland Charter Township member since 2016 Holland,

Mark H. Nye DLZ Corporation member since 1986 South Bend, IN 574-236-4400

Mary Nykamp Wightman & Assoc Inc member since 2014 Benton Harbor, MI 269-927-0100

# 0

Oakland County Water Resources Commissioner member since 2002 Waterford, MI

Kevin T. O'Brien City of Dearborn member since 1993 Dearborn, MI 313-943-3336

John F. O'Brien Genesee County Water & Waste Service member since 1986 Flint, MI 810-732-7870

Ken O'Brien City of Frankenmuth member since 1993 Frankenmuth, MI 989-652-8987

Terence J. O'Brien member since 2006 Grand Blanc, MI 810-397-5884

Eli Oklejas Jr. Fluid Equip. Dvlpmnt. Co., Inc. member since 1987 Monroe, MI 734-241-3935

Curt Michael Olar City of Saginaw member since 1996 Saginaw, MI 989-387-1348

F. Keith Oldewurtel member since 1979 Ada, MI

John E. Olson Spicer Group Inc. member since 1997 Saginaw, MI 989-754-4717

## RETURN TO TABLE OF CONTENTS

Olivia Nicole Olsztyn-Budry Bloomfield Township member since 2013 Bloomfield Hills, MI

John C. O'Malia O'Malia Consulting member since 1967 Williamston, MI 517-927-7188

Michael W. O'Malley member since 1992 Saint Joseph, MI 574-274-3889

Paul O'Meara City of Birmingham Water Dept. member since 2001 Birmingham, MI 248-530-1836

Jenny Oorbeck NSF International member since 2015 Ann Arbor, MI 734-418-6610

Orion Township Dept. of Pub. Wks. member since 2002 Lake Orion, MI 248-393-7018

Shawn D. Orlaske member since 1996 Saint Joseph, MI 269-429-5113

Christopher Ormes Village of Elsie member since 2013 Elsie, MI 989-862-4273

Patrick W. O'Rourke Stantec member since 2001 Ann Arbor, MI

Joseph E. Ortquist Holland BPW member since 2001 Holland, MI 616-355-1546

William Osborne City of Monroe member since 2014 Monroe, MI 734-241-6074

James V. Ouzts member since 2007 Rockford, MI 616-204-5967

City of Owosso Water Department member since 1990 Owosso, MI

Kenny Ozanich City of Berkley member since 2008 Berkley, MI 248-658-3490

# Р

Adam Pace Monroe Environmental Corp. member since 2010 Monroe, MI 734-242-7654

Kirk Page Township of Marquette member since 1981 Marquette, MI Carl A. Palma City of Grand Rapids member since 1995 West Olive, MI 616-456-3930

Valerie Palmer Eaton Green Estates Water member since 1998 Charlotte, MI 517-543-6649

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Charles Parker Charles Parker, II member since 2015 Swartz Creek, MI

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Andrew Parrott City of Midland member since 2007 Midland, MI 989-430-1203

Mark Parsley Fishbeck, Thompson, Carr & Huber member since 2013 Grand Rapids, MI 616-464-3842

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James R. Paschal member since 2002 Howell, MI 734-347-7428

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Paul Patterson Hydrocorp member since 2008 Troy, MI 734-904-5153 Steven M. Patterson Village of Ravenna member since 1993 Ravenna, MI 231-853-2360

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Christine J. Pawlak Holland Board of Public Works member since 2008 Holland, MI 616-355-1251

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Deborah L. Pellow Ishpeming Area Wastewater member since 1998 Ishpeming, MI 906-486-4391

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Duane Pendred Sims-Whitney Utilities Authority member since 2007 Au Gres, MI 989-876-7904

Pennfield Charter Township member since 2000 Battle Creek, MI 269-209-5861

Alan Pennington Moore & Bruggink Inc. member since 2003 Grand Rapids, MI 616-363-9801 Pentland Twp. Wtr. Dept. member since 2002 Newberry, MI 906-293-8577

City of Perry member since 1993 Perry, MI 517-625-6155

Derek N. Perry Meridian Charter Township member since 2004 Okemos, MI 517-853-4654

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Tracy Petit Frenchtown Water member since 2015 Newport, MI 734-915-8804

Donald Petrovich Plainfield Township Water Dept. member since 1991 Belmont, MI 616-364-7174

Kristen Philip Michigan Department of Env. Quality member since 2000 Lansing, MI

Brian Phillips FTC&H member since 2006 Grand Rapids, MI 616-464-3807

Richard Phillips Superior Township member since 2012 Brimley, MI 906-440-1199

Josh Pierce Village of Nashville member since 2007 Nashville, MI 517-852-9571

Richard L. Pierson Gull Lake Sewer & Water Auth member since 1995 Richland, MI 269-731-4595

Catlin Pietrowski E. Lansing Meridian Water & Swr Auth. member since 2011 East Lansing, MI 517-337-7535

Deve H. Pihlaja City of Hancock member since 1992 Hancock, MI 906-482-0619 Mark R. Pilkington Carrollton Township member since 2006 Saginaw, MI

Dean Pine member since 1998 Monroe, MI 734-242-8889

Jeff R. Pinkowski Cambridge Brass member since 1995 Getzville, NY 800-724-3906

**City of Plainwell, #111** member since 1987 Plainwell, Ml 269-685-9363

Darryll Plamondon member since 2015 Ludington, MI 231-845-1500

Adele M. Pleatman Waterwayze member since 2015 West Bloomfield, MI 248-737-8784

Amy Ploof Oakland County Water Resources Commissioner member since 2015 Waterford, MI

Dave Plooster EJ member since 1998 Wyoming, 231-536-4504

City of Plymouth member since 1998 Plymouth, MI 734-453-7737

Mark D Pniewski member since 2016 Macomb, Ml

Tom Pollock City of Greenville member since 2005 Greenville, MI 616-754-5098

William Joseph Popp Johnson & Anderson member since 2015 Clarkston, MI 248-821-1887

Chris Porman City of Plymouth member since 2007 Plymouth, MI 734-453-7737

Cheryl D. Porter City of Detroit, Water & Sewer member since 2005 Detroit, MI 313-926-8135

Albert R. Posthuma member since 1968 N Muskegon, MI 231-744-7373

Arden Postma Grand Rapids Water Department member since 2016

Aaron Potter Waterford Township Dept. of Public Works member since 2012 Waterford, MI

David J. Potter Arlington Estates member since 2010 Muskegon, MI

Luke M. Potter City of Clare member since 2011 Clare, MI 989-386-2182

Powell Fabrication & Manufacturing, Inc. member since 1994 Saint Louis, MI 989-681-2158

Marti Praschan City of Ann Arbor member since 2008 Ann Arbor, MI

Catherine A. Prein Prein & Newhof member since 1988 Grand Rapids, MI 616-364-8491

Mark R. Prein member since 1996 Grand Rapids, MI 616-363-9936

Edwin Lewis Priehs City of Imlay City member since 2011 Imlay City, MI 810-724-8712

Richard Probst Eagle Harbor Township member since 2012 Eagle Harbor, MI 906-289-4407

Process Control Services member since 2009 Plymouth, MI 734-453-0620

Matthew J. Prosoli Pumps Plus, Inc. member since 1994 Farmington Hills, MI 248-888-9004

Brad Pryor City of Monroe Water Plant member since 2015 Monroe, MI 734-241-5947

Jeff Pugh Fleis & VandenBrink Engineering, Inc. member since 2003 Grand Rapids, MI 616-891-9504

Lucy B. Pugh AECOM member since 2004 Grand Rapids, MI 616-940-4321

David R. Purkiss NSF International member since 1996 Ann Arbor, MI 734-827-6855 Vicki M. Putala OHM Advisors member since 1996 Livonia, MI 734-522-6711

Ed Queen City of Wayne member since 2016 Wayne, MI

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David Quinn City of Caseville member since 2003 Caseville, MI 989-856-4407

Mike Quinnell Saginaw-Midland Water Supply member since 2004 Bay City, MI 989-684-2220

### R

James R. Rabine member since 1977 Grand Blanc, MI 810-618-1150

John E. Racek member since 1979 Comstock Park, MI 616-363-9801

Tim Rafferty

member since 2014 East Jordan, MI

Patrick W. Raftery City of Trenton WWTP member since 1991 Trenton, MI 734-676-0646

Dan Rainey Detroit Water & Sewerage Department member since 2014 Detroit, MI

John R. Rakoczy Rangeline Tapping Services, Inc. member since 2004 Royal Palm Beach, FL 800-346-5971

Jose Ramirez Jr. Pennfield Charter Township member since 2002 Battle Creek, MI 269-968-8549

Frank C. Rampton Trenton Corporation member since 1999 Ann Arbor, MI 734-368-7528

Lutgarde Raskin University of Michigon member since 1990 Ann Arbor, MI 734-647-6920

Matthew Ratz City of Monroe Water Plant member since 2015 Monroe, MI 734-241-5947

Jayne Rauch KAR Laboratories member since 1999 Kalamazoo, MI 269-381-9666 Matthew T. Raysin Genessee County Water & Wastewater member since 1999 Flint, MI 810-732-7870

**City of Reading** member since 2015 Reading, MI 517-283-2604

Red Flint Sand and Gravel member since 1997 Eau Claire, WI 800-238-9139

James E. Redding Rowe Professional Services Company member since 1991 Flint, MI 810-341-7500

Joel Reed City of Monroe member since 2014 Monroe, MI 734-243-0700

**City of Reed City** member since 2015 Reed City, MI 231-832-2245

Barry J. Reeder member since 2000 Ferndale, MI 248-288-5150

Kimberly L. Reeder member since 1984 Portage, MI Chad Reenders

Grand Rapids Water Department member since 2012 Grand Haven, MI 616-846-0582

Dean Reid member since 2009 Commerce Township, MI 248-379-2290

James A. Reinhold Michigan Meter Technology Group member since 1984 Sebewaing, MI 248-585-3700

Joe Reinke member since 2013 Merrill, MI 989-859-1616

Paul D. Reinsch City of Saginaw Water Treatment Plant member since 1990 Saginaw, MI 989-759-1640

Timothy Reisbig City of Ionia-DPW member since 2012 Ionia, MI 616-527-5786

Rick Reitz Village of Michiana member since 2011 New Buffalo, MI 269-469-4600 Chad Reul Grand Rapids Water Department member since 2015 Grand Rapids, MI

Rudolph S. Reyes Village of Oxford DPW member since 2005 Oxford, MI 248-628-1244

Andrew Reynolds Holland Board of Public Works member since 2015 Holland, MI 616-355-1540

Brian L. Rice Fleis & VandenBrink Engineering, Inc. member since 2002 Grand Rapids, MI 616-977-1000

James R. Rice member since 1998 Marquette, MI 906-249-4580

David L. Rich member since 1984 Lake Jackson, TX 979-266-9676

Jared P. Richards Tucker, Young, Jackson & Tull member since 2002 Newport, MI 313-909-1139

Mike Richards Pentland Twp. Wtr. Dept. member since 2011 Newberry, MI 906-293-8577

Timothy M. Richards City of Livonia Public Works member since 2003 Livonia, MI 734-466-2632

Linda Richardson Independence Township DPW member since 1990 Clarkston, MI 248-625-8222

Richland Township Water Dept. member since 2003 Hemlock, Ml 989-642-2097

Timothy Richnak City of Troy member since 2006 Troy, Ml 248-524-3396

Stanley H. Rickard City of Hart member since 1977 Hart, MI 231-873-2488

Karen E. Ridgway Applied Science, Inc. member since 1986 Detroit, MI 313-567-3990

Tim W. Ritchie City of Adrian member since 2002 Adrian, MI 517-264-4828 Pamela Ritsema Grand Rapids Water Department member since 2013 Grand Rapids, MI 616-456-3079

James Ritsema City of Kalamazoo -Dept. of Pub. Svcs. member since 2015 Kalamazoo, MI

Ricky R. Rivard City of Essexville member since 2002 Essexville, MI 989-893-6101

Pat Rivera Village of Mackinaw City member since 2002 Mackinaw City, MI

Matthew Rizzo Michigan Meter Technology Group, Inc. member since 2015 Madison Heights, MI 248-585-3700

Tim Roache member since 1980 Elk Rapids, MI 231-620-1289

Michael K. Robbins City of Petoskey member since 2005 Petoskey, MI 231-347-2500

Deena Roberson Holland Board of Public Works member since 2015 Holland, MI 616-355-1534

David C. Roberts Berlin Township member since 1994 Newport, MI

Paul A. Rochna Jr. member since 1997 Gaylord, MI

City of Rockford member since 2014 Rockford, MI 616-866-1537

Nick C. Roder Village of Garden member since 2004 Garden, MI 906-644-2423

Grace Rodriguez member since 2015 Ann Arbor, MI Jamie Roels

Henry Rodriguez Village of Shelby member since 2015 Shelby, MI 231-861-2500

Evoqua Water Technologies member since 2015 Holland, MI 616-748-7635

Timothy Rohn Richland Township Water Dept. member since 2003 Hemlock, MI Donald Rohraff City of Livonia member since 2003 Livonia, MI 734-466-2607

Robert Roland Frenchtown Water member since 2015 Monroe, MI 734-915-8801

Kevin Roney City of Garden City DPS member since 1993 Garden City, MI 734-793-1805

Thomas Rook Perceptive Service & Operations member since 1985 Plainwell, MI 269-762-6999

Randall W. Roost Lansing Board of Water and Light member since 1995 Lansing, MI 517-702-6114

Casey Rose member since 2013 Marquette, MI

Joan B. Rose Michigan State University Stores member since 1986 East Lansing, MI 517-432-4412

Mark A. Rose member since 1984 Escanaba, MI 906-786-3291

Ron Rose Water District #1 of Midland County member since 1993 Sanford, MI 989-687-2709

Rosedale Products Inc. member since 2010 Ann Arbor, MI 734-665-8201

Scott Roselle City of Novi member since 2013 Novi, MI 248-735-5644

Andrew S. Ross member since 1988 Dearborn, MI 313-791-0796

Brian J. Ross Genesee County WWS member since 1993 Linden, MI 517-321-2002

Gary Roth Water District No. 1 of Midland County member since 2003 Sanford, MI 989-687-2709

Thomas Rounds Dixon Engineering, Inc. member since 2010 Lake Odessa, MI

Christopher C. Rovig Michigan State University Utilities member since 2015 East Lansing, MI 517-353-1760 Donald E. Row Jr. Severn Trent Envrnmntl Services Inc. member since 2000 Hamilton, MI 269-751-0560

Steven Rowland member since 2004 Saint Clair Shores, MI 586-246-0949

Justin Roy City of Traverse City member since 2011 Traverse City, MI 231-922-4923

Jason Rozell City of Rochester Hills Water Department member since 2014 Rochester Hills, MI 248-656-4685

Christopher Rumsey Village of Vermontville member since 2014 Vermontville, MI 517-726-1444

Randall E. Russell Michigan City Dept of Water Works member since 1975 Michigan City, IN 219-874-3228

Steven Robert Rutkowski Spicer Group member since 2013 Saginaw, MI

Kenneth Rutkowski member since 2003 Port Austin, MI 989-738-4180

Steven James Ryan Sr. Ryan's Modern Sewer Cleaning member since 1997 Grand Rapids, MI 616-437-1132

Ryan's Modern Sewer Cleaning member since 2002 Grand Rapids, MI 616-458-3993

Wayne T. Rybak City of Rochester Hills member since 1993 Rochester Hills, MI 586-752-2004

Richard M. Rzeczkowski City of Berkley member since 2008 Berkley, MI 248-658-3490

S

Bruce R. Sabin Fleis & Vandenbring Engineering member since 1984 Ada, MI 616-868-0166

William Sadler Adrian Water Department member since 2015 Adrian, MI 517-264-4825

City of Saginaw member since 1984 Saginaw, MI 989-759-1662 Saginaw Chippewa Indian Tribe member since 2001 Mt Pleasant, MI

