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Annual Business Meeting

Business Meeting/Election of Officers is on Monday, June 25 at 11:30am following the opening session.

Everyone is welcome to attend.

2018-2019 Board Nominations

Greg Kacvinsky  
President

Jennifer Wagner  
President-Elect

Michelle LaRose  
Vice President

Pete Cavagnaro  
Federation Delegate

Mark Fowler  
Association Director

2017-2018 Board of Directors

Cheryl Vosburg  
President

Greg Kacvinsky  
President-Elect

Jennifer Wagner  
Vice President

Brian Ross  
Past President

Mike Harvey  
Association Director

Harry Price  
Association Director

George Davis  
Secretary

Keith Moss  
Treasurer

Todd Wibright  
Federation Delegate

Conference Coordination

George Davis and Allison Wood
Conference Coordination

Harry Price, Mike Harvey, and Kathryn Yusko
Awards

Allison Wood
Exhibits, Sponsors

Scott Kafka, Kim Maurice
Entertainment

Greg Kacvinsky
Technical Program

Joe Moore
Golf

Jennifer Wagner
Time and Place
On behalf of the Michigan Water Environment Association and Boyne Mountain, it is my pleasure to welcome you to the 93rd Annual MWEA Conference. As always we have a great week planned for you at Boyne Mountain Resort. The Conference Committee under the leadership of our President Elect, Greg Kacvinsky, has worked diligently over the past year to assemble a world class event where you can enjoy the best leadership discussions, technical programs, and socializing and networking opportunities of the year.

The 2018 Annual Conference will begin on Sunday, June 24th and conclude on Wednesday, June 27th. Our Time and Place Committee has chosen Boyne Mountain Resort in beautiful Boyne Falls, Michigan for our conference location this year because it offers all the amenities needed to accommodate a large conference while at the same time offering great options for family time. The Sunday night reception & dinner will be held at the Mountain Grand Lodge, on the lawn between the Civic Center and the MGL, and is sure to be one of the highlights of the conference social events. You and your family have many opportunities here to explore Boyne Mountain and enjoy our great state of Michigan through restaurants, and an award winning spa. They also offer an amazing water park, fabulous zip lining, horseback riding, bike riding, swimming, campfires, canoeing and spectacular golf. If they offer all the amenities needed to accommodate a large conference while at the same time offering great options for family time.

Over the past year, the MWEA Board of Directors has worked to develop and carry out goals in support of our strategic plan and vision... to be the recognized authority on and advocate for Michigan's water resources. This 93rd conference has been put together for our members as a mission to provide bold leadership, champion innovation, connect water professionals, and leverage knowledge to support clean and safe water. It truly is Michigan's Water Quality Event of the year!

Our opening session will include a presentation by the Water Environment Federation (WEF) Trustee Mark Poling, Mark is the business operations director for Clean Water Services, the public wastewater and storm water utility serving Washington County, Oregon. Mark has more than 30 years of experience working for utilities, and has served in management for more than 20 years. He has a bachelor's degree in natural resource management from Grand Valley State University, and a master's degree in environmental engineering from the University of Washington. Mark plans to attend the entire conference and we look forward to hearing more about what's happening at WEF. Also on Monday's agenda is a presentation by Lindsey Smith from Michigan Public Radios "Environment Report", a presentation on "Utility of the Future - Implementation" by Pete Cavagnaro and Brian Hannon, and also an MDEQ Update from Kelly Green.

The remaining sessions of the technical program are all top notch. We will have experts speaking about watershed management, collections, utility management, asset management, and utility of the future, as well as process and design.

In addition to the technical program, there will be opportunities for socializing and networking that our members have come to expect and appreciate. We will have a vendor reception and Exhibits Night with a Disney Theme that will be lots of fun. The conference also offers opportunities for members to attend the Annual Golf Outing, Water for People canoe trip, wine/beer tasting, and jewelry making/essential oils. There will be award presentations commemorating the achievements of the many dedicated professionals in our industry, which will be held at two distinct celebrations on Tuesday (lunch for MWEA Awards and dinner for WEF Awards).

On Wednesday morning we'll have our “News from the Field” update from Steve Aiken and we'll hear a presentation from the Dan Wolz Grant recipient: Sarah Gerborkoff from Houghton Middle School. We'll also have an interesting presentation by Robert Czachorski on the use of smart technology to track harmful algal blooms in the Great Lakes and Dr. James Barnard will wrap up the plenary session with a presentation on the history of biological nitrogen and phosphorus removal.

There are many concurrent technical sessions and activities happening at this event. So we encourage you to review the conference program and plan your schedule in advance so you get the most out of your time. I am convinced that you will not leave this conference without finding ways to improve your efforts of protecting our waters.

As we approach our 93rd Annual Conference, we need to take a moment to reflect on the impact that our members make in the lives of everyone in our great state of Michigan. Keeping our water resources safe, and protecting public health and the environment is a critical mission we all support. We have so much to be thankful for in this state, including an abundant supply of fresh water – representing 95% of the entire fresh water supply in the United States!

On behalf of the MWEA Board of directors, we thank you for your support and we look forward to seeing you in June!
General Information

Registration • All conference participants, including attendees, spouse/guests, speakers, exhibitors, and award recipients, are required to pre-register for the conference. Registration check-in will be on Sunday from 5:30pm - 7:00pm at the Reception Tent (behind Mountain Grand Lodge on the lawn) and also on Monday and Tuesday from 7:30am - 3:00pm in the Civic Center, West Lobby. The conference registration form is available on page 10 of this program or online at www.mi-wea.org.

Conference Fees • Full conference registration includes admission to all technical sessions, vendor exhibits, annual business meeting, most entertainment activities, awards ceremonies and all other association activities sponsored during the Conference. Conference registration DOES NOT include your meal tickets. See MEALS for further information.

Meals • If you are staying at Boyne Mountain, your meal tickets are included as part of your room fee. If you are not staying at Boyne Mountain, you may purchase meal tickets separately at the Mountain Grand Lodge front desk. Please get your meal tickets as soon as you arrive.

Discounted Registration Fees • You can save on your registration fee in two ways. If you are an MWEA member, register at the discounted/early member rate by May 17, 2018. If you are not a member, join MWEA to receive the member rates.

Name Badges • Name badges must be worn at all times and are required for entrance to ALL conference sessions, meals and activities.

Golf • To participate in the Sunday golf outing you must be pre-registered. See information and registration on page 12 of this program.

Payment • Checks, MasterCard, Visa, Discover and American Express are accepted for registration. Cash payments and onsite registration are available but discouraged.

Conference Attire • The suggested conference attire is ‘business casual.’ The exception to this is Tuesday night’s Leadership Celebration where it is business formal. Comfortable shoes are strongly recommended. In addition, the theme for Monday’s Exhibit Night is “Disney.” We encourage you to dress to celebrate the Disney theme. Do an internet search for creative ideas!

Hotel Accommodations • To receive the special rate, hotel reservations must be made directly with Boyne Mountain by May 17, 2018. After that date, reservations will be honored only on a space-available basis at current room rates. Requests after room block is filled will be placed in the next available accommodation type with the rate changing accordingly. Hotel accommodations can be made by returning the form found on page 11 of this program directly to Boyne Mountain Resort. Please do not send the hotel registration form to MWEA. Babysitting service is available by contacting Boyne Mountain.

Check-in/Check-out • Check in time at Boyne Mountain Resort is 5:00pm. Check out time depends on the building you are staying in; see page 11.

Refunds/Cancellations • MWEA will refund your registration fee less a $50 processing fee per person for cancellations received in writing by June 1, 2018. No refunds will be granted after that date. Substitutions may be made at any time (the difference between a member and non-member price will be charged or credited).

Avalanche Bay Indoor Water Park
Voted Michigan’s #1 Waterpark by readers of the Detroit Free Press! Visit www.avalanchebay.com for more info.

Solace Spa & Salon
Solace Spa offers a variety of treatments including facial and body treatments, massages and wraps, as well as a full menu of beauty treatments and our brand new full-service hair salon!

Zipline Adventure
Enjoy the thrill of racing your friends and family on the side by side lines of the Twin Zip or choose the relaxed pace of the Zipline Adventure Tour. These guided tours begin at the top of the mountain and allow you to soar on a series of lines, over slopes and through trees, as you descend back to the base area. Both are all thrills, no skills activities for all ages.