Saginaw-Midland Water Supply member since 1989 Bay City, MI 989-684-2220

City of St. Clair member since 1974 Saint Clair, MI 810-329-7121

City of St. Ignace member since 1978 Saint Ignace, MI 906-643-9670

City of St. Louis member since 1957 Saint Louis, MI 989-681-3567

Anne Saliers Holland Board of Public Works member since 2013 Holland, MI 616-355-1658

Imad Salim Wade Trim member since 2010 Detroit, MI 313-961-3650

Terry Samann Village of Vermontville member since 2014 Vermontville, MI 517-726-1444

Justin Sand member since 2015 St. Clair Shores, MI

Jerry D. Sanders member since 2000 Twin Lake, MI 313-277-7586 Larry D. Sanford

**City of Ann Arbor Utilities** member since 1979 Ann Arbor, MI 734-994-2840

Edward Santiago BASF Corporation member since 2015 Wyandotte, MI 734-324-2686

Bob Santure H2o Towers LLC member since 2012 Saline, MI 734-429-1828

Biren Saparia Detroit Water & Sewerage Department member since 2012 Detroit, MI

Scott Sarasin All Stars member since 2015 Milford, MI 248-390-4212

David Savant EJ member since 2006 East Jordan, MI 231-536-4540 Don Saville Custom Service & Design, Inc. member since 2015 Auburn Hills, MI 248-340-9005

Bridget Sawmiller member since 2014 Bloomfield Hills, MI 248-885-4853

Ron Schaefer Wolverine Power Systems member since 2015 Zeeland, MI 616-844-8920

Richard R. Schafer Jr. member since 1995 Kaleva, Ml 231-510-7526

Steve Schantz Ann Arbor Public Services member since 2013 Ann Arbor, MI 734-794-6000

Daniel S. Schechter member since 1991 Birmingham, MI 248-390-7103

David B. Schendel member since 1980 Canton, MI Eric W. Schiebold

Environmental Sales, Inc. member since 1997 Southfield, MI 248-569-9393

Eric A. Schiesswohl member since 1993 Saginaw, MI 989-791-9870

Ken Schippers Village of Vicksburg member since 2004 Vicksburg, MI

Dan Schlaff Village of Dexter Utilities member since 2012 Dexter, Ml 734-426-4572

Michael G. Schlegelmann City of Troy, Mich. member since 1996 Troy, MI 248-885-1981

Robert Schliska member since 1998 Saginaw, MI 989-753-1031

Katherine Schlutow Bloomfield Township member since 2013 Bloomfield Hills, MI 248-594-2802

Kris Schlutow member since 2015 Huntington Woods, MI 586-489-0192

Brian D. Schmidt member since 1988 Saint Joseph, MI 269-983-0718 Ray Schmidt City of Chelsea member since 2014 Chelsea, MI 734-475-1771

Leslie E. Schmidtke Grosse Ile Dept. of Pub Wks member since 1988 Grosse Ile, MI 734-676-5959

David E Schmuker member since 2015 Sparta, MI 616-690-2104

Allan E. Schneck City of Rochester Hills member since 2011 Rochester Hills, MI 248-656-4685

James E. Scholl member since 1986 Okemos, MI 517-303-5584

Garry Scholten Jr. Allendale Township Water member since 1999 Allendale, MI 616-895-5142

Brad S. Schotanus Dixon Engineering, Inc. /c/o Heidi Stoneman member since 1992 Lake Odessa, MI 630-220-1410

Gary T. Schrader Niles Township D.P.W. member since 1990 Niles, MI 269-684-5647

Julie Schroeder Chikaming Township Water Dept. member since 2005 Harbert, MI 269-469-1676

Brian Schulte City of Roseville member since 2008 Macomb, MI

Darold Schultz Thomas Township member since 1992 Saginaw, MI 989-781-6438

Lucinda Schultz City of Jackson member since 2012 Jackson, MI 517-768-6073

Lonnie Schulz Village of Elkton member since 2012 Elkton, Ml 989-375-2270

Wendy Schultz City of Ann Arbor Water Treatment Plant member since 2013 Ann Arbor, MI

**Paul Schumi** member since 2006 630-485-9870

Marcus Schweisthal City of Farmington member since 2015

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Scio Township member since 1986 Ann Arbor, MI 734-665-2606

Douglas A. Scott Rowe Professional Services Company member since 2007 Flint, MI 810-341-7500

Jerry R. Scott Worth Township PW member since 2001 Lexington, MI 810-359-2742

Kipp H. Scott member since 1999 Blissfield, MI 517-486-3261

Mark Scott Algonac Water Dept. member since 2011 Algonac, MI 810-794-3281

Randy M. Scott Spc Services, LLC member since 1992 Escanaba, MI 906-233-9360

Robert A. Scull City of Saline member since 2000 Saline, MI

Jeffrey Sears Charter Township of Grand Blanc member since 2015 Grand Blanc, MI 810-424-2706

Sebewaing Light & Water Dept member since 2013 Sebewaing, MI 989-883-2700

Paul Seegert Michigan Rural Water Assoc. member since 1979 Allen, MI 989-429-7591

Randy Seida West Side Water member since 2014 Lansing, MI 517-485-5476

Nate Seif RS Technical Services, Inc. member since 2015 Lowell, MI 616-897-7041

Robert D. Seif member since 1980 Lowell, MI 616-897-7041

Harry D. Sellers CH2M HILL member since 2011 Traverse City, MI 331-620-4819

John Selmi member since 2005 Pinckney, MI 313-387-2642

Howard Blair Selover F&V Operations member since 2015 Grand Rapids, MI Craig Selover Selover Consulting member since 2002 Naples, FL 239-529-2063

Mary Lynn Semegen Detroit Water & Sewerage Department member since 2004 Detroit, MI 313-561-6083

John W. Seppi member since 1987 Chatham, MI 906-439-5608

Edward T. Serwatowski Village of Armada member since 1981 Armada, MI 586-784-9151

Thomas R. Seymour member since 1992 East Lansing, MI 517-332-4771

Traci Shaffer City of Wyoming member since 2005 Wyoming, MI 616-261-3582

Bradley Shaw Kawkawlin Metropolitan District Water member since 2011 Kawkawlin. Ml

Ronald E. Shaw Jackson City Water Department member since 1993 Jackson, MI 517-768-6107

Liane Shekter Smith MDEQ-ODWMA member since 1978 Lansing, MI

Liane J. Shekter Smith MDEQ-ODWMA member since 1997 Marshall, MI 517-284-6543

Gregory S. Sheldon Zeeland Board of Public Works member since 1996 Zeeland, MI

Rick Sheltrow City of Iron River member since 2015 Iron River, MI

Ravelle Shepherd Wurldtech member since 2015 Southfield, MI 313-682-9104

Brad Shepler Hubbell, Roth, & Clark, Inc. member since 2002 Bloomfield Hills, MI 248-454-6300

Steven J. Sienkiewicz Peoplegro LLC member since 1984 Dearborn Heights, MI 313-282-2052

**Timothy Sikma** *City of Wixom* member since 2000 Highland, MI Edward Siler Holland Board of Public Works member since 2012 Holland, MI 616-355-1572

Silversmith Inc. member since 2015 Gaylord, MI 877-732-8988

**Timothy J. Simmons** *Village of Saranac* member since 2015 Saranac, MI

Randy Sinko Lansing Board of Water & Light member since 2008 Lansing, MI 517-897-5997

Larry Sirls City of Southfield member since 2012 Southfield, MI 248-752-3739

Kevin Sisk Frenchtown Water Department member since 2015 Newport, MI 734-289-1015

Janice M. Skadsen member since 1985 Ann Arbor, MI

Stephen Skalski City of Kalamazoo -Dept. of Pub. Svcs. member since 2013 Kalamazoo, MI 269-337-8454

Barry Skutt Jr. Saginaw Chippewa Indian Tribe member since 2008

John A. Slattery City of Saginaw member since 1998 Saginaw, MI 989-759-1641

Michael Slomski Plainfield Township Water Department member since 1994 Belmont, MI 616-364-7174

Cresson Slotten City of Ann Arbor member since 2008 Ann Arbor, MI

Alan Smaka Wightman and Associates, Inc. member since 2011 Benton Harbor, MI 269-927-0100

Bill Smeda Allied Mechanical Services member since 2013 Hudsonville, MI 616-669-4800

Brett E. Smith Village of Grosse Pte. Shores member since 1990 Saint Clair Shores, MI 313-886-0020

Justin Smith St. Johns Water Treatment Plant member since 2015 Herman Snay Kelly R. Smith member since 2002 Warren, MI 586-215-5794

Kimberly Ellen Smith Charter Township of Union member since 2015 MT Pleasant, MI 989-330-8664

Michael R. Smith member since 1990 South Boardman, MI 231-369-4262

Rod Smith City of Portland member since 2014 Portland, MI 517-647-2948

Stephen Smith BASF Corporation member since 2015 Wyandotte, MI 734-324-2729

Thomas A. Smith Prein & Newhof member since 1994 Grand Rapids, MI 616-364-8491

City of Saline member since 2011 Saline, MI 734-944-2003

John Snethkamp member since 1983 Wyandotte, MI

William J. Snyder City of Harper Woods member since 1999 Harper Woods, MI 313-343-2570

Dorman Snyder Village of Athens member since 2007 Athens, MI 517-741-8208

Joseph Sobus City of Monroe Water Plant member since 2012 Monroe, MI 734-241-5947

Albert Sodman St. Johns Water Treatment Plant member since 2005 Saint Johns, MI 989-224-8944

James L. Solberg Solberg, Knowles & Associates member since 1996 Newaygo, MI 231-652-1934

Rick Solle Plainfield Charter Township member since 2008 Belmont, MI 616-363-9660

Lenny J. Solomon Clow Valve Co. member since 2012 Troy, MI 248-302-1110

Shaun Somers member since 2015 Chesterfield, MI 810-488-1361 Southeastern Oakland County Wtr Authority member since 2013 Royal Oak, MI 248-288-5150

Southwest Barry Cnty. Sewer & Water Authority member since 2006 Delton, MI 269-623-3405

Laura Spencer Village of Beulah member since 2013 Beulah, MI 231-882-4451

Spicer Group Inc. member since 1963 Saginaw, MI 989-754-4717

Nicole Bettina Spieles Greeley and Hansen LLC member since 2014 Detroit, MI 313-628-0730

Christine V. Spitzley Tri-Cnty Reg Planning Comm member since 1994 Lansing, MI 517-393-0342

Thomas R. Spitzner City of Kalamazoo member since 1989 Kalamazoo, Ml 269-337-8758

Donald Spurr member since 1973 Troy, MI 586-436-1765

Ann St. Amand PhycoTech, Inc. member since 2000 Saint Joseph, MI 269-983-3654

**St. Johns Water Treatment Plant** member since 2002 Saint Johns, MI

Paul Stanley Water Solutions Unlimited, Inc. member since 1988 Franklin, IN 317-784-8086

William G. Stannard Raftelis Financial Consultants, Inc. member since 1984 Kansas City, MO 816-285-9020

Tom Stanojevic American Cast Iron Pipe Co. member since 1999 Chicago, IL 810-523-9613

City of Stanton member since 2016 Stanton, MI 989-831-9332

K. Blake Stark NSF International member since 1990 Ann Arbor, MI 734-769-5480

### RETURN TO TABLE OF CONTENTS

Patrick J. Staskiewicz Ottawa County Road Commission member since 1993 Grand Haven, MI 616-850-7208

Jeremy E. Statler Spring Lake Township DPW member since 2006 Spring Lake, MI 616-502-2167

Daniel Staunton City of Hartford member since 2008 Hartford, MI 269-621-2477

Terry Steenhagen II City of Kentwood member since 2000 Grand Rapids, MI 616-554-0767

Brian D. Steglitz City of Ann Arbor member since 1997 Ann Arbor, MI

Ronald F. Steinbrink Macomb Township Water & Sewer member since 2003 Macomb, MI 586-598-0687

Harold E. Steward II City of Monroe member since 2002 Monroe, MI 734-241-5947

Dale Stewart Northern Pump & Well member since 2010 Lansing, MI 877-477-1757

Daniel Stickel Waterford Township Dept. of Public Works member since 2012 Waterford, MI 248-618-7451

David L. Stinson Northern Pump & Well member since 2004 Lansing, MI 517-322-0219

Daniel Stockard member since 2015 Oxford, MI 248-568-7150

Michelle Stocker member since 2014 Escanaba, MI 269-436-0551

Andrew J. Stone Village of Wolverine Lake member since 2002 Wolverine Lake, MI 248-624-1710

Nelson Stone member since 2015 North Muskegon, MI

Joy Stothard City of Bay City member since 2014 Bay City, MI 989-894-8340 Mark R. Strahan Village of Blissfield member since 1989 Blissfield, MI 517-486-2550

Thomas Stressman City of Cedar Springs member since 2013 Cedar Springs, MI 616-696-1330

Robert Strykowski member since 2012 Lake Linden, MI 906-296-8541

**Bob Stucker** *City of Fenton Water Plant* member since 1988

Charles V. Suchodolski Bay County Deparment of Water and Sewer member since 2011 Bay City, MI 989-684-3883

Ervin J. Suida City of Howell member since 1999 Howell, MI 517-223-4745

Steven Sujkowski member since 2015 Saginaw, MI 989-245-1578

Don Sumption Carrollton Township member since 2004 Saginaw, MI 989-754-4611

Charles Sundblad City of Caro member since 2002 Caro, MI 989-673-2571

Larry D. Sundling member since 2006 Rapid River, MI 906-280-7354

Janet Supanich Village of L'Anse member since 1999 Pelkie, MI 906-524-5880

Superior Township Utility Department member since 1978 Ypsilanti, Ml 734-480-5500

James J. Surhigh Hubbell, Roth & Clark, Inc. member since 2011 Bloomfield Hills, MI 248-454-6342

James Susan Fishbeck Thompson Carr Huber member since 1977 Grand Rapids, MI 616-464-3734

Bryan Sutton City of Flushing member since 1997 Flushing, MI 810-659-5665 Shimo Svabic City of Wyoming member since 2010 Wyoming, MI 616-530-7260

Keith M. Swaffar NTH Consultants, Ltd. member since 1998 Northville, MI 313-237-3939

Seth Swanson OHM Advisors member since 2015 Livonia, MI 734-466-4502

Doug Sweeris City of Allegan Wastewater Plant member since 2015 Allegan, MI 269-686-1117

**City of Sylvan Lake** member since 1989 Sylvan Lake, MI 248-682-1440

Matthew B. Sype City of Flat Rock member since 2001 Flat Rock, MI 734-782-2470

David Szlag Oakland University member since 2015 Rochester, Ml 248-370-4064 ext 9213027

## Т

Terri Tabor-Conerway Detroit Water & Sewerage Dept. member since 2005 Detroit, MI 313-964-9485

Matt Tagget Bridgeport Charter Township member since 2015

**Tyrone Talifer** *T & N Services, Inc.* member since 1997 Detroit, MI

Tank Industry Consultants member since 1985 Indianapolis, IN 317-271-3100

Diane Tapio Republic Township member since 2005 Republic, MI 906-376-8827

Jim L. Tardani City of Wyoming member since 1999 Holland, MI 616-399-7849

Greg Tatara Genoa Township MHOG Wtr Auth member since 2006 Brighton, MI 810-227-5225

Kelly Tatlock City of Wyoming member since 2011 Holland, MI 616-399-6511 Adam Taylor Greenfield Resources Corporation member since 2015 Troy, MI

Calvin Lee Taylor Charter Township of Ausable member since 1993 Oscoda, MI 989-739-9169

Michael Taylor Grand Blanc TWP member since 2007 Grand Blanc, MI 810-424-2640

Robert M. Taylor Birchwood Farms Golf & Country Club member since 1999 Harbor Springs, MI 231-526-7460

Mark J. TenBroek CDM Michigan Inc. member since 1987 Detroit, MI 313-230-5615

Jon P. Terres member since 1998 Alma, MI

Bob Tervonen City of Ironwood Water Utility member since 2009 Ironwood, MI 906-932-5050

Thomas M. Teske EJ member since 1979 East Jordan, MI 231-536-4428

Christopher Tesone USALCO member since 2010 Poland, OH 330-418-4422

Steve Teunis member since 2001 Charlevoix, MI 616-846-7016

Kirk Tews City of Midland member since 2007 Midland, MI

Jodie Theis City of Wyoming Public Works member since 2013 Wyoming, MI 616-560-7260

Terry Thenikl Plainfield Township Water Dept. member since 2006 Grand Rapids, MI 616-363-9660

Les Therrian City of St. Ignace member since 1995 Saint Ignace, MI 906-643-9671

Michelle Thibideau Village of Centreville member since 2014 Centreville, MI 269-467-6409 Ernie Thomas City of Belding member since 1993 Belding, MI 269-794-1900

Pat Thomas City of Grosse Pointe Park member since 2004 Grosse Pointe Park, MI 313-822-5100

Scott Thomas Iron Mountain Water Department member since 2010 Iron Mountain, MI 906-774-0722

Brad Thomas Birch Run Township member since 2007 Birch Run, MI 989-233-9317

Laura Anne Thome Detroit Water & Sewerage Department member since 2005 Detroit, MI 313-926-8136

Christopher D. Thompson member since 1998 East Lansing, MI 571-702-6521

Julie Thompson Holland Board of Public Works member since 2008 Holland, MI 616-355-1630

Joellen C. Thompson Grand Rapids Water Department member since 1987 Grand Rapids, MI 616-456-4238

Thomas Thompson Village of Manchester member since 2015 Manchester, MI 734-428-7171

John Thompson Liquiforce Services, Inc (USA) member since 2007 Romulus, MI 734-955-2508

**Jim Thompson** member since 2012 Flint, MI

Mark Thornton City of St. Joseph member since 2012 Saint Joseph, MI 269-983-1240

**City of Three Rivers** member since 1976 Three Rivers, MI 269-273-1845

Brian E. Thurston MDEQ ODWMA Cadillac District member since 1995 Cadillac, MI 231-590-3430

Zachery Thurston member since 2014 Lansing, MI 517-242-2706

Clark Tibbe Ottawa County Public Utilities member since 1997 Grand Haven, MI 616-842-5400

David A. Timm member since 1978 Rockford, MI 616-295-5702

Piper C. Tittle member since 2000 Edwardsburg, MI 269-663-8583

Christopher G. Townley Townley Engineering,LLC member since 1995 Freeland, MI 810-404-2266

Township of Marquette member since 1975 Marquette, MI

Mike Tracy Michigan State University Utilities member since 2014 East Lansing, MI

Jon Trammell member since 2016 Petoskey, MI

Mary J. Trapp-Gunst Plainfield Charter Township member since 2008 Grand Rapids, MI 616-363-9660

John F. Traynor Hydro-Meter Systems Inc. member since 2001 Pontiac, MI 248-343-6400

Trenton Corporation member since 1993 Ann Arbor, MI 734-424-3600

Thomas W. Trice Bloomfield Township member since 2005 Bloomfield Hills, MI 248-594-2800

Rohit D. Trivedi Arcadis member since 1986 Detroit, MI 313-324-4008

Paul D. Trosper City of Troy, Mich. member since 2015 Troy, MI 248-524-3395

Kyle Tryan member since 2009 Coloma, MI 906-241-0184

Mel Tuchowski Garlock Sealing Technologies member since 2015 Kingsford, MI 906-221-1198

Gary L. Tuhacek City of Fennville member since 1983 Fennville, MI 269-561-2444 William Turner member since 2007 Romulus, MI 734-699-8900

Robert J. Tutsock Saginaw Valley State University member since 1993 University Center, MI 989-964-4080

Kevin Tyler City of Linden member since 2012 Linden, MI 810-735-7980

Nancy Tyree EJ member since 2009 East Jordan, MI 231-536-2261

Austen Tyrer member since 2014 Midland, MI 989-329-5346

### U

Donald Uitvlugt City of Wyoming member since 2015 Dorr, MI 616-681-2236

Murat Ulasir Orchard, Hiltz & McCliment, Inc. member since 2005 Livonia, MI 734-466-4472

Rick Lee Updike City of Plainwell, #111 member since 2006 Plainwell, MI 269-544-1505

Aaron Uranga Hubbell, Roth and Clark, Inc. member since 2011 Canton, MI

USABlueBook member since 1994 Gurnee, IL 800-548-1234

### V

Amy Vail City of Cadillac member since 2006 Cadillac, MI 230-775-2368

John H. Van Arsdel M.E. Simpson Company, Inc. member since 1990 Valparaiso, IN 800-255-1521

James J. Van De Wege Holland Board of Public Works member since 1988 Holland, MI 616-355-1698

Charles Van Der Kolk Zeeland Board of Public Works member since 1985 Zeeland, MI 616-772-6212

Tom E. Van Der Kolk Holland Charter Township member since 1984 Holland, MI 616-396-1891 Brian R. Van Dyken Plainfield Township Water Department member since 2015 Grand Rapids, MI 616-706-6280

James C. Van Harn Grandtech Inc. member since 1994 Byron Center, MI 616-878-1000

Frederick J. Van Luven Tilden Township member since 1986 Ishpeming, MI 906-486-6580

Steven P. Van Oast member since 1998 Macomb, MI 586-228-1986

Mark A. Van Port Fleet member since 2004 Dimondale, MI 517-719-1721

Lloyd Van Slooten Zeeland Board of Public Works member since 1995 Zeeland, MI 616-772-6212

John Van Uffelen Holland Board of Public Works member since 1946 Holland, MI 616-355-1642

John G. Van Uffelen Holland Board of Public Works member since 1978 Holland, MI 616-355-1642

Michael R. Van Wagner Village of Howard City member since 2014 Howard City, MI

Christopher D. Van Wormer Fer-Pal Construction USA, LLC member since 2012 Taylor, MI 734-624-5321

Theodore VanAken member since 2012 Grand Rapids, MI 616-355-1539

Jesse B. VanDeCreek Hubbell, Roth & Clark, Inc member since 2005 Bloomfield, MI

Sam Vanden Berg City of Grand Rapids member since 2011 West Olive, MI 616-456-3931

Steven R. VandenBrink Fleis & VandenBrink Engrg. Inc. member since 1993 Grand Rapids, MI 616-977-1000

Tim Vander Schaaf member since 2003 Spring Lake, MI 616-842-0080

Joseph A. Vander Stel Grand Haven Water Treatment Plant member since 1988 Grand Haven, MI 616-847-3487 Benjamin Vanderhulst Holland Board of Public Works member since 2015 Holland, MI

Brian Vanderlaan Plainfield Township Water Department member since 2015 Grand Rapids, MI

Lucas VanderZee City of Harbor Springs member since 2014 Harbor Springs, MI

Daryl R. Vandyke Kalamazoo Lake Water & Sewer member since 1997 Grand Rapids, MI

Diane Vandyke Evoqua Water Technologies member since 2015 Holland, MI 616-772-9011

Geneva Vanlerberg LBWL member since 2009 Williamston, MI 616-206-6299

Kevin VanSickle Genesee County Water & Waste Services member since 2005 Flint, MI 810-600-4150

Brian J. Vanveelen City of Lowell member since 2012 Lowell, MI 616-897-5234

Bryan Varacalle Livingston Co Drain Comm member since 2014 Howell, MI 517-546-0040

Gary R. Vaughan Greeley and Hansen member since 1984 Galena, OH 740-965-8020

Rick Velderman City of Wyoming Water Treatment Plant member since 1996 Holland, MI 616-399-7847

James Vella Niles Charter TWP DPW member since 2014 Niles, MI

Freda W. Velzen Holland Board of Public Works member since 1998 Holland, MI 616-355-1512

Robert J. Veneklasen City of Wyoming Utilities Department member since 1986 Holland, MI 616-669-5290

Mark VerBerkmoes Grand Haven Charter Township member since 1991 Grand Haven, MI 616-842-5988 **G. Jean Verbos** *Gogebic Range Water Auth.* member since 2004 Ramsay MI

906-667-0465 **Thomas A. Veresh**  *Wade Trim & Associates* member since 2007 Taylor, MI 734-947-9700

Edward Verhamme Limnotech member since 2015 Ann Arbor, MI

734-332-1200

Sanjeev Verma Fluid Equipment Development Company (FEDCO) member since 2014 Monroe, MI 734-241-3935

Jay David Vermilye Dubois Cooper Associates member since 2014 Plymouth, MI 734-455-6700

Stephen J. Verstrat Access Business Group LLC member since 2001 Ada, MI 616-787-6133

Rajaram Vijayendran Metco Services, Inc. member since 1997 Warren, Ml 586-920-2620

Village of Baraga member since 1977 Baraga, MI 906-353-6795

Village of Birch Run member since 1998 Birch Run, MI 989-624-5711

Village of Beulah member since 2013 Beulah, MI 231-882-4451

Village of Cassopolis member since 2012 Cassopolis, MI 269-445-8098

Village of Centreville member since 2005 Centreville, MI 269-467-6409

Village of Climax member since 1983 Climax, MI 269-746-4174

Village of Colon member since 2002 Colon, MI 269-432-2532

Village of Dexter Utilities member since 2012 Dexter, MI 734-426-8303

Village of Edwardsburg member since 1978 Edwardsburg, MI 269-663-8484 Village of Elkton member since 1981 Elkton, MI 989-375-2270

Village of Farwell member since 2012 Farwell, MI 989-588-9530

Village of Homer member since 1998 Homer, MI 517-568-4321

Village of Howard City member since 2014 Howard City, MI

Village of Jonesville member since 2014 Jonesville, MI 517-849-2104

Village of Kalkaska member since 1987 Kalkaska, MI 231-258-9191

Village of Kingsley member since 2003 Kingsley, Ml 231-263-7778

Village of Lake Odessa member since 1977 Lake Odessa, MI 616-374-7228

Village of Mackinaw City member since 1986 Mackinaw City, MI 231-436-5652

Village of Mayville member since 1996 Mayville, MI 989-843-6621

Village of Middleville member since 2013 Middleville, MI 269-795-3385

Village of Pinckney member since 1991 Pinckney, MI 734-878-0666

Village of Romeo member since 2014 Romeo, MI 586-752-2684

Village of Shelby member since 1993 Shelby, MI 231-861-2500

Village of Shepherd member since 1989 Shepherd, MI 989-828-5062

Village of Spring Lake member since 2014 Spring Lake, MI 616-842-1393

Village of Union City member since 2015 Union City, MI 517-741-8591

Village of Vicksburg member since 2004 Vicksburg, MI 269-649-1919 Village of Webberville member since 2011 Webberville, MI 517-375-8671

Lynn Vis City of Wyoming member since 2015 Wyoming, MI 616-261-3560

Judy N. Visscher Holland Board of Public Works member since 2007 Holland, MI 616-355-1210

Uldis G. Vitins member since 1990 Canton, MI 734-453-3460

Paul J. Vogel Greeley and Hansen LLC member since 1987 Chicago, IL 312-558-9000

Jeff D. Volkers Holland Charter Township member since 1999 Holland, MI 616-396-1891

Richard Gray Vreeland City of Gobles member since 1998 Gobles, MI 269-628-5370

Nathan M. Vriesman Vriesman & Korhorn Civil Engineers member since 2003 Byron Center, MI 616-277-2185

### W

Rich Wackerle Allied Mechanical Services member since 2013 Hudsonville, MI 616-669-4800

Brian A. Wadaga Village of Baraga member since 2008 Baraga, MI 906-353-6795

Matt Wade City of Grand Haven Dept. of Public Works member since 2015 Grand Haven, MI

Trevor S. Wagenmaker Hubbell, Roth & Clark member since 1995 Bloomfield Hills, MI

Kimberly Wahl member since 2008 Burt, MI 989-928-1576

Joe Wahlfield City Of Wyoming member since 2012 Wyoming, MI 616-530-7260

Randal Ray Waites Charter Township of Genesee member since 1996 Genesee, MI Jeremy Walker U.S. Army member since 2015 Warren, MI

Lisa M. Wallick Metco member since 2004 Saint Clair Shores.

Ned P. Walter Sagenaw Charter TWP member since 1980 Saginaw, MI 989-529-9806

Jason Walters Village of Farwell member since 2015 Farwell, MI

Gerald R. Wangelin Macomb Township member since 2009 Macomb, MI

Jerry Ward Waterford Township Dept. of Public Works member since 2012 Waterford, MI

John K. Warner Muskegon Cnty Dept. of Pub. Wks. member since 2003 Muskegon, MI 231-724-6411

Naubert Warner City of Dearborn Heights member since 2004 Dearborn Heights, MI 313-791-6007

Timothy A. Warner Isabella County Drain Office member since 1989 Mount Pleasant, MI

Brian Warren member since 2008 Plainwell, MI 906-399-2909

Jeff Warren Village of Peck member since 2000 Peck, MI 810-378-5090

**Brian Washburn** member since 1995 Marysville, MI 810-364-9808

Ondrea J. Washington Detroit Water & Sewerage Department member since 1989 Detroit, MI 313-204-8174

Washington Township Water & Sewer member since 2003 Washington, MI 586-752-9740

Water District #1 of Midland County member since 1979 Sanford, MI 989-687-2709

Waterford Township Dept. of Public Works member since 2012 Waterford, MI 248-618-7464 Sue Watson City of Dowagiac member since 1973 Dowagiac, MI 269-782-8200

Eric J. Way member since 1979 Grand Ledge, MI

**City of Wayland** member since 1980 Wayland, MI 269-792-0686

Jeff Webb City of Riverview member since 2016 Riverview,

Allen A. Weber Etna Supply Company member since 1986 Grand Rapids, MI 616-514-5164

James A. Webster City of Howell member since 1991 Howell, MI 517-546-5309

Teresa Weed Newman Project Innovations, Inc. member since 2007 Farmington Hills, MI 248-310-3435

Duane Weeks Village of Middleville member since 2011 Middleville, MI 269-795-2094

Maureen L. Wegener C2AE member since 1982 Lansing, MI 517-371-1200

Dave Weiler Hampton Township member since 2014 Essexville, MI 989-892-4841

James A. Weinberg Village of Colon member since 2008 Colon, MI 269-432-2532

Richard Weirich Frenchtown Water member since 1999 Newport, MI 734-289-1015

William Weirich City of Wyandotte member since 2004 Wyandotte, MI 734-324-7142

Matthew C. Weldon Plainfield Township Water Dept member since 1991 Grand Rapids, MI 616-363-9660

Ken Wenglikowski Bangor Monitor Metro District member since 2013 Bay City, MI 989-684-2570

Ken Wesley UIS Scada member since 2014 Dexter, MI Jack West City of Farmington Water Department member since 2015

Robert M. West Hartland Township member since 2015 Hartland, Ml 810-632-1075

West Side Water member since 1980 Lansing, MI 517-485-5476

Barb Westerberg City of Reed City member since 2015 Reed City, MI

Westerman Companies member since 1986 Bremen, OH 740-569-4143

Scott D. Westover Ypsilanti Community Utilities Authority member since 2001 Ypsilanti, MI

Judy A. Westrick Tamarack Environmental Laboratories, LLC member since 1996 Washington, MI 906-630-2552

Daniel J. Whalen Williams & Works, Inc. member since 1991 Grand Rapids, MI 616-224-1500

Tony White Mueller Co. member since 1997 Downers Grove, IL 630-725-1895

W. Curtis White White IEQ Consultants member since 1988 Midland, MI 989-708-4610

City of Whitehall member since 2014 Whitehall, MI 231-894-4048

Benjamin Whitehead Black & Veatch member since 2005 Grand Rapids, MI 616-459-2360

Keith Whittington City Of Marquette member since 2007 Marquette, MI 906-250-6129

**Todd Wibright** *City of Grandville* member since 2006 616-365-9246

Karlyn L. Wickham Michigan Water Environment Association member since 2011 Bath, MI 517-641-7377