Odawa Casino
A free shuttle service to the Odawa Casino in nearby Petoskey is available. The casino features nearly 1,000 slot machines, table games, and a poker room, all for those ages 19 and over. With more than 50,000 square feet to welcome players of every skill level, you’ll be sure to feel the pure excitement and warm hospitality here.

The Monument Golf Course
A scenic mile-long golf cart ride takes you to the summit of this 7,086-yard jewel at Boyne Mountain. Four sets of tees drop in giant steps to the pond protected first hole that Sam Snead called one of the most intimidating anywhere. The Monument was a Golf-Digest’s runner-up for Best New Resort Course of 1987. Snead, Kathy Whitworth, Gene Sarazen, Byron Nelson and other legends have played the course, admired it and picked holes to be named for them. The Monument is the location of the Annual Conference Golf Outing on Sunday afternoon. See Golf Registration Form (page 12) for more details.

Deer Lake For Swimming and Fun
Head to the sandy beach and refreshing waters of Deer Lake (located on the west side of the resort property) for summer fun and a cool dip. All resort lodging guests are welcome at Deer Lake Beach where you’ll discover activities such as boce ball and a putting course and enjoy views from the lake and warm breeze from a kayak, row boat and the latest addition...SUPs (Stand Up Paddleboards). Use of the beach area, SUPs, kayaks, paddle boats and rowboats is complimentary for Boyne Mountain lodging guests. Sailboats are available for rental.

Family Fun
Events

Welcome Reception
Sunday, June 24
Place: Mountain Grand Lodge
Time: 5:00-7:00pm Registration
      6:00pm Reception
      7:00pm Dinner
      8:30pm Entertainment

You will need to check-in at the hotel to receive and/or purchase meal tickets BEFORE you come to the reception. The new location of the Welcome Reception will be behind the Mountain Grand Lodge on the lawn and patio.

Group/Guest Activities

MWEA Canoe With Purpose 2018
Sunday, June 24 | 11:45am - 5:30pm
Meet in Hotel Lobby

The 9th Annual MWEA Canoe With Purpose will take place on Sunday, June 24, 2018, as a part of the Annual Conference. Canoe rentals will again be provided by Jordan Valley Outfitters located at 311 N. Lake St. (M-66), East Jordan. We will be paddling the Jordan River from Graves Crossing Road to Rogers Road, a trip of about three hours.

PLEASE NOTE: the Jordan River is not recommended for beginner paddlers! The cost of the trip is $90 for a team of two paddlers ($50 for transportation and canoe rental and $40 for Water For People). If you prefer to rent a kayak, the cost for a solo is $55 and the cost for a two-person tandem is $100. You can also bring your own boat and donate $20 per person to WFP. Plan to return to Boyne Mountain by 5:30pm. The schedule for the Sunday event is to meet at the Boyne Mountain Grand Lodge main lobby at 11:45am. Transportation to and from the Jordan River is provided by Jordan Valley Outfitters.

You are encouraged to register by May 20 if you plan to join the Canoe With Purpose event. Later registrations will be considered but no guarantee of canoe availability can be made. To register, indicate your selection on the attendee conference registration form on page 10, or email Josh Redner (jwredner@ftch.com). If weather interferes with our trip, refunds may not be available. The Paddle With Purpose event will raise funds for Water For People, a WEF charity of choice, whose mission is to promote the development of high quality drinking water and sanitation services, accessible to all, and sustained by strong communities, businesses, and governments. Thanks for your support!

Jewelry Making Class & Essential Oils
Tuesday, June 20 | 9:00am - 11:00am and 1:00pm - 3:00pm
Grand Mountain Lodge, Vienna B Room

Join Margaret Ross from Margaret Ross Jewelry Designs and Laura Wallis from Young Living for a combined class on essential oils and lava rock bracelets. They will guide you step-by-step to create a bracelet of your own. Because of the porous nature of lava rock the beads easily soak in the oil and your body heat aids in gently diffusing the scent to create your personal wearable aromatherapy diffuser. Samples of the bracelet and a signup sheet will be available at the conference registration desk.

Beer and Wine Tasting
Tuesday, June 20 | 4:00 – 5:15
Graz Room, Lower Level of Mountain Grand Lodge

Join us as we have an expert guide you through samples of a Michigan beer and wine, sharing their knowledge and expertise. Come explore and taste all that Michigan has to offer. There is no charge for the tasting and light appetizers will be served. Raffle tickets can be purchased for a chance to win bottles of beer or wine.
## Conference at a Glance

### Sunday, June 24
- **11:00am** Golf Outing
  - Alpine Golf Course
- **11:45am - 5:30pm** Water for People Event: "Canoe With Purpose"
  - Meet in Hotel Lobby
- **5:00pm - 7:00pm** Conference Registration
  - On the patio behind Mountain Grand Lodge
- **6:00pm - 7:00pm** Reception
  - Under the tent behind the Mountain Grand Lodge
- **7:00pm - 8:30pm** Dinner
  - Under the tent behind the Mountain Grand Lodge
- **8:00pm - 8:30pm** 5-S Meeting and Introduction of Inductees
  - Meeting Location is in Vienna B inside Mountain Grand Lodge
- **8:30pm** Entertainment
  - Under the tent behind the Mountain Grand Lodge
  - Suitable for the whole family

### Monday, June 25
- **6:30am - 8:30am** Breakfast Buffet
  - Everett’s inside Mountain Grand Lodge
- **7:00am - 8:00am** 5K Walk / Run
  - Meet in Hotel Lobby
- **7:00am - 8:00am** DEQ Breakfast Meeting
  - Vienna B, Grand Mountain Lodge
- **7:30am - 3:00pm** Conference Registration
  - Civic Center-West Lobby
- **8:30am - 11:30am** Opening Session
  - Matterhorn C/D, Civic Center
- **11:30am - 12:00pm** Business Meeting and Election of Officers
  - Matterhorn C/D, Civic Center
- **12:00pm - 1:00pm** Lunch Buffet
  - Vienna, Grand Mountain Lodge
- **1:00pm - 3:00pm** Session 1A: Collection Systems
  - Lower level Civic Center
- **1:00pm - 3:00pm** Session 1B: Stormwater
  - Lower level Civic Center
- **1:00pm - 3:00pm** Session 1C: Operations and Treatment
  - Lower level Civic Center
- **5:00pm - 8:30pm** Exhibits Open
  - Civic Center
- **6:00pm - 8:00pm** Dinner
  - Civic Center
- **9:00pm** Bonfire
  - Tiki Hut outside of Civic Center

### Tuesday, June 26
- **6:30am - 8:30am** Breakfast Buffet
  - Everett’s inside Mountain Grand Lodge
- **7:00am - 8:00am** Committee Chair Breakfast
  - Vienna B, Grand Mountain Lodge
- **7:30am - 3:00pm** Conference Registration
  - Civic Center-West Lobby
- **8:30am - 11:45am** Session 2A: Hot Topics
  - Lower level Civic Center
- **8:30am - 11:45am** Session 2B: Watershed
  - Lower level Civic Center
- **8:30am - 11:45am** Session 2C: Asset Management
  - Lower level Civic Center
- **9:00am - 11:00am** Jewelry Making and Essential Oils Class
  - Lower level of Mountain Grand Lodge
- **12:00pm - 1:15pm** Awards Luncheon
  - Matterhorn, Civic Center
- **1:00pm - 3:00pm** Essential Oils Class
  - Lower Level of Mountain Grand Lodge
- **1:30pm - 4:15pm** Session 3A: Treatment Process & Design
  - Lower level Civic Center
- **1:30pm - 4:15pm** Session 3B: Sustainability & Energy Management
  - Lower level Civic Center
- **4:00pm - 5:15pm** Beer and Wine Tasting
  - Graz Room, lower level of Mountain Grand Lodge
- **6:00pm - 7:00pm** Cocktail Reception
  - Vienna Rooms in Mountain Grand Lodge
- **6:30pm** 5S Induction Ceremony
  - Vienna Rooms in Mountain Grand Lodge
- **7:00pm** Leadership Celebration Dinner
  - Vienna Rooms in Mountain Grand Lodge

### Wednesday, June 27
- **6:30am - 8:30am** Breakfast Buffet
  - Everett’s inside Mountain Grand Lodge
- **8:30am - 11:45am** Plenary Session
  - Matterhorn A & C, Civic Center
- **12:00pm** Lunch at the restaurant of your choice
  - or pre-ordered TO GO Box Lunches
- **12:00pm - 2:00pm** Board Meeting
  - Vienna B, Grand Mountain Lodge

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**Exhibits Night Theme**

**Monday, June 25, 2018**

**5:00pm - 8:30pm | Civic Center**

**Dress as your favorite Disney character!**
Speakers

James Barnard, Ph.D.