**Greg Wicklund** member since 2012 Farmington Hills, MI 248-613-8705

# 2016 MEMBERSHIP DIRECTORY

Glen Wiczorek City of Ann Arbor (WTP) member since 2014 Ann Arbor, MI 734-214-2519

Gary Wiedmayer Village of Manchester member since 1998 Manchester, MI 734-428-8360

Karl Wiegand Globe Fire Sprinkler Corporation member since 2010 Standish, MI

Kevin Eugene Wierenga Ottawa County Road Commission member since 2003 Grand Haven, MI 616-850-7234

Ron Wight City Of Newaygo member since 2003 Newaygo, MI 231-652-7984

Robert W. Wilcox Fleis & Vandenbrink Engineering, Inc. member since 2003 Grand Rapids, MI 616-977-1000

Rich Wiles City of Troy member since 2014 Troy, MI

John A. Willemin member since 2001 Grand Rapids, MI 616-575-3824

Andrew J. Willetts City of Troy member since 2014 Troy, MI

Brad Willey City of Monroe member since 2014 Monroe, MI 731-241-6074

Doug Robert Williams Linwood Metro Water member since 2012 Linwood, MI 989-697-5532

Gary L. Williams Jones & Henry Engineers member since 1988 Cincinnati, OH 513-515-6010

James R. Williams Peerless-Midwest, Inc. member since 1985 Mishawaka, IN 574-252-4140

Michael J. Williams Peerless-Midwest, Inc. member since 1987 Mishawaka, IN 574-254-9050

Russell Williams Waterford Township Dept. of Public Works member since 2015 Waterford, MI 248-618-7462 Russell Williams Negaunee Township Water System member since 2013 Negaunee, MI 906-475-7869

Steven E. Williams Williams & Works, Inc. member since 2003 Grand Rapids, MI 616-224-1500

Joseph W. Wilson Allegan member since 2015 Allegan, MI 269-686-1116

Allen Wilson member since 2004 Detroit, MI 313-928-0915

Allen R. Wilson Sand Piper Estates member since 2000 810-359-7001

James A. Wilson City of Trenton DPS member since 1998 Trenton, MI 734-676-1853

Joseph M. Wilson Michigan State University member since 1999 Saint Johns, MI 989-224-2495

Michael H. Winegard AECOM member since 1981 Wheaton, IL 312-373-6631

Marlin Wingard Eagle Harbor Township member since 2012 Eagle Harbor, MI 906-289-4407

Lyle Edward Winn Anderson, Eckstein, and Westrick, Inc. member since 2014 Shelby Township, MI

Matt Wisniewski Dake Corporation member since 2015 Grand Haven, MI 800-866-4423

Eric W. Witte member since 1986 Melvindale, MI 313-218-7910

City of Wixom member since 2005 Wixom, MI 248-624-0141

Brian L. Wohlscheid Municipal Supply Company member since 1987 Portland, MI 517-647-6597

Arlene Wojda United Water member since 2007 Lachine, MI 989-356-0757 Andrew Wolanin Suez-Na member since 2016 Wixom Ml

Brian L. Wolf City of Wyoming member since 1992 Wyoming, MI 616-530-7260

William Wolfson Detroit Water & Sewerage Department member since 2014 Detroit, MI

Bruce L. Wood Huron Charter Township DPW member since 1989 New Boston, MI

Bryon Wood HDR member since 2005 Ann Arbor, MI 734-332-6438

Bryan Woodbeck East Lansing Meridian Water Auth. member since 2001 East Lansing, MI 517-337-7535

Kameron Woodcock City of Monroe member since 2016 Monroe, MI

Nichole Woodward City of Ann Arbor member since 2006 Ann Arbor, MI 734-794-6000

Terry L. Woodward Fishbeck, Thompson, Carr & Huber, Inc. member since 1997 Southfield, MI 248-204-5900

Gary A. Wozniak DEQ member since 1999 Kalamazoo, MI 269-491-3107

Brian Wozny City of Walled Lake member since 2007 Walled Lake, MI 248-624-4847

Conuetta Wright City of Ann Arbor Water Plant member since 2015 Canton, MI 734-994-2840

Mark Wright Badger Meter Mfg Co. member since 2004

810-223-2170

Michael Wright member since 2013 Clarkston, MI 248-296-4158

Thomas F. Wright City of Fenton member since 1999 Fenton, MI 810-629-2261 Bari Wrubel City of Marysville Wtr Filtration Plant member since 2010 Marysville, MI 810-364-8460

Dennis E. Wuerfel Sr. member since 1979 Au Gres, MI 989-697-5085

David B. Wunder Calvin College, Dept. of Engrg. member since 1993 Grand Rapids, MI 616-526-6337

Matthew S. Wurtz City of Grand Blanc member since 1999 Grand Blanc, MI 810-694-5420

Michael C. Wurts City of Lapeer member since 2011 Lapeer, MI 810-664-6887

Wyandotte Municipal Services member since 1972 Wyandotte, MI 734-324-7111

Johnie P. Wyatt member since 1978 New Carlisle, IN 574-654-3453

City of Wyoming Utilities Department member since 1980 Holland, MI 616-399-7841

#### Y

Ayumi Yamamoto NSF International member since 2015 San Diego, CA 734-827-5621

Ronald D. Yarnell member since 2000 Sanford, MI 989-689-4319

Alex A. Yavich member since 1997 Grand Rapids, MI 616-975-0847

Yinyin Ye member since 2013 Ann Arbor, MI

David Yoder Village of Unionville member since 2007 Unionville, MI 989-674-2244

Kyana R.L. Young Michigan State University member since 2011 Lansing, MI 520-591-9069

Timothy Young City of Hazel Park member since 2006 Hazel Park, MI 248-542-0340

#### Herbert H. Yount City of Monroe Water Filtration

member since 1999 Monroe, MI 734-241-5947

Ypsilanti Community Utilities Authority member since 1975 Ypsilanti, MI 734-484-4600

Michael L. Yuresko Grand Blanc Township member since 2006 Grand Blanc, MI 810-564-3240

#### Z

Scott Zastrow Peerless Land & Water Co., Inc member since 1989 Holland, MI

Gary Zatalokin City of White Cloud member since 1999 White Cloud, MI 231-689-1194

Jay Zawacki member since 2014 Ann Arbor, MI 313-230-5607

Tim Zebell City of St. Joseph member since 2006 Saint Joseph, MI 269-983-5541

Zeeland Board of Public Works member since 1993 Zeeland, MI 616-772-6212

Jennifer Zelski Hamlett Environmental Technologies Co. member since 2007 Howell, MI 517-294-7512

Thomas Zemba member since 2011 Menominee, MI 906-630-6719

Fangyun Zhong member since 2015 East Lansing, MI

Richard W. Ziehmer member since 1999 Richmond, MI 734-680-5560

Christine E. Ziemba United Water member since 2010 Wixom, MI 248-960-0870

Bruce F. Zimmerman Mackinac Public Works Department member since 1990 Mackinac Island, MI 906-847-6130

# SECTION LEADERSHIP

#### 2015-2016 MI-AWWA BOARD OF TRUSTEES

Chair
Chair-Elect
Vice Chair
Past Chair
Director
Incoming Director
Secretary/Treasurer
Trustees

Barbara Marczak John Willemin Christine Spitzley Randall W. Roost Brian Steglitz Mark Coleman Brian Thurston Bruce Bartley 13-16 Bill Fritz 13-16 Bill Maier 14-17 Amy Vail 15-18 Clyde Dugan 15-18

#### BOARD COMMITTEES AND TASK FORCES

BYLAWS	Pat Staskiewicz	
COUNCIL OF PAST OFFICERS		
	Randall Roost	
FINANCE COMMITTEE	Brian Thurston, Chair	
HISTORIC PRESERVATION C	COMMITTEE Tom Newhof, Chair	
NOMINATIONS COMMITTEE		
	Mark Coleman, Chair	
PLANNING & STRATEGY CC	MMITTEE Brian Steglitz, Chair Mark Coleman	

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#### PAST OFFICERS

#### PAST CHAIRS

Randall Roost Tom Smith, Grand Rapids Pat Staskiewicz, Ottawa County Mark Coleman, Detroit Brian Steglitz, Ann Arbor Troy Gallagher, Escanaba Mike Williams, Mishawaka, IN Khalil Atasi, Detroit Dave Koch, Holland/Grand Rapids Timothy D. McNamara, Grand Rapids Jim Van De Wege, Holland Tim LeTourneau, Grand Rapids Patsy Clark, Grand Rapids Wm. Elgar Brown, Lansing Gerald Caron, Wyoming Janice Skadsen, Ann Arbor Bruce Hawkinson, Norway Charles Van Der Kolk, Zeeland Sue McCormick, Lansing Paul Mattausch, Kalamazoo William Dixon, Lake Odessa William Kelley, Lansing Thomas Newhof, Grand Rapids Warren Isaacson, Escanaba John A. DeKam, Bay City Curtis C. Cowles, Lowell Antenore "Butch" Davanzo, Detroit Wilfred L. LePage, Monroe Donald E. Swan, Saline John C. O'Malia, Lansing Gordon E. Olivier, Lansing Ronald H. Bowen, Traverse City John Wagner, Jr., Farmington Hills Kenneth Squiers, Waterford Twp Raymond J. Smit, Ann Arbor Virgil Langworthy, Lansing William P. Fishback, Lansing Wayne H. Abbott, Jr., Ann Arbor Thomas McPherson, Cadillac William C. Ewing, Flint Ernest Cedroni, Detroit Robert W. Bretz, Oak Park Francis J. D'Amour, Escanaba Raymond M. Harwood, Flint John M. Holland, Ann Arbor Ervin H. A. Stahl, Lansing Donald K. Shine, Wyoming Charles A. Froman, Jr., Saginaw Arthur C. Michael, Detroit Robert Haw, Flint

Sault Ste. Marie
Manistee
Grand Rapids
Shanty Creek Resorts
Mission Point Resort
Mt. Pleasant
Traverse City/Acme
Kalamazoo
Sault Ste. Marie
Treetops Resort
Boyne Highlands
Grand Rapids
Shanty Creek
Mackinac Island
Treetops Resort
Marquette
Boyne Highlands
Grand Rapids
Shanty Creek
Kalamazoo
Grand Traverse
Mackinac Island
Dearborn
Lansing
Shanty Creek
Flint
Grand Rapids
Grand Traverse
Grand Rapids
Boyne Mountain
Kalamazoo
Mackinac Island
Grand Traverse
Grand Rapids
Detroit
Mackinac Island
Traverse City
Southfield
Kalamazoo
Traverse City
Lansing
Boyne Falls
Grand Rapids
Flint
Boyne Falls
Detroit
Traverse City
Ann Arbor
Grand Rapids
Traverse City

Paul Reinsch

Tom DeLaura

Randall Roost

Brian Thurston

Pat Staskiewicz

Mark Coleman

Brian Steglitz

Lori Cipparone

Michael Averill

Tom Smith

Paul Retel

Barbara Marczak

Joe Moore

COUNCILS AND THEIR COMMITTEES AND TASK FORCES			
CONFERENCE & RECOGNIT	ION COUNCIL		
	Dave Stinson, Chair		
Annual Conference Pro	ogram Christine Spitzley		
Association Service No	mination Janice Skadsen Jerry Caron		
Faust Award	Brian Steglitz Brock Howard		
Fuller Award	Khalil Atasi		
Joint Expo	Jennifer Zelski		
Manufacturer's Adviso	<b>ry</b> Ira Gabin		
Contests	Mike Schlegelmann		
COMMUNICATIONS COUNCIL Cindy Irving, Chair			
Community Awareness	5		
	Dave Stinson Gary Wozniak		
EDUCATION & TRAINING C	Bob Miller, Chair		
<b>Regional Meeting</b>	Ray Berkin		
Small Community Wate	e <b>r Systems</b> Chris Kenyon		
UP Coordinating	Mike Trombly Cory Larson		
Youth Education	Mike Grenier		

Stuart H. Bogue, Det	roit	1965	Saginaw	
Joseph M. Rogeven, Jackson		1964	Detroit	
Albert Sabo, Kalamazoo		1963	Grand Rapids	
Gerald Remus, Detro		1962	Lansing	
Tony Eikey, Traverse	City	1961	Detroit	
Herbert L. Keinath, F	rankenmuth	1960	Traverse City	
Leo V. Garrity, Detroi	t	1959	Saginaw	
Robert E. Hansen, M	t. Clemens	1958	Grand Rapids	
Walter E. Smith, Detr	oit	1957	Detroit	
Claud R. Erickson, La	Insing	1956	Kalamazoo	
Herschel O. Self, Flin	t	1955	Flint	
Douglas Feben, Detro	bit	1954	Muskegon	
E. D. Berrett, Detroit		1953	Escanaba	
Louis E. Ayres, Ann A	rbor	1952	Battle Creek	
George Hazey, Wyan		1951	Benton Harbor	
Jack E. Cooper, Detro	oit	1950	Detroit	
John F. Dye, Lansing		1949	Traverse City	
Paul Stegeman, Midl	and	1948	Flint	
Everett D. Cattell, Jac	ckson	1947	Bay City	
R. Lee Sensabaugh,	Muskegon	1946	Traverse City	
Earl L. Holloway, Flint		1945	Grand Rapids	
Earl L. Holloway, Flint		1944	Jackson	
Louis B. Harrison, Bay City		1943	Ann Arbor	
Harrison H. Caswell, Ann Arbor		1942	No Conference	
Leo E. McQueen, Coldwater		1941	Grand Rapids	
Rene J. LaMarre, Detroit		1940	Ann Arbor	
TRUSTEES				
Amy Vail	2015-	Troy Gallaghe	r 2004-2007	
Clyde Dugan	2015-	David Morse	2004-2007	
Bill Maier	2014-	Sharon Hudso	on 2004-2006	
Liane Shekter Smith	2014-2016	Mike Williams	2003-2006	
Bruce Bartley	2013-	Khalil Atasi	2003-2005	
Bill Fritz	2013-	Christine Spit	zley 2002-2005	
Jaime Fleming	2012-2016	David Koch	2003-2004	
Carrie Ricker Cox	2014-2015	R. Douglas Tr	embeth 2001-2004	
John Willemin	2012-2014	Robert Venek	lasen 2001-2004	
Joel Annable	2011-2014	Roger Olson	2000-2003	

Ken Mendenhall

James Reinhold

Bruce Jerome

2011-2014

2010-2013

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1945 G 1944 1943 1942 No	Traverse City Grand Rapids Jackson Ann Arbor Conference Grand Rapids Ann Arbor
Troy Gallagher David Morse Sharon Hudson Mike Williams Khalil Atasi Christine Spitzley David Koch R. Douglas Trembeth Robert Veneklasen Roger Olson	2004-2007 2004-2007 2004-2006 2003-2005 2002-2005 2002-2005 2003-2004 2001-2004 2001-2004 2001-2003 2000-2003
Tom Spitzner Timothy McNamara James Van De Wege Timothy LeTourneau Vincent Ferrarese Thomas Idema H. Gary Peters Donald R. Spencer Richard Husby	2001-2003 2001-2003 1999-2002 1999-2001 1998-2001 1998-2001 1997-2000 1997-2000 1996-1999

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GOVERNMENT AFFAIRS CO	<b>UNCIL</b> Molly MacieJewski, Chair
MI-WARN	Tim Neumann
MEMBERSHIP COUNCIL	Mike Williams, Chair
Diversity	Alando Chappell
Membership Recruitme	e <b>nt &amp; Retention</b> Carrie Ricker Cox Chuck Van DerKolk
Young Professionals	Matt Parks
Water Sector Careers	Tina Pawlak
TECHNICAL NETWORKS CO	<b>DUNCIL</b> Geneva Vandenburg, Chai
Asset & Infrastructure	Mgmt Sally Duffy
<b>Distribution Practices</b>	Dan Sorek
Groundwater/Source V	<b>Vater Protection</b> Vacant
Lab Practices	Jon Dmitruk
Maintenance	Chuck Kronk
Research & Technical P	<b>ractices</b> Bruce Bartley
Safe Water in Ecuador	
	Benjamin Whitehead Jessica Howard
Safety Practices	Hugo Cardenas
Water Security	Bill Maier Steve Liebrecht