James Barnard, Ph.D., of Black & Veatch is recognized internationally for developing the BARDENPHO Process, one of the first biological nutrient removal (BNR) process configurations. Dr. Barnard is part of Black & Veatch’s Advanced Environmental Technologies Division, a staff focused on bringing their knowledge directly to bear on Black & Veatch projects around the world.

Dr. Barnard has 38 years of experience with research, planning, design, and commissioning of municipal and industrial wastewater plants. He has been involved in the design of more than 70 wastewater treatment plants for biological nitrogen and phosphorus removal world-wide. Some of Barnard’s designs include: the first large-scale treatment plant for the City of Johannesburg (South Africa); the first BNR plant in the U.S (Palmetto, FL); the Kelowna Nutrient Removal plant in Kelowna (British Columbia), which incorporates features such as pre-fermentation of primary sludge for providing the volatile fatty acids (VFA) required for improved phosphorous removal; and a number of industrial waste treatment plants that utilize the upflow anaerobic sludge blanket (UASB) reactor process.

Robert Czachorski

Robert Czachorski has 25 years of experience in consulting with a primary focus on water resources and municipal engineering. He is OHM’s lead technical expert on wastewater collection systems and leads OHM’s national sewer work. Robert has performed water and sewer studies for nearly 100 municipal utility systems throughout the country.

Robert is a nationally recognized expert in wet weather issues and sanitary collection systems. He has published several papers that highlight many unique insights and techniques for system analysis, including a new hydrologic model for antecedent moisture impacts on sewer systems, which resulted in a 2001 Award from the Water Environment Federation (WEF) and a 2007 award from the Consulting Engineers Council, the leading industry professional association. His work on cloud data approaches for tackling harmful algal bloom on Lake Erie was part of the winning team for the Cleveland Water Alliance’s Internet of H2O challenge in October of 2017.

Lindsey Smith

Lindsey Smith is Michigan Radio’s Investigative Reporter. She previously served as Michigan Radio’s West Michigan Reporter.

Lindsey has worked as a reporter at radio stations in both West and Southeast Michigan, and her work has been repeatedly recognized by the Michigan Association of Broadcasters and Michigan Associated Press. Her 2015 documentary about the Flint water crisis, Not Safe to Drink, won the station a national Edward R. Murrow Award, an Alfred I. duPont - Columbia University Award, and a Third Coast/Richard H. Driehaus Award. The Detroit chapter of the Society of Professional Journalists named her “Young Journalist of the Year” in 2014.

She’s a graduate of Eastern Michigan University and Specs Howard School of Media Arts.

Branko Kerkez

Branko Kerkez, Assistant Professor of Civil and Environmental Engineering at the University of Michigan, focuses on the development of intelligent water grids, which have the potential to revolutionize the interaction between hydrologic systems and man-made infrastructure. His long-term goal is to build the Internet of water, an intelligent cyber-physical system that connects natural water bodies with physical infrastructure. This demands the use of advanced sensing technologies and data-driven models on top of a novel communications backbone. One main area of interest is the control and optimization of large-scale water systems, spanning everything from water supply (lakes, snowpack, reservoirs) to demand (agricultural and urban uses, hydropower production, decentralized operations of municipal water grids). Many solutions to this large-scale systems problem couple domain knowledge from Civil and Environmental Engineering with an enlarged set of tools from Electrical Engineering and Computer Science.

Before joining CEE in January 2013, Kerkez spent four years collaborating on the deployment of one of the world’s largest environmental sensor networks in the mountains of California. “California is struggling to meet the water needs of its growing population,” he explained. The state’s water supply relies heavily on snowpack in the Sierra Nevada, but currently there were no existing tools, techniques or models to conduct reliable, real-time water forecasts in the western part of the country.

Mark Poling

Mark Poling is a member of the 2017-2018 Board of Trustees for the Water Environment Federation (WEF), an international organization of water quality professionals headquartered in Alexandria, Va.

Mark is the business operations director for Clean Water Services, the public wastewater and stormwater utility serving Washington County, Oregon.

A member of the Pacific Northwest Clean Water Association, Mark served as the 2012-2013 President. Mark is a leader within the utility management project of the WEF-WE&RF Leaders Innovation Forum for Technology (LIFT). He has served on WEF task forces, including those responsible for the development of operations training based on MOP 11: Operation of Water Resource Recovery Facilities and of the Water Reuse Roadmap.

Mark has more than 30 years of experience working for utilities, and has served in management for more than 20 years. He is a certified Group 4 operator and has a bachelor’s degree in natural resource management from Grand Valley State University, and a master’s degree in environmental engineering from the University of Washington.
Technical Program Agenda

All half-hour course segments within each session are worth .05 CECs, other than the Opening and Plenary Sessions which are given credits based on attendance at the entire session. Professional Development Hours (PDHs) will also be given for Professional Engineers.

Monday, June 25

**OPENING SESSION**

8:30-8:45  President’s Welcome  
Cheryl Vosburg, City of Marshall

8:45-9:15  WEF Address  
Mark Poling, WEF

Peter Cavagnaro, Johnson Controls, Inc.  
Brian Hannon, Moore & Bruggink Consulting Engineers

10:00-10:30  MDEQ Update  
Kelly Green, MDEQ

10:30-11:00  Leveraging Technology for Smart Water Management  
Branko Kerkez, University of Michigan

11:00-11:30  The Environment Report – Environmental Stories Worth Sharing  
Lindsey Smith, Michigan Public Radio

11:30-12:00  Annual Meeting and Election of Officers

**Session 1A: COLLECTION SYSTEMS**

1:00-1:30  Mission Impossible: Hunting Down I/I in Pontiac  
Elaine Venema, Fleis & VandenBrink  
Brian Bennett, Oakland County Water Resources Commissioner's Office

1:30-2:00  The Infrastructure Story Behind 800 New Jobs in Coldwater Michigan  
Jeff Brown, FTCCH

2:00-2:30  The Success of Inflow and Infiltration Removal in the City of Roosevelt Park  
Peter Brink, P.E., Prein&Newhof

2:30-3:00  Air/Vacuum Release Valves - A Neglected Maintenance Item - Establishing an Effective Preventative Maintenance Program  
Greg Tatara, Ph.D., MHOG Utility Department  
Tesha Humphriess, P.E., MHOG Utility Department

**Session 1B: STORMWATER**

1:00-1:30  Revitalization of a Historic Urban Park with Sustainable Stormwater Management  
Susan Rusinowski, Environmental Consulting & Technology, Inc.  
Tonya Lewandowski, Environmental Consulting & Technology, Inc.

1:30-2:00  Green Infrastructure Installation Techniques - Ann Arbor Waste Water Treatment Plant  
Leah Balogh, Arcadis  
Paul Bahn, Arcadis  
Christopher Engielt, City of Ann Arbor

2:00-2:30  Hiawatha Drain - County Drain or Habitat Restoration?  
Dana Burd, Prein&Newhof  
Joe Bush, Ottawa County Water Resources Commissioner

2:30-3:00  MDOT Stormwater BMPs - The Challenge of Design  
Janeen McDermott, AECOM

Tuesday, June 26

**Session 2A: HOT TOPICS**

8:30-9:00  Goin' Hog Wild - A Fast Paced Coldwater WRRF Expansion  
Kent Moeggenborg, Fishbeck, Thompson, Carr & Huber  
Jack Rafter, PE, Fishbeck, Thompson, Carr & Huber  
Jeff Budd, Coldwater Board of Public Utilities

9:00-9:30  Rethinking the Mechanism of Biological Phosphorus Removal  
James Barnard, Black & Veatch  
Steve Arant, Black & Veatch  
Patrick Dunlap, Black & Veatch

9:30-10:00  Making Compliance Cheaper for Local Government: The Michigan Municipal Wetland Alliance  
Stacy Hisong, Fahey Schultz Burzyn Rhodex, PLC  
Stephen Shine, State of Michigan Department of Natural Resources

10:15-10:45  Grand Rapids - Utility of the Future - What are they up to?  
Michael Lunn, City of Grand Rapids

10:45-11:15  Smarter Plant and Small Energy Bills: New Upgrades at the GCDC District 3 WRRF  
Andrew Dow, Donohue & Associates, Inc.  
Joe Perraud, Genesee County Drain Commissioner

11:15-11:45  A Comparison of Technologies for Hydrogen Sulfide Control from a Lengthy Force Main  
Lambrina Tercala, OHM Advisors  
Scott Martin, Scio Township

**Session 2B: WATERSHED**

8:30-9:00  Engineering Our Environment  
Lynne Seymour, Hubbell, Roth & Clark, Inc.