Water Treatment Practices Peter Schwarz

#### DIRECTORS

Mark Coleman	2016-	Donald K. Shine	1974-1977
Brian Steglitz	2013-2016	Stuart Bogue	1971-1974
David Koch	2010-2013	T. L. Vander Velde	1968-1971
Jerry Caron	2007-2010	Gerald Remus	1965-1968
Janice Skadsen	2004-2007	Claud Erickson	1962-1965
Charles Van Der Kolk	2001-2004	Herschel O. Self	1959-1962
Sue McCormick	1998-2001	Edward D. Barrett	1956-1959
William Kelley	1995-1998	Louis E. Ayres	1953-1956
John A. DeKam	1992-1995	Earl E. Norman	1951-1953
Donald E. Swan	1989-1992	Raymond J. Faust	1950-1951
Kenneth M. Squiers	1986-1989	Rene J. LaMarre	1947-1950
Ervin H. A. Stahl	1983-1986	Harrison H. Caswall	1944-1947
Wayne H. Abbott, Jr.	1980-1983	Laurence G. Lenhardt	1941-1944
John Holland	1977-1980	George H. Fenkell	1938-1941

#### SECRETARY/TREASURERS

Brian Thurston	2010-	Gordon E. Olivier	1976-1982
Eric J. Way	1997-2010	C. C. Crumley	1967-1976
Wm. Elgar Brown	1992-1997	T. L. Vander Velde	1949-1967
Richard S. Sacks	1987-1992	Raymond J. Faust	1944-1949
James K. Cleland	1982-1987	Maurice N. Gerardy	1939-1944

#### ASSISTANT SECRETARY/TREASURERS

David A. Timm	1997-2010
Eric J. Way	1992-1997
Wm. Elgar Brown	1989-1992
Sheryl Thelen Topliff	1987-1989
Richard S. Sacks	1983-1987

Eric J. Way 1982-1983 1976-1982 James K. Cleland Gordon E. Olivier 1967-1976 C.C. Crumley 1966-1967

# PAST AWARD RECIPIENTS

2015

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1990 1990

1989

#### GEORGE WARREN FULLER MEMORIAL AWARD

Randall Roost	Lansing	2016
Tom Idema	East Jordan	2015
Mark Coleman	Detroit	2014
Gary S. Logsdon	Lake Ann	2013
Khalil Z. Atasi	Detroit/Maitland, FL	2012
David S. Koch	Holland/Grand Rapids	2011
James J. Van De Wege	Holland	2010
Dave Timm	Grand Rapids	2009
Jerry Caron	Wyoming	2008
Bradley B. Brogren	Lansing	2007
Patsy S. Clark	Grand Rapids	2006
William J. Dixon	Lake Odessa	2005
Janice Skadsen	Ann Arbor	2004
Eugene A. Glysson	Ann Arbor	2003
Charles Van Der Kolk	Zeeland	2002
Eric J. Way	Lansing	2001
Sue McCormick	Lansing	2000
Thomas Newhof	Grand Rapids	1999
Wm. Elgar Brown	Lansing	1998
Warren L. Isaacson	Escanaba	1997
John A. DeKam	Bay City	1996
Curtis Cowles	Lowell	1995
John C. O'Malia	Lansing	1994
Donald E. Swan	Saline	1993
Wilfred L. LePage	Monroe	1992
James K. Cleland	Lansing	1991
Kenneth Squiers	Pontiac	1990
Clifton Albers	Grand Haven	1989
William A. Kelley	Lansing	1988
William C. Ewing	Flint	1987
Ronald H. Bowen	Traverse City	1986
Cletus L. Courchaine	Escanaba	1985
Virgil Langworthy	Lansing	1984
Wayne H. Abbott Jr.	Ann Arbor	1983
Gordon E. Olivier	Lansing	1982
Robert E. Hansen	Mt. Clemens	1981
A. L. Wilcox	Walled Lake	1980

#### **RAYMOND J. FAUST AWARD**

<u></u>	
Jon Bloemker	MDEQ
Larry Sanford	Ann Arbor
Patrick Staskiewicz	Ottawa County
Mark Coleman	Detroit
Brock Howard	Lansing
Brian Steglitz	Ann Arbor
Mike Averill	Wyoming
Pat Cook	Lansing
Gary Logsdon	Lake Ann
Ray Berkin	Allegan
Christine Spitzley	Lansing
Bill Maier	Lansing
David Koch	Holland/Grand Rapids
Richard Benzie	Lansing
Don DeGrand	Gwinn
David Morse	Niles
Jim Lahti	Lansing
Tim McNamara	Grand Rapids
Randall Roost	Lansing
James Van De Wege	Holland
Ira Gabin	Dewitt
Bob Veneklasen	Muskegon
Dave Timm	Grand Rapids
Jerry Caron	Wyoming
Michael Roon	Wyoming
Joe Hipskind	Grand Rapids
Vince Ferrarese	Plainfield Twp
Bruce Hawkinson	Norway
Tom Idema	Wyoming
H. Gary Peters	Saginaw-Midland
Janice Skadsen	Ann Arbor
Patsy Clark	Grand Rapids
Ken Mendenhall	Shelby
William Kelley	Lansing
Charles Van Der Kolk	Zeeland
William Dixon	Lake Odessa
John O'Malia	Lansing
Clyde Dugan	Lansing
Bradley Brogren Richard Husby	Lansing Lansing Twp
Warren Isaacson	Escanaba
Susan McCormick	Lansing
Richard Sacks	Lansing
James Biener	Grand Rapids
Lynda Dominguez	Lansing
Curtis Cowles	Lowell
Kenneth Nefe	Midland
Orlin Loen	Kalamazoo
Gregory Sowa	Saginaw
Duane Bowditch	Grand Rapids
Wm. Elgar Brown	Lansing
Ivan Fasel	Traverse City

Paul Mattausch Willus Lambers	Benton Harbor	198
	Holland Grand Danida	198
Thomas Newhof	Grand Rapids	198
John Erickson Gerald Goshorn	Escanaba Alma	198 198
Thomas Ledger	Greenville	198
Eric J. Way	Lansing	198
Donald Saladin	Lansing	198
James Van De Wege	Wyoming	198
T. Harry Daubenspeck	Holland	198
Henry T. Lane	Detroit	198
Robert Bretz	Oak Park	198
John DeKam	Bay City	198
Clifton Albers	Grand Haven	198
Wilfred LePage	Monroe	198
Willard Morley	Gladstone	198
Louis VanDinther	Muskegon	198
Leno Alexander	Norway	198
Thomas McPherson	Cadillac	198
HONORARY	IEMBERS	
Gerald Caron	Wyoming	2015
Janice Skaden	Ann Arbor	2008
Charles Van Der Kolk	Zeeland	2007
Ervin Stahl Eric J. Way	Haslett	2005 2005
Sue McCormick	Lansing Ann Arbor	2003
Bill Kellev	Lansing	2003
John A. DeKam	Bay City	2002
James K. Cleland	Lansing	2001
Wm. Elgar Brown	Lansing	2000
Wayne H. Abbott Jr.	Ann Arbor	1988
Nina McClelland	Ann Arbor	1985
Donald K. Shine	Wyoming	1983
DIAMOND PI	N AWARD	
Chuck Van Der Kolk	Zeeland	2009
Eric J. Way	Lansing	1993
Gregory Sowa Kenneth McGeorge	Saginaw Macomb Twp	1991 1987
Kennetti wicdeorge	Macomb Twp	1907
OPERATORS' SERVICE AWA		US
Ronald Hayes	Detroit	2015
Scott Hamelink	Lansing	2014
Alex Chimpouras	MHOG	2013
Barry Korhorn	Byron-Gaines Utility Authority	2012
Mike Grenier	Holland	2011
Greg Gorman	Wyoming	2009
Robert Peter	MHOG	2008
Mike Mulder	East Lansing	2007
Mark Rose	Escanaba	2006
Victor Chichester	Midland	2005
John Wierenga	Grand Rapids	2004

erald Caron	Wyoming	2015
anice Skaden	Ann Arbor	2008
harles Van Der Kolk	Zeeland	2007
vin Stahl	Haslett	2005
ric J. Way	Lansing	2005
ue McCormick	Ann Arbor	2003
ill Kelley	Lansing	2002
ohn A. DeKam	Bay City	2001
ames K. Cleland	Lansing	2001
/m. Elgar Brown	Lansing	2000
(Jarne H. Abstat Ir.	Ann Arbor	1088
/m. Elgar Brown /ayne H. Abbott Jr.		2000 1988
ina McClelland	Ann Arbor	1985
onald K. Shine	Wyoming	1983

k Van Der Kolk	Zeeland	2009
. Way	Lansing	1993
ory Sowa	Saginaw	1991
eth McGeorge	Macomb Twp	1987

Detroit	2015
Lansing	2014
MHOG	2013
Byron-Gaines	2012
Utility Authority	
Holland	2011
Wyoming	2009
MHOG	2008
East Lansing	2007
Escanaba	2006
Midland	2005
Grand Rapids	2004
Grand Haven	2003
Wyoming	2002
Quincy	2001
Marquette	2000
Holland	1999
Traverse City	1998
Monroe	1997
St. Joseph	1996
Grand Haven	1995
Mt. Clemens	1995
Alpena	1994
New Buffalo	1993
Muskegon	1992
Flint	1991
Tecumseh	1990
Gladstone	1990
Marine City	1989
L'Anse	1988
Grand Haven	1987
East Lansing	1986
Blissfield	1985
	Lansing MHOG Byron-Gaines Utility Authority Holland Wyoming MHOG East Lansing Escanaba Midland Grand Rapids Grand Haven Wyoming Quincy Marquette Holland Traverse City Monroe St. Joseph Grand Haven Mt. Clemens Alpena New Buffalo Muskegon Flint Tecumseh Gladstone Marine City L'Anse Grand Haven Ext.

#### AWWA WATER UTILITY HALL OF FAME

Donald K. Shine	Wyoming	2003
Louis Ayres	Ann Arbor	1996
Gardner S. Williams	Ann Arbor	1982

#### OUTSTANDING SERVICE TO AWWA

Charles Van Der Kolk	2015
William A. Kelley	2008
Donald K. Shine	1985

#### AWWA LANDMARKS John Dye Water Conditioning Plant Mt. Clemens Water Filtration Plant

Sault Ste. Marie Water Storage Tank

Grosse Pointe Farms Water

Marine City Water Works

Treatment Plant

2014

2005

1996

1994

1992

Dennis Williams

Ronald Brondyke

Thomas Biehl

Bruce Clark

David Herman

Gary Trese

Marine City Wate	r Works ater Works Swedetown	1992
Standpipe, Calun		1991
Alpena Water Tre	atment Plant	1991
Water Works Parl	k, Detroit rks Filtration Plant	1988
Ann Arbor Bartor		1985
and Impoundmen		1985
Grand Rapids Mo	nroe Ave.	
Water Plant		1980
AMBASSA	DOR AWARD	
Eric J. Way	Lansing	1999
Gregory Sowa	Saginaw	1997
Gordon E. Olivier	Lansing	1981
PLATINUN AWARD	I PRESIDENTIAL	
Eric J. Way	Grand Ledge	2014
-	ESIDENTIAL AWA	
Eric J. Way	Lansing	1999
Gordon E. Olivier	Lansing	1981
JACK A. BO	DRCHARDT AWAF	KD .
Eugene A. Glysso		2011
Eric J. Way	Grand Ledge	2011
Thomas Newhof James Cleland	Grand Rapids Lansing	2008 2005
Richard Force	Ann Arbor	2005
Dan Wolz	Wyoming	1999
Wallace Rogalski		1996
Wayne H. Abbott	Jr. Ann Arbor	1993
Arthur Maass	Midland	1990
William J. Redma		1988
Ervin H.A. Stahl	Lansing	1986
Jack E. Cooper	Plymouth	1983
YOUNG PE	ROFESSIONAL	
OF THE YE	AR AWARD	
Patrick Droze		2015
Carrie Ricker Cox		2013
Jaime Petrovich		2013
Dave Harran		2012
Dave Schroeder		2011
Dan Kitchen		2010
Jeff Glover		2009
Matt Tomlinson		2008
Dan Lewis		2007
Brian Steglitz Kris Philip		2006 2006
	IICKS AND	
GADGETS		
Paul Zumbach	Genesee Charter Township	2012
Bill Martin	Plainfield Township	2011
Richard Hardin	City of Sterling Heights	2010
Stan Sanders	City of Bay City	2009
Ronald Caryl	Sumpter Township	2008
Andrew Parrott	City of Midland	2007
Dan Weaver Ralph Brecken	City of Midland City of Lowell	2007 2006
naiph Diebheil	ONJ UI LOWOII	2000
	HUSBY PUBLIC	
AWARENE	SS AWARD	
Erin Campbell		2014
Michael O'Malley		2013
Susan Deming David Morse		2012 2011
Gary Wozniak		2011
Dennis Williams		2009
Mary Jane Robins	on	2008
City of Kalamazoo	's Wellhead Protection Team	2007
Christine Kosmow	ski	2006
Pat Idema		2005
Mark Coleman		2004
Mike Roon		2003
Christine Spitzley Vincent Ferrarese		2002 2001
Lvnda Crites		2001
Richard Husby		1999
Chuck Van Der Ko	lk	1998
Robert Scheuerm		1997
Patsy S. Clark		1996
Brad Brogren		1995
_		<b>T</b> • • •
R	ETURN TO	TA

#### GOLD WATER DROP AWARD

GOLD WATE	R DR	OP AWARD	
William Kellev	2014	John M. Holland	2008
Gary Logsdon	2014	Patrick W.	2008
Thomas Newhof	2014	McAvinchey	2000
Daniel Stock	2012	Kenneth F. Nefe	2008
Jack Chidister	2011	Francis D. Newell	2008
Cletus Courchaine	2011	Kenneth M.	2008
James Hubbell	2011	Squiers	2000
Gerald Goshorn	2010	Anthony V.	2008
Wilfred LePage	2010	Stuppnig	2000
Harry D. Bennetts	2009	Paul E. Vankooten	2008
Ernest Cedroni	2009	Parry Baer	2007
John A. Grasel	2009	Donald Holley	2007
W. Gordon Miller	2009	Emmett Lowry	2007
William C. Ewing		William Richards	2007
SILVER WA	TER D	ROP AWARD	
Joel A. Annable	2015	Mark Rose	2014
David Burkett	2015	Bruce Sabin	2014
Clyde R. Dugan	2015	Steven	2014
Ira M. Gabin	2015	Sienkiewicz	
Glen Michel	2015	Tom Van Der Kolk	2014
Thomas Rook	2015	Martin Hage	2014
Charles	2015	David Rich	2014
Van Der Kolk		Terry Alexa	2013
Michael G. Blom	2015	James Heath	2013
Donald J. DeGrand	2015	Brock Howard	2013
Guy Forstrom	2015	David Koss	2013
Timothy D.	2015	Charles Lieberman	
McNamara		John Meyer	2013
Stephen C. Nichols	2015	Barry Simescu	2013
Janice M. Skadsen	2015	John Snethkamp	2013
David Bratt	2014	Gary Tuhacek	2013
Gregory Brown	2014	Jerry Wilson	2013
Donald French	2014	Brett Yardley	2013
Raymond Hildinger	2014	Harold Bajema	2012
Charles (Bill)	2014	Steven Boss	2012
Ireland		Michael Call	2012
Daniel Jenkins	2014	Robert Dalzell	2012
Wayne Langeland	2014	Gary Flannigan	2012
Steven Lawry	2014	Donald Link	2012
John Premo	2014	Maureen Wegener	2012
LIFE MEMBE			
Clyde Dugan	2015	Steve Hohensee	2010
Brock Howard	2015	Bruce Jerome	2010
Steve Sierkiewicz	2015	Jack Jewett	2010
Gary Tuhacek	2015	David Morse	2010
Harold Bajema	2014	Tim Roache	2010
Martin Hage	2014	David Schendel	2010
Charles (Bill)	2014	Melvin Sheats	2010
Ireland		Robert Seif	2010
Donald Link	2014	Douglas R. Dail	2009
David Rich	2014	Albert M. Dewitt	2009
Barry Simescu	2014	George E. Hubbell	2009
Jerry Wilson	2014	Robert H. Kuhn	2009
James Heath	2013	F. Keith Oldewurtel	2009
John Meyer	2013	John E. Racek	2009
Robert Dalzell	2012	Larry D. Sanford	2009
Bill Beauchaine	2011	Paul Seegert	2009
Henry Binder	2011	Arthur L.	2009
Jerry Caron	2011	Shufflebarger	
Mike Chesher	2011	Thomas M. Teske	2009
Vic Chichester	2011	Frank M.	2009
Mark Coleman	2011	Tymowski	
William Fazer	2011	David W. Upmeyer	2009
Malcolm Fox	2011	Eric J. Way	2009
Dan Gebrowsky	2011	Dennis E.	2009
David Hand	2011	Wuefel Sr.	2000
Bob Kimmer	2011	Luther Brodbeck	2008
Art Maass	2011	A. Craig Burandt	2008
Kirk Page	2011	John DeKam	2008
Jim Rabedioux	2011	Thomas Hollis	2008
Ed Serwatowsk	2011	Paul Hudson	
Mike St. Bernard	2011	H. Andrew Kaatz	2008
Gary Trese	2011	H. Andrew Kaatz Harry Kleiman	2008

(Life Members prior to 2008 are not listed)

2011

2011

2010

2010

2010

2010

Harry Kleiman

Charles Kronk

Dave Timm

Larry Moehlman

John Van Uffelen

Donald Wiedyke

2008

2008

2008

2008

2008

2008

# 2016 BUYERS' GUIDE



## Our MI-AWWA Buyers' Guide consists of two sections:

- 1. A categorical listing of products and services, including a list of the companies that provide them.
- 2. An alphabetical listing of the companies appearing in the first section. This listing includes name, contact info, website and more.