9:00-9:30  Grassroots Success Story through Leadership in the Kawkawlin River Watershed  
Tonya Lewandowski, Environmental Consulting & Technology, Inc.
9:30-10:00  Boardman Dam Removal and River Restoration - Lessons Learned from the Construction Site (and how they can help design) 
Dan DeVaun, AECOM
Troy Naperala, AECOM

10:15-10:45  The Impact of Habitat Alteration and Water Quality Stressors on Fish and Macroinvertebrates in an Urban Coldwater Stream 
Dan Myers, GVSU Aniss Water Resources Institute

10:45-11:15  Collaborative Stormwater Permitting in the Rouge River Watershed 
Annette DeMaria, Environmental Consulting & Technology, Inc.
Brandy Siedlaczek, City of Southfield
Jim Ridgway, Environmental Consulting & Technology, Inc.

Devan Rostorfer, Southeast Michigan Council of Governments (SEMCOG)
Kelly Karll, Southeast Michigan Council of Governments (SEMCOG)

Session 2C: ASSET MANAGEMENT
8:30-9:00  Asset Management: News from the Future 
Evan Pratt, Washtenaw County Water Resources

9:00-9:30  Regional Asset Management Pilot Program: 21st Century Infrastructure 
Kelly Karll, Southeast Michigan Council of Governments (SEMCOG)

9:30-10:00  Ensuring Infrastructure Optimization: Leveraging Data Analytics to Achieve Successful Asset Management 
Ryan Nagel, Hazen and Sawyer

10:15-10:45  Distilling Information from Asset Management Data 
Lindsey Kerkez, OHM Advisors

10:45-11:15  City of Wyoming - Using Asset Management to Support Workflow and Business Process Efficiency and Performance 
Craig Heisel, Donohue and Associates
Kate Erickson, City of Wyoming

11:15-11:45  Wastewater Asset Management - Unique Perspectives from the Municipality and Engineering Services Provider - Plymouth 
Alex Mattila, GHD
Matt Lamb, GHD
Gage Muckleroy, GHD
Patrick Fellrath, Charter Township of Plymouth

Session 3A: TREATMENT PROCESS & DESIGN
1:30-2:00  Sustainability Focused Facility Planning - A Community Specific Approach 
Nathan Cassity, Donohue & Associates, Inc.
Paul Stokes, City of East Lansing

2:00-2:30  Whole Plant Modeling of the Clinton River WRRF: Capacity Evaluation And Operational Optimization 
Jared Buzo, Oakland County WRC
Evangelina Belia, Primodal US Inc.

2:30-3:00  Oakland County - Clinton River WRF Screening Improvements Project 
Megan Fenstemaker, Duperon Corporation
Jared Buzo, Oakland County Water Resources

3:15-3:45  Ann Arbor Wastewater Treatment Plant Facilities Renovations: Building the Project Before Construction 
Rachel Daniel, Arcadis
Earl Kenzie, City of Ann Arbor
Tom Porter, Arcadis

3:45-4:15  South Haven WWTP Pump Station and Headworks 
Dennis Benoit, Hubbell, Roth & Clark, Inc.
Mike VanderPloeg, Hubbell, Roth & Clark, Inc.