# CATEGORIES

#### **ACCESS HATCHES**

EJ

#### **AIR STRIPPING** Medora Corp., home of SolarBee and GridBee brands

CHEMICAL/GASES TGO Technologies

#### CHEMICAL PROCESSING & FEED SYSTEMS

ARCADIS Franklin Miller Inc. Fluid Process Equipment TGO Technologies Waterworks Systems & Equipment, Inc.

#### COATINGS, LININGS,

& CORROSION CONTROL Utility Service Group

# **CONSTRUCTION CASTINGS**EJ

**CONTRACTORS** HD Supply Waterworks Kerr Pump & Supply

#### CSO & STORMWATER EQUIPMENT Hydro International

# CSO/SSO CONTROLS, WATER RESOURCES, DISTRIBUTION & COLLECTION

AECOM CDM Smith Michigan Inc. Fishbeck, Thompson, Carr & Huber, Inc. Greeley and Hansen Hubbell, Roth & Clark, Inc. Hydro International

**DATA MANAGEMENT** Eramosa

#### **DISINFECTION/EQUIPMENT** TGO Technologies

#### ELECTRICAL INSTRUMENTATION/ CONTROLS/GENERATORS AECOM

Fishbeck, Thompson, Carr & Huber, Inc. Kerr Pump & Supply Peerless-Midwest, Inc. UIS SCADA Inc.

## ELECTRONIC VALVES

#### ENGINEERS/CONSULTANTS

AECOM ARCADIS CDM Smith Michigan Inc. Dixon Engineering, Inc. Eramosa Fishbeck, Thompson, Carr & Huber, Inc. Greeley and Hansen Hubbell, Roth & Clark, Inc. Kerr Pump & Supply Williams & Works, Inc.

#### ENVIRONMENTAL CONTAMINANT TREATMENT SYSTEMS TGO Technologies

#### FILTER MEDIA

Layne Christensen Peerless-Midwest, Inc. Utility Service Group

#### FILTRATION

Kennedy Industries, Inc. Layne Christensen Fluid Process Equipment Utility Service Group Waterworks Systems & Equipment, Inc.

#### FINANCIAL SERVICES ARCADIS

**FRP DOORS & GRATING** J.G.M. VALVE CORP.

#### **GENERAL INDUSTRIAL** Franklin Miller Inc.

**GEOGRAPHIC INFORMATION SYSTEMS** CDM Smith Michigan Inc.

**GRIT REMOVAL** Hydro International

ICE PIGGING PIPES Utility Service Group

**INSPECTORS/LOCATORS** Dixon Engineering, Inc.

## 2016 BUYERS' GUIDE

### LABORATORIES/SUPPLIES

KAR Laboratories, Inc. Prein & Newhof

**LABORATORY TESTING** KAR Laboratories, Inc.

**MANHOLE COVERS & FRAMES** EJ

MANHOLE REHABILITATION LiquiForce

#### **METERS/METER TESTING**

M.E. Simpson Co., Inc. SLC Meter LLC UIS SCADA Inc. United Systems & Software

#### METER READING SYSTEMS

SLC Meter LLC United Systems & Software Utility Service Group

#### **ODOR CONTROL SOLUTIONS**

Bluewater Engineered Storage Systems J.G.M. VALVE CORP. Kennedy Industries, Inc. Layne Christensen Medora Corp., home of SolarBee and GridBee brands Prein & Newhof PVS Technologies Waterworks Systems & Equipment, Inc.

#### **OPERATION SERVICES**

American Cast Iron Pipe Company Utility Service Group



**PIPE & APPURTENANCES** 

Bluewater Engineered Storage Systems Forterra HD Supply Waterworks Krausz USA SLC Meter LLC

PIPE REPAIR PRODUCTS Krausz USA

#### PIPELINE REHABILITATION LiquiForce

**PROCESS MECHANICAL** CDM Smith Michigan Inc.

#### **PUMPS/PUMP SYSTEMS**

Fishbeck, Thompson, Carr & Huber, Inc. Fluid Process Equipment HD Supply Waterworks Hubbell, Roth & Clark, Inc. J.G.M. VALVE CORP. Kennedy Industries, Inc. Kerr Pump & Supply Layne Christensen Peerless-Midwest, Inc. Prein & Newhof Vesconite

#### **PUMP REPAIR & FIELD SERVICE**

Kennedy Industries, Inc.

#### **RESIDUALS/WASTE MANAGEMENT**

ARCADIS Greeley and Hansen Hydro International Waterworks Systems & Equipment, Inc.

#### SAFETY PRODUCTS

TGO Technologies

SCADA SYSTEMS UIS SCADA Inc.

**SEPTAGE RECEIVING FACILITIES** Franklin Miller Inc.

#### STORAGE TANKS/RESERVOIR SYSTEMS AECOM

Bluewater Engineered Storage Systems Dixon Engineering, Inc. DN Tanks, Inc. Hubbell, Roth & Clark, Inc. Pittsburg Tank & Tower Maintenance Co. Utility Service Group

SURVEYING Prein & Newhof

**TANK MAINTENANCE & INSPECTIONS** Pittsburg Tank & Tower Maintenance Co.

**TRANSFER SWITCHES** UIS SCADA Inc. **UTILITY BILLING SOFTWARE** United Systems & Software

**UV DISINFECTION** Fluid Process Equipment

#### VALVE ASSESSMENTS/HYDRANT FLOW TESTING/SMOKE TESTING M.E. Simpson Co., Inc.

#### VALVES

American Cast Iron Pipe Company Cla-Val EJ HD Supply Waterworks J.G.M. VALVE CORP. Kennedy Industries, Inc. Kerr Pump & Supply M.E. Simpson Co., Inc. SLC Meter LLC UIS SCADA Inc. United Systems & Software

#### WATER DISTRIBUTION SUPPLIES

DN Tanks, Inc. SLC Meter LLC

Utility Service Group

#### WATER QUALITY MONITORS

Medora Corp., home of SolarBee and GridBee brands

WATER SAVING VALVES Cla-Val

#### **WATER TREATMENT CHEMICALS** PVS Technologies

Water Solutions Unlimited

#### WATER/WASTEWATER TREATMENT SYSTEMS

AECOM ARCADIS Bluewater Engineered Storage Systems CDM Smith Michigan Inc. Franklin Miller Inc. Fishbeck, Thompson, Carr & Huber, Inc. Fluid Process Equipment Greeley and Hansen HD Supply Waterworks Hubbell, Roth & Clark, Inc. Hydro International J.G.M. VALVE CORP. Layne Christensen Medora Corp., home of SolarBee and GridBee brands Peerless-Midwest, Inc. Prein & Newhof **TGO Technologies** Waterworks Systems & Equipment, Inc.

#### Ā

#### AECOM

Troy Naperala, PE 10850 Traverse Highway, Suite 3365 Traverse City, MI 49684 231-922-4301 troy.naperala@aecom.com www.aecom.com

#### **American-Ductile Iron Pipe**

Jordan Byrd 1501 31st Avenue North Birmingham, AL 35207 AMERICAN 205-307-2969 jordanbyrd@american-usa.com www.American-usa.com

#### **American Spiralweld Pipe**

Jordan Byrd 1501 31st Avenue North Birmingham, AL 35207 AMERICAN 205-307-2969 jordanbyrd@american-usa.com www.American-usa.com

#### ARCADIS

Bob Stevenson 1001 Woodward Avenue, Suite 1000 Detroit, MI 48226 313-965-8436 robert.stevenson@arcadis-us.com www.arcadis-us.com

#### B

#### **Bluewater Engineered Storage Systems**

Mark Nelson 2000 Town Center, Suite 1000 Southfield, MI 48075 248-351-9773 mnelson@bluewaterstoragesystems.com www.bluewaterstoragesystems.com

#### С

#### CDM Smith Michigan Inc.

Mark TenBroek 645 Griswold Street, Suite 3770 Detroit, MI 48226 313-963-1313 tenbroekmj@cdmsmith.com www.cdmsmith.com

#### Cla-Val

Jim Graber in Michigan/ Phyllis Dretzka in Costa Mesa CA 1701 Placentia Avenue Costa Mesa, CA 92627 800-942-6326 info@cla-val.com www.cla-val.com



#### D

#### **Dixon Engineering, Inc.**

Ira Gabin, P.E. 1104 Third Avenue Lake Odessa, MI 48849 616-374-3221 dixon@dixonengineering.net www.dixonengineering.net

#### DN Tanks, Inc.

Steve Applegate 100 West Court Avenue, Suite 109 Jeffersonville, IN 47130 317-517-5771 steve.applegate@dntanks.com www.DNTanks.com



EJ John Hunter 301 Spring Street East Jordan, MI 49727 800-626-4653 john.hunter@ejco.com



## **Eramosa**

Tim Kruse 400 Renaissance Center, Suite 2600 Detroit, MI 48243 313-556-2840 tim.kruse@eramosa.com www.eramosa.com

#### F

Fishbeck, Thompson, Carr & Huber, Inc. Christopher Frilen 1515 Arboretum Drive, SE Grand Rapids, MI 49546 616-464-3715 crfrilen@ftch.com www.ftch.com fishbeck thompson carr & huber

#### **Fluid Process Equipment**

Jim Hoffman 4797 Campus Drive Kalamazoo, MI 49008 269-345-1923 ihoffman@sunsrce.com www.fpepumps.com

Forterra Sheila Griffin 511 E. John Carpenter Freeway, Suite 600 Irving, TX 75062 FORTERRA 972-266-7519 sheila.griffin@forterrabp.com www.forterrabp.com



Dave Schuppe 60 Okner Parkway Livingston, NJ 07039 973-535-9200 info@franklinmiller.com www.franklinmiller.com



#### G

**Greeley and Hansen** Deborah Veal 1001 Woodward Avenue, Suite 850 Detroit, MI 48226 dveal@greeley-hansen.com

#### н

**HD Supply Waterworks** hdswaterworks.com

Hubbell, Roth & Clark, Inc. Jesse VanDeCreek, P.E. 555 Hulet Drive, P.O. Box 824 Bloomfield Hills, MI 48303-0824 248-454-6300 jvandecreek@hrc-engr.com

#### **Hydro International**

www.hrc-engr.com

2925 NW Aloclek, Suite 140 Hillsboro, OR 97124 866-615-8130 wwinquiryus@hydro-int.com www.hydro-int.com



J.G.M. VALVE CORP. loe Maruskin 1155 Welch Road, Suite D Commerce, MI 48390 248-926-6200 contact@jgmvalve.com www.jgmvalve.com



#### $\mathbf{K}$

Т

**KAR Laboratories**, Inc. Jayne Rauch 4425 Manchester Road Kalamazoo, MI 49001 269-381-9666 irauch@karlabs.com www.karlabs.com

Kennedy Industries, Inc. Mark Hemeyer 4925 Holtz Drive Wixom, MI 48393 248-684-1200 mjh@kennedyind.com www.kennedyind.com

(Kennedy

## 2016 BUYERS' GUIDE

#### Kerr Pump & Supply

Glenn Kline 12880 Cloverdale Oak Park, MI 48237 248-543-3880 glenn@kerrpump.com www.kerrpump.com

#### Krausz USA

Pete Brown 331 SW 57th Avenue Ocala, FL 34474 352-817-1295 pete.brown@krauszusa.com www.krauszusa.com

KRAUSZ

L

#### Layne Christensen

Theodore Batkie 3126 N. Martin Luther King Jr. Boulevard Lansing, MI 48906 517-323-4931 *ted.batkie@layne.com www.layne.com* 

#### LiquiForce

John Thompson 28529 Goddard Road, Suite 106 Romulus, MI 48174 734-231-6691 *jthompson@liquiforce.com www.liquiforce.com* 



## PITTSBURG TANK & TOWER MAINTENANCE CO., INC.

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Inspections	Repair	New & Used	Tanks
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Dry	Paint	Erection	Underground
RÓV	Insulation	Dismantles	Ground Storag

ROV inspections can be viewed on TV console during inspection & DVD provided. All inspections include bound reports, recommendations and cost estimates.

> Patrick Heltsley 270-826-9000 Ext. 253 270-748-1325 www.watertank.com

#### M

Medora Corp., home of SolarBee and GridBee brands Joel Bleth 3225 Highway 22, Dickinson, ND 58601 866-437-8076 info@medoraco.com www.medoraco.com

#### ][Grid Bee® Solar Bee® Brands of Medora Corporation

#### M.E. Simpson Co., Inc.

Natalie N. Wainscott 3406 Enterprise Avenue Valparaiso, IN 46383 800-255-1521 natalien@mesimpson.com www.mesimpson.com

#### Р

#### Peerless-Midwest, Inc.

Bob Masters 505 Apple Tree Drive Ionia, MI 48846 616-527-0050 robert.masters@peerlessmidwest.com www.peerlessmidwest.com

#### Pittsburg Tank & Tower Maintenance Co.

Joella Duncan P.O Box 913 Henderson, KY 42419 270-826-9000 sales@watertank.com www.watertank.com

#### **Prein & Newhof**

Kimberly Jongsmaa 3355 Evergreen Drive NE Grand Rapids, MI 49525 616-364-8491 kjongsma@preinnewhof.com www.preinnewhof.com

#### **PVS Technologies**

Kara Hible 10900 Harper Avenue Detroit, MI 48213 800-337-7428 khible@pvschemicals.com www.pvschemicals.com

#### S

### SLC Meter LLC

John Traynor 595 Bradford Street Pontiac, MI 48341 248-625-0667 *jtraynor@slcmeter.com www.slcmeter.com* 

#### T

#### **TGO Technologies**

3471 Regional Parkway, Suite B Santa Rosa, CA 95403 800-543-6603 sales@tgotech.com www.tgotech.com

#### U

#### **UIS SCADA Inc.**

Ken Wesley 2290 Bishop Circle East, Dexter, MI 48130 734-424-1200 ken.wesley@uiscorp.com www.uiscorp.com

#### **United Systems & Software**

Steve Flaherty 205 Ash Street, Benton, KY 42025 260-515-3800 stevef@united-systems.com www.united-systems.com

#### **Utility Service Group**

Dan Kitchen 1230 Peachtree Street NE, Suite 1100 Atlanta, GA 30309 855-526-4413 help@utilityservice.com www.utilityservice.com

Utility Service Group

## V

Vesconite 2 Watkins Street, Denver Johannesburg, South Africa 01127116161111 vesconite@vesconite.com www.vesconite.com

#### W

#### Water Solutions Unlimited

Mark McKee 295 Industrial Drive, Franklin, IN 46131 317-339-6639 mmckee@getwsu.com www.getwsu.com

#### Waterworks Systems & Equipment, Inc.

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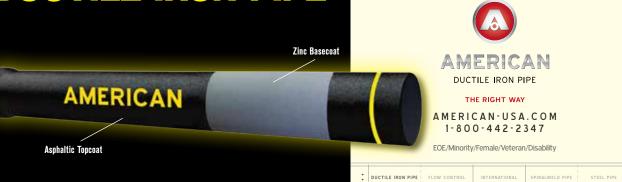


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## FAREWELL WISHES TO DAN MCVAY

With more than 25 years in the industry, Regional Manager, Dan McVay, is retiring after 15 years of service with DN Tanks. He has been an active member of AWWA and was a deserving recipient of the Fuller, LaDue, Lechner and Water Wheel awards. We appreciate his years of dedication, support and commitment to our customers and to the industry. We wish Dan and his wife, Sharon, well as they embark on this new journey.





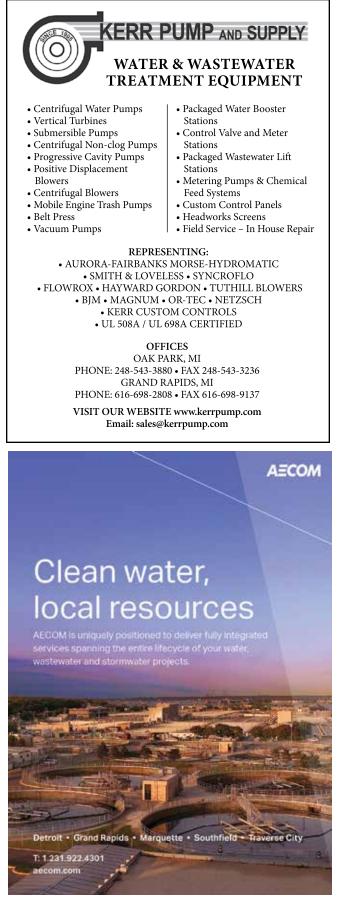
## WELCOME STEVE APPLEGATE

As Dan leaves, we welcome a new addition to the DN Tanks family. We are pleased to introduce your new point of contact for your area, Steve Applegate. Please feel free to contact Steve regarding new and / or existing tank projects.



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#### 46 WATER WORKS NEWS | Spring 2016

# Flint Water Crisis: What happened and why?





ATER

## Susan J. Masten<sup>1</sup>, Simon H. Davies<sup>1</sup>, and Shawn P. McElmurry<sup>2</sup>

<sup>1</sup> Department of Civil and Environmental Engineering, Michigan State University, East Lansing, MI 48824 <sup>2</sup> Department of Civil and Environmental Engineering, Wayne State University, Detroit, MI 48202

here has been much in the news about the water crisis in Flint and the length of time that it took for government officials to react to this crisis. This paper looks into what happened to the Flint water system and why the distributed water was so corrosive.

# Flint Water Crisis: What happened and why?

DISCLAIMER: The findings and conclusions expressed in this article are those of the authors and do not necessarily reflect the official policy and position of the Michigan Section AWWA.

Beginning in 1967, Flint purchased its water from the Detroit Water and Sewage Department (DWSD). The Flint Water Service Center (FWSC) treated Flint River water two to four times a year, for periods of a few days and the treated water was discharged into the Flint River (as per their NPDES permit). On April 16, 2014, the FWSC switched from distributing drinking water from DWSD to treating water at their facility in Flint. In doing this, the source water changed from Lake Huron to the Flint River. Within a few weeks of the switch, residents started complaining about the color, taste, and odor of the water. In May 2014, they informed officials that the water was causing rashes, especially in children. General Motors Corporation complained about the corrosiveness of the water toward their engine parts and switched water supplies in October 2014. Problems were also experienced in Flint with low



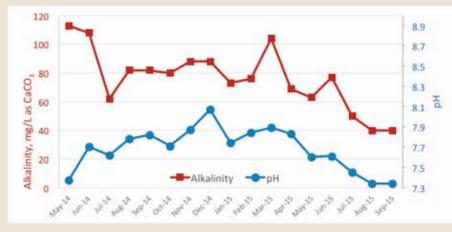
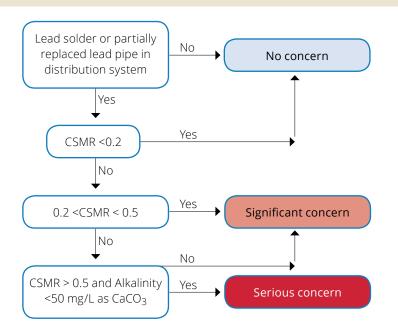


Figure 2 Decision Tool for assessing potential corrosion in lead pipes (from Nguyen, et al., 2010)



chlorine residuals and in August and September 2014, the water exceeded regulatory limits for E. coli. As a result, three boil water alerts were issued within a 22 day period. The high chlorine dosages that were used resulted in violations for total trihalomethanes (TTHMs), byproducts formed from the reactions of naturally occurring organic matter (NOM) with chlorine. With the assistance of two engineering firms, the FWSC tried to address the TTHM and bacteria problems. Initially they increased the coagulant dosage and discontinued the softening bypass stream; however, when that did not work activated carbon was recommended. After replacing the anthracite media with granular activated carbon and repairing the ozonation system, the TTHM levels were brought under control.

The problem that has received the most attention is the lead in the Flint water. In March 2015, the city of Flint sampled Flint resident Lee Ann Walters' home, and found high concentrations of lead in her water. Subsequent testing of 120 samples by Virginia Tech professor Marc Edwards found that the water in 24 homes contained high lead levels. In September, doctors led by a local pediatrician, Dr. Mona Hanna-Attisha, published data showing that blood lead levels (BLLs) in children increased significantly after the switch to Flint River as a water source (Hanna-Attisha et al., 2016). In the area of Flint with the highest lead levels in the water, the BLLs in children tested increased by a factor of about 2.5. After much publicity regarding the lead problem, the source water was switched back to Lake Huron treated by DSWD on October 16, 2015. As the lead levels remained high in some houses, the concentration of the phosphate corrosion inhibitor was increased on December 9, 2015, when FWSC began adding an additional ~2.5 mg/L phosphoric acid as (P), to try to enhance the formation of the protective coating on the pipes.

So what happened? The red color of the water observed by the residents

was due to corrosion of the iron pipes. While FWSC took steps, such as flushing the mains by opening fire hydrants, they never seemed to address the root cause of the corrosion of the pipes. Iron corrosion is very complex. There are several reasons that the iron corroded. A corrosion inhibitor (e.g., phosphate) was not added to the water. The chloride content of the treated water was high (60-92 mg/L), and, as shown in Figure 1, the pH and alkalinity of the treated water was low. For 18 months the chloride content of the treated water was high, not only because the chloride concentration of the Flint River water was ~45 mg/L, but because ferric chloride was used as a coagulant. The pH decreased by up to one log unit as a result of the treatment. Treatment for softening and turbidity removal, along with disinfection, reduced the alkalinity by as much as 190 mg/L as CaCO<sub>2</sub>. As a result of the reduction in the pH, alkalinity, and hardness, the water was undersaturated with respect to calcium carbonate and corrosive to the iron pipes. In addition, it is possible that the corrosion problem was exacerbated by bacterial regrowth in the pipes, as a result of low chlorine residuals and the likely presence of low molecular weighteasily metabolized compounds formed from the reaction of ozone with NOM.

The reduction in pH and alkalinity and the high chloride levels in the treated water also resulted in lead corrosion. With reduced alkalinity, lead carbonate minerals (cerussite, PbCO<sub>2</sub>; hydrocerussite,  $Pb_3(CO_3)_2(OH)_2$ ) were not able to effectively passivate the lead service lines. As phosphate was not added, for 18 months phosphate minerals such as chloropyromorphite,  $Pb_5(PO_4)_3$ Cl, or hydropyromorphite,  $Pb_5(PO_4)_3$ OH were not favorable, thereby leaving the lead pipes unprotected against corrosion.

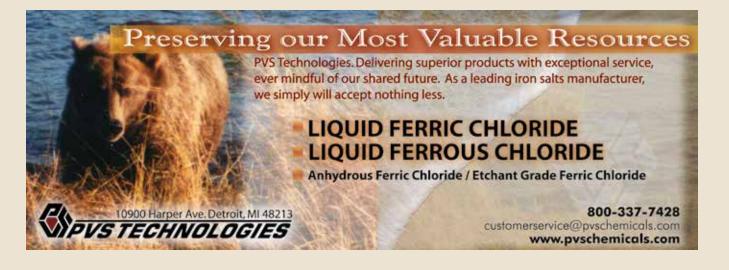
Commonly used indices could have predicted that the treated Flint River water would likely corrode the iron and lead pipes. For example, the decision tool shown in Figure 2 uses the chloride to sulfate mass ratio (CSMR) to predict the corrosivity of water towards lead piping. At the range of CSMR values found in the treated Flint River water (2.8-3.9), corrosion of lead pipes would be anticipated. As shown in Figure 1, before July 2015, the alkalinity of the water was greater than 50 mg/L as CaCO3 so the corrosivity of water would have been a concern. However, after this time, the alkalinity of the water was less than 50 mg/L and the CSMR continued to greatly exceed 0.5, increasing the concern of corrosion. Similarly, corrosion indices such as the Langelier Saturation Index and Larson-Skold Index suggest that the water was likely to be corrosive to iron pipes. Finally, neither was the water treated to achieve optimal corrosion control nor was a corrosion inhibitor added while the Flint River water was being treated.

In the wake of the corrosion and lead exposure that occurred, the Michigan Department of Environmental Quality (MDEQ) conducted extensive sampling and analysis of the Flint water. Approximately 9.6% of the samples collected as part of MDEQ's Sentinel Sampling (in February 2016) continued to have lead levels above the federal action level of 15 ppb. Seven of the 616 samples had lead levels exceeding 150 ppb, the maximum level at which the pointof-use filters provided are rated. The highest lead levels measured exceeded 3,200 ppb. Based on a more extensive data set collected by MDEQ (>13,000 samples, since September 2015), it appears that in a significant number of premises, the lead levels are still high and that it may take more than a year for lead levels to reach a point where the concentrations of all samples are below the action level. Clearly, there is much to be done before the water crisis in Flint is over.

#### Citations

Nguyen, C., Stone, K., Clark, B., Edwards, M., Gagnon, G., Knowles, A. Impact of chloride: sulfate mass ratio (CSMR) Changes on Lead Leaching in Potable Water. 2010. Water Research Foundation and US Environmental Protection Agency, Denver CO USA.

Hanna-Attisha, M., LaChance, J., Sadler, R.C., and Schnepp, A.C. Elevated blood lead levels in children associated with the Flint drinking water crisis: a spatial analysis of risk and public health response. 2016. American Journal of Public Health 0: e1-e8.



# MI AWWA RESEARCH AND TECHNICAL PRACTICES AWARD 2016 AWARD APPLICATION FOR FINALISTS

Complete and return to: Jesse B. VanDeCreek, P.E. Hubbell, Roth & Clark, Inc

Hubbell, Roth & Clark, Inc. 555 Hulet Drive, Bloomfield Hills, Michigan 48302 p. 248-454-6300 f. 248-454-6345 jvandecreek@hrc-engr.com

Fax or mail the application with appropriate signatures. Applications must be received by **August 15, 2016**. All entries must be available for distribution or publication by the Michigan Section, AWWA.

## 1. Name and Nomination Authorization of Utility(s) and/or Organizations Involved in Research or Technical Practice

Authorized by:	Title:	
Signature:		
Utility/Organization Name:		
Authorized by:	Title:	
Signature:		

#### 2. Individuals Involved in Research or Technical Practice

Name:	Title:	
Employer:		
Address	Phone:	
	Email:	
	Title:	
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Signature:	Date:	

4. Attach a clear and understandable summary of the Goals, Procedures, Data and Results, and Conclusions of the research or technical practice you would like considered for the "Research and Technical Practices Award."

## MEMBER UPDATE

# MI AWWA RESEARCH AND TECHNICAL PRACTICES AWARD **2016 NOMINATION FORM**

Complete and return to: Jesse B. VanDeCreek, P.E.

Hubbell, Roth & Clark, Inc. 555 Hulet Drive, Bloomfield Hills, Michigan 48302

p. 248-454-6300 f. 248-454-6345 jvandecreek@hrc-engr.com

Nominations must be received by **June 15, 2016**. Electronic, faxed, or mailed nominations will be accepted. All entries must be available for distribution or publication by the Michigan Section, AWWA.

1. Name of Utility(s) and Organization(s) \_\_\_\_\_

2. Names of Individuals Involved in Research or Involved in Research or Technical Practice (Optional)

**3.** Goals of Research or Technical Practice \_\_\_\_

4. Summary or Conclusions of Research or Technical Practice \_\_\_\_

5. Nominated By: \_\_\_\_

Representing: \_\_\_\_\_\_ Address: \_\_\_\_\_

\_\_\_\_\_ Date: \_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

# WATER SECURITY **SUMMIT**

The Michigan AWWA Water Security committee is pleased to announce its annual Water Security Conference will be held May 18 at the Eagle Eye conference Center in Bath, Mich.

The goal of the conference is to provide municipal management with update on governmental security guidelines and networking event with other municipal leaders.

Keynote speaker will be Kevin Morley- AWWA National Water Security Preparedness Director. He will be discussing:

· Reality of the Threat Environment

· Water Sector Cyber Risk Management

· Key Available Resources We will share an update on MIWARN and conduct tabletop exercise and hot wash group lessons learned discussions. Will qualify for .5 CECs.

For registration, visit www.mi-water.org. Member fee \$110, Non-member fee \$155.

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# **REMINDER ON TRAININGS**

Here's what is coming up for the remainder of the year.

May 10-12 18 18	Short Course in Water Bacteriology Lab Practices Seminar Water Security Summit	1 2 2
June 7 16 19-22	Small Systems Workforce Development Workshop Small Systems Conference AWWA ACE16 in Chicago	
August 30-Sep 1	Basic Math and Hydraulics Short Course	1 2 3
Septemb 7 13-16 27-29 27-29	er Cross Connections Seminar – Advanced MI-AWWA Annual Conference & Exhibits Water Treatment Short Course II Basic Math and Hydraulics Short Course	2 2 1
October 4 5	Fall Regional Meeting – Livonia Fall Regional Meeting – Kalamazoo	1 2
11-13 11-13 18 19 25-26 TBD TBD	Distribution System Short Course Limited Treatment Short Course Fall Regional Meeting – Mt Pleasant Fall Regional Meeting – Gaylord U.P. Distribution Seminar Asset Management Seminar Health and Safety Seminar	e 1 2 2

\* Dates subject to change. Please check online for confirmed dates, times, and locations.

# MEET JOE VANDERSTEL



Joe is the 54-year-old F1-S1 licensed Water Facilities Manager for the City of Grand Haven & Northwest Ottawa Water System. Before he attended Lake Superior State University (LSSU) and Grand Valley State University (GVSU), where he earned two associates degrees; one in Natural Resources Technology and another in Water Quality Technology as well as a

bachelor's degree in Biology, Joe graduated high school from and worked in Grand Haven where he was raised. Being a hometown man, Joe went looking for employment in West Michigan and was fortunate to find his first job in the water industry as an operator for the City of Grand Haven.

With patience and perseverance, Joe gained a good

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foundation of water treatment knowledge and experience and after 16 years, was promoted to Water Facilities Manager. He is still just as excited about water as ever and continues to learn all he can about providing safe drinking water. With inspiration from past supervisors and some very good engineers, Joe hopes to someday teach others about filtration and the importance it has on community health. Seeing as how he still gets excited about water projects, he is bound to become an inspiration to other water industry professionals just as so many others were and are for him.

For Joe, getting more operators from different sized communities involved with MI- AWWA is important. To accomplish this, Joe suggests we use marketing, job fairs, and outreach and education. The resources that MI-AWWA can provide to operators will become more of a necessity

## MEMBER UPDATE

as regulations change in an effort to continue providing safe drinking water to everyone, but involvement can be a large challenge for smaller communities who don't always have the luxury of time to get involved and stay involved. With more open doors and opportunities from the section, an operator who is outgoing and eager to be involved may spark others to participate. Joe thinks MI-AWWA can provide that foundation. He is also focused on several training possibilities. Something he would like to observe is training that would encompass "How to respond to an emergency" that would be geared toward those many "what if this happens to you moments" in which new and existing operators would see value.

For now, Joe stays busy managing employees at the water facility that he calls home. With the completion of a 2012 expansion and renovation project that included a water pumping station at the lake, there is no shortage of work for Joe. Even with his plate full, Joe finds time to follow other passions by volunteering his time for Junior Achievement, the AWWA MI Section Education and Training Council, and as the Environmental and Natural Resources Committee Liaison. With plans to start an outreach and education program where he uses water models showing the water treatment process from source, to filtration, to wastewater treatment, Joe is sure to leave a lasting impact on the water industry. ▲





## MDEQ UPDATE

# CLEAN WATER INFRASTRUCTURE FUNDING OPPORTUNITIES

The DEQ will soon accept applications from communities interested in low-interest loans to help address aging infrastructure.

Michigan's State Revolving Fund (SRF) and Drinking Water Revolving Fund (DWRF) every year provide communities with low-interest loans for the planning, design and construction of wastewater, nonpoint source pollution control and drinking water system projects. Interest rates range between 2 to 3 percent.

The first step for communities interested in applying is to submit a project plan by May 1 for drinking water projects or by July 1 for wastewater and nonpoint source projects. For further information on the loan programs, visit the Revolving Loan website at *www.michigan.gov/cleanwaterrevolvingfund* or call 517-284-5433 to talk with a revolving loan project manager.



# SARA TITLE III - EMERGENCY PREPAREDNESS FOR MICHIGAN FACILITIES AND THEIR COMMUNITIES

ARA Title III, also known as the Emergency Planning and Community Right-to- Know Act, requires facilities to report information to state and local officials that can be vital to the safety of their community. SARA Title III establishes requirements for Federal, State and local governments, Indian Tribes, and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. The Community Right-to-Know provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. The SARA Program tracks hazardous chemical storage and shares this information with Local Emergency Planning Committees and fire departments. The information is used to develop community emergency management plans that are utilized in case of an emergency in the community or at an individual facility. This information can be used to improve chemical safety and protect public health and the environment.

Sections 311 and 312 of SARA Title III address emergency and hazardous chemical inventory reporting. Over 6,000 facilities in Michigan submit hazardous chemical inventories or Tier II Reports to the Michigan SARA Title III Program, Local Emergency Planning Committees (LEPCs), and local fire departments. These reporting requirements apply to any facility storing hazardous materials above certain thresholds that must maintain a safety data sheet (SDS) in accordance with the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200 or are storing Extremely Hazardous Substances.

#### SARA Title III Training Opportunities:

- Tier II reporting workshops will be offered in 2016. Please see the DEQ Calendar, Events and Training website to register at *www.michigan.gov/deq/0,4561,7-135-3308\_333-292960--,00.html.*
- A SARA Title III Tier II Reporting Basics webinar is also being offered. Please go to the following website to register www.michigan.gov/deq/0,4561,7-135-3308\_3333-371323--,00. html.
- To view the 2016 SARA Title III Guidebook (which includes information on how to submit a Tier II report located in Chapter 3: SARA Title III Sections 311 & 312): *www.michigan. gov/deq/0,4561,7-135-3307\_29815\_4137-91088--,00.html.*

#### Need Help:

Please do not hesitate to contact the SARA Title III Administrators by sending an email to *deq-sara@michigan.gov.* Be sure to include your phone number.

# JOINT EXPO RECAP

Winter was fairly gentle on most of the state. And Joint Expo and Operators Day benefited. Record numbers of attendees came out to participate in the Operators Day trainings, the Infrastucture Project Funding Seminar, and of course walk the booths in the exhibit hall, seeing more than 200 exhibiting companies.

Water and wastewater operators heard from experts in electrical maintenance, backflow prevention, Miss Dig, and more. The Infrastructure Project Funding Seminar offered managers and directors an in-depth look at ways to fund infrastructure projects to meet daily challenges and long term goals.

Young people were again invited to participate in the YP/ NP Round Table on water industry careers. Hosted by the MI-AWWA Young Professionals and MWEA New Professionals, the Round Table provided a great discovery forum for new and young entrants to the water industry as well as students.

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The first day of the Expo closed with what has become the traditional Mixer at a local pub. A special thank you to the exhibitors who participated in and sponsored the Scavenger Hunt and Mixer. See page 56 for the list of sponsoring exhibitors. Thank you also to the energetic YP and NP volunteers who made the Hunt and the Mixer the best one yet.

Various contests were held both Tuesday and Wednesday to keep energy high in the exhibit hall. There were a couple of surprises. See below for details.

Exhibitors: thank you for participating. Keep your eye on the Joint Expo page on the website and your email box for information on booth registration opening for 2017.

Mark Your Calendar for the 2017 JOINT EXPO & OPERATORS DAY - February 7-8, 2017 Lansing Center, Lansing, MI.

## WATER OPERATORS COMPETE FOR BEST TIMES

The Michigan Section held its annual Tapping and Meter Madness competitions at Joint Expo in February. Both competitions are a race against the clock. A team of three works to tap a simulated water main in the Tapping Contest. Meter Madness is a race to see how fast participants can assemble a meter from a bucket of parts. Troy swept the competitions with a win in Meter Madness and wins by both their women's and men's teams at Tapping.

Hydrant Hysteria, a new competition that is still gaining

ground within AWWA, also held its state competition at Joint Expo. This competition is a race against the clock to assemble a hydrant.

Congratulations to the winners of this year's contests. The Tapping Teams and the Meter Madness winner will receive travel support to compete in the national competition held at ACE16 in Chicago this June. The Lansing Lethal Ladies will defend their national title against the new Michigan women's champs Smooth Operators.

Well done teams! Thanks to all who competed!

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2016 Meter Madness Michigan Champion Rick Greenwell, City of Troy

L to R 2016 Hydrant Hysteria Michigan winners Cam Kerbyson, Richard Garza



L to R 2016 Tapping Michigan Champion Ladies Team Smooth Operators: Kelly LaPointe, Scott Carruthers, Nikki MacMillan and Ashely Levin



L to R 2016 Tapping Michigan Champion Men's Team Troy Tappers: Mark Pniewski, Scott Carruthers, Rich Wiles and Andy Willetts

## YOUNG PROFESSIONALS CREATE ENERGY, FUN AT JOINT EXPO

The MI-AWWA Young Professionals in collaboration with the MWEA New Professionals hosted two events that were rather well attended and organized at this year's Joint Expo.

The Student Roundtable was attended by 33 individuals consisting of both professionals and college students who attended Joint Expo on Tuesday February 2nd. Bay College attended as they have for the past several years and asked

some hard hitting questions of our panelists and participants. The event is centered around careers and opportunity within the water industry and the importance of networking and mentoring within the industry.

Careers within the industry are carved out of many different paths and this year's discussion emphasized the importance of continuously learning about the technical aspects of our

# JOINT EXPO & OPERATORS DAY RECAP

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industry but also the soft skills and how that can help you with your career. Brad Schepler from HRC, Kevin Livingston from HESCO and Ben Anderson from the Village of Cassopolis served as the panelists for this year's events while Matt Parks from OHM Advisors facilitated the event. Overall, the event was a success and efforts to expand participation from other schools will be a key focus for 2017.

The Scavenger Hunt in the Exhibit Hall took on a new format and came through with the most participation we have seen to date. Special thanks to all the sponsors especially Victaulic who was an Uber Sponsor but also contributed towards the prizes and swag. In all, over \$700 in gift cards were awarded and over 70 participants took the time to answer clues from the 23 different sponsors. The event concluded with a mixer, which also was coordinated by the YPs and NPs. Jenna Karazim (Vice Chair of the YP group) from the City of Ann Arbor was instrumental in the implementation of this year's event.

A really big thank you to all who helped. If there are any questions on how to help with next year or if you are interested in being a 2017 sponsor in the Scavenger hunt, please feel free to contact Matt Parks at *matt.parks@ ohm-advisors.com*  Thank You to Scavenger Hunt and Mixer Sponsors

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As we continue to deliver valuable information through the pages of this magazine, in a printed format that is appealing, reader-friendly and not lost in the proliferation of electronic messages that are bombarding our senses, we are also well aware of the need to be respectful of our environment. That is why we are committed to publishing the magazine in the most environmentally-friendly process possible. Here is what we mean:

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  offset program in conjunction with any air travel we undertake related to our
  publishing responsibilities for the magazine.

So enjoy this magazine...and KEEP THINKING GREEN.

## **NEWS & NOTES**

# **OPERATOR'S MERITORIOUS SERVICE AWARD**

The Michigan Section, AWWA is soliciting nominations of individuals to be considered for the 2016 Operator's Meritorious Service Award. This award will be presented at the Michigan Section, AWWA Annual Conference this coming September. The purpose of this award is to provide recognition to a section member for special performance in one or more of the following areas:

- 1. Continuous compliance with public health standards in finished water.
- 2. Consistent and outstanding contribution to plant maintenance thereby prolonging the useful life of equipment.
- 3. The development of new and/or modified equipment or significant process modifications to provide for a more efficient or effective treatment.

- 4. Special efforts in the training of treatment operator.
- 5. Special acts not directly related to water treatment but demonstrate dedication to the public beyond the normal operating responsibilities.
- 6. Constant and outstanding contribution to operation and/or maintenance of distribution lines, pump stations and reservoirs.

Deadline for submission of nominations is June 30, 2016. To obtain a copy of the award nomination form, go to *www.mi-water.org* and look under "Documents Download-Awards." Send submissions to: Nathan Vriesman, P.E. Vriesman & Korhorn Civil Engineers 7885 Byron Center Ave SW Ste A, Byron Center, MI 49315 *nate@VKcivil.com* 

# ACE16 BUS TRIP HERE'S YOUR CHANCE - VISIT ACE16 EXPO

The Michigan Section has chartered two buses to allow water operators from across the state the chance to visit the exhibit floor at ACE16 in Chicago. This is a great opportunity for anyone interested in visiting a large exhibit floor, networking with water professionals from around the country, and earning CECs in the process!

This is a whirlwind, one-day trip to keep costs down.

Registration for the Bus Trip includes transportation from your pick up location to McCormick Place in Chicago, snacks on the bus, registration for the ACE16 exhibits and all activities in the exhibit hall, lunch in the exhibit hall, and 0.1 other CECs.

One route will travel along I69/I96 and one route will travel along I94. See the Section website for a map, pick up locations, and times.

Cost of the trip is only \$75 for members. See the website for more information.

Thanks to Fer-Pal for supporting this trip and helping us keep the registration fee low.

Space is limited so register soon.

# MANISTIQUE VYING FOR BEST TASTING WATER AT ACE 16

The City of Manistique won Best Tasting Water at the L 2015 Michigan Section AWWA annual meeting. This win is a culmination of compliance, determination, planning, funding, construction and, of course, luck. The City has in the past struggled with disinfection byproducts from treating an inland river as their source. While Lake Michigan and area groundwater sources are available, deep highly mineralized wells and bedrock near the lakeshore made these options cost prohibitive. To maintain compliance with the disinfection by-product standards, the City rebuilt their filters, made improvements to the coagulant rapid mix, and installed ozone as a pre-oxidant. An ultraviolet contactor was also added for good measure. After 7 million dollars in improvements, the water meets drinking water standards, and tastes really good! Last year's winner, the City of Chelsea, helped present the traveling trophy.

The City of Manistique is on to Chicago for the National

"Best of the Best" contest at the Annual Conference and Exposition June. Wish them best of luck!



Gary Wozniak, Corey (Manistique), and Chelsea passing the trophy from the last year's Section meeting

## ANN ARBOR USED CONTEST, PUBLIC VOTE, TO SELECT ART FOR WATER TOWER

EXCERPTED FROM A CITY OF ANN ARBOR PRESS RELEASE

In January, the City of Ann Arbor announced the winner of its Art in the Sky contest. Bill Burgard's design depicting

birds, fish and wildlife will adorn the Manchester elevated water tank once it's painted later this year. Burgard is an illustrator, designer and lecturer at the University of Michigan Stamps School of Art and Design and lives near the water tower.



The Art in the Sky contest elicited 598 entries from Ann Arbor residents of all ages. The

public cast more than 3,200 votes to choose the winner from the five finalists selected by a panel of judges.

Addition of the artwork and all other improvements are scheduled to be completed by October of this year.



# LEAD, COPPER, AND CORROSION CONTROL: MEMBER FORUMS AND TRAININGS

The Flint water crisis has left an indelible mark on the water industry. Water professionals not only need to achieve and maintain their license, but this new scrutiny demands that they go beyond the minimum requirements and seek out professional development that enhances their skills and gives them what's needed to make sound decisions that protect public health.

The Michigan Section's leadership created two opportunities for members to enhance their skills and get a leg up on the changes coming.

In March, the Section hosted a Water Summit. The Summit offered a forum for water professionals to discuss the challenges they're facing in this ever-changing landscape.

On May 6, the Section will host a Water Quality Workshop. This workshop focuses on the Lead and Copper Rule. If you haven't already, register today.

### **Coming Up**

AWWA will be highlighting sessions at ACE16 that delve into the more technical aspects of corrosion control and managing water quality and the Section's Annual Conference & Exhibits (MI-ACE 2016) will have sessions dedicated to these topics as well.

# MICHIGAN NIGHT AT ACE16

Join your Michigan colleagues at Michigan Night in Chicago on Sunday during ACE16. Attendance is complimentary to members but you are asked to please register so that we can plan accordingly. Visit the calendar on the Section website, to register today.

Come enjoy a taste of Chicago and see who from Michigan makes it to ChiTown.

There is still opportunity to support this fun member networking event. Contact Bonnifer Ballard at 517-292-2912 for more information.

## CORRECTION

The winner of the MI-AWWA High School Senior Academic Scholarship is Alica Cook (Pat Cook). We apologize for the misprint.



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10 Annual Contenence and Exhibits

BOYNE HIGHLANDS > SEPTEMBER 13-16 > HARBOR SPRINGS, MI

## MARK YOUR CALENDAR

to attend this year's Michigan Section Annual Conference & Exhibits (MI-ACE 2016) on September 13-16, 2016 at Boyne Highlands in Harbor Springs.

- Featured speaker Dave Dempsey, renowned author on water protection
- More than 30 sessions where you will learn about water quality, asset management, and more
- Hear the latest on the Lead and Copper Rule
- Explore products and services in the exhibit hall
- Network with colleagues from across Michigan

MI-ACE 2016 is the place for water professionals to hear the latest on the challenges you're facing now and into the future. Make plans to attend. Registration opens May 1st.

## TREAT. TRANSPORT. TASTE.

# CALL FOR ADDITIONAL SPEAKERS MI-ACE 2016

The MI-ACE 2016 Program Committee still has a few areas that we would like to have covered in the program at the Annual Conference. If you are skilled and experienced in one of the areas below, please contact Program Committee Chair Christine Spitzley for more information on possibly presenting at MI-ACE 2016.

Asset Management Water Quality Management















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