Session 3B: SUSTAINABILITY & ENERGY MANAGEMENT
1:30-2:00  Munising, MI Leads the Way with Energy Efficiency, In Full Compliance with Permit & Saves Money 
Joh Kang, Tetra Tech
Tom Albaugh, PE, Independent Consultant

2:00-2:30  Achieving Energy Efficiencies through Capital Improvements at the Benton Harbor - St. Joseph WWTP 
Timothy Lynch, BHSJ WWTP

2:30-3:00  Energy Neutrality Achieved Through Codigestion 
Michael Maringer, Quasar Energy Group

3:15-3:45  Biosolids Management - The Perfect Storm 
Majid Khan, Great Lakes Water Authority
Dan Alford, Great Lakes Water Authority
Ed Hogan, Wade Trim
Beena Chackunkal, PE, Great Lakes Water Authority

3:45-4:15  Oakland County Unit Factor Assignment Study Updates 
Laura Gruzwalski, Johnson & Anderson, Inc.

Wednesday, June 27
PLENARY SESSION
8:30-8:45  President’s Welcome and Address 
Greg Kacvinsky, OHM Advisors

8:45-9:15  News From the Field 
Steve Aiken, Duperon

9:15-10:00  Dan Wolz Science Teacher Grant Winner 
Sarah Gerborkoff, Houghton Middle School

10:15-11:00  Internet of H2O Challenge: Tracking Water Quality in the Great Lakes 
Robert Czachorski, OHM Advisors

11:00-12:00  A History of the Treatment of Wastewater 
Dr. James Barnard, Black & Veatch

12:00  Conference Adjourns
Conference Registration Form

Registration Information
You can register and pay online at www.mi-wea.org or return completed form along with payment to:
MWEA
PO Box 397, Bath, MI 48808
Phone 517-641-7377
Fax 517-641-7388
mwea@mi-wea.org

- When completing form, please print or type.
- Each attendee must be registered.
- Return this entire form, along with payment for registration fees to MWEA.
- Make checks payable to MWEA.
- Name badges are required for ALL functions – no exceptions.
- Registration form and payment must be postmarked by May 17, 2018 to qualify for early registration rate.

Meals are included with your Boyne room registration.
Meals are not included as part of your conference registration fee.
If you are not staying at Boyne Mountain, meal tickets can be purchased at the hotel lobby when you arrive.

ADD-ON: Paddle With Purpose Sunday, June 24, 2018 (optional)
Select One
☐ No, I would not like to participate.
☐ Yes, and I need to rent a canoe (team of 2 paddlers) - add $90.00 USD
☐ Yes, and I need to rent a kayak (solo) - add $55.00 USD
☐ Yes, and I need to rent a kayak (2-person kayak) - add $100.00 USD
☐ Yes, but I will be bringing my own boat (cost is a donation to Water For People) - add $55.00 USD

Payment for Paddle With Purpose can be made separately from the attendee registration - please call MWEA to process.

Name_______________________________
Company/Employer_______________________________
Address_______________________________
City_________________ State__________ Zip_________________
Phone_________________________ WEF/MWEA Membership No._________________
Email______________________________

Special Requirements______________________________________________

Please print name(s) as you would like it to appear on the name badge(s):
Yourself_____________________________ Spouse/Guest_____________________________
Spouse/Guest Email __________________________

Children’s names and ages______________________________________________

Participating as: Check all that apply
☐ This is the 1st MWEA Annual Conference I have attended
☐ I am interested in volunteering/helping on-site at Annual Conference (MWEA will contact you with available opportunities)

Attending the Awards Luncheon on Tuesday, June 26th
☐ Yes, staying at Boyne and plan to attend
☐ Yes, but I’m not staying at Boyne and will buy a meal ticket
☐ No, I cannot attend the luncheon

Attending the Leadership Celebration Dinner on Tuesday, June 26th
☐ Yes, staying at Boyne and plan to attend
☐ Yes, but I’m not staying at Boyne and will buy a meal ticket
☐ No, I cannot attend the dinner

Registration Fees: Please check the appropriate rate(s).

<table>
<thead>
<tr>
<th>Full Conference</th>
<th>Member</th>
<th>Non-Member</th>
<th>Student/Retiree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early registration on or before 5/17/18</td>
<td>$325</td>
<td>$395</td>
<td>$100</td>
</tr>
<tr>
<td>Late registration after 5/17/18</td>
<td>$380</td>
<td>$450</td>
<td>$100</td>
</tr>
<tr>
<td>One day only</td>
<td>$215</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early registration on or before 5/17/18</td>
<td>$245</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Late registration after 5/17/18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which day do you plan to attend?

Speaker Rates:
Speakers receive a discount on attending the conference. See below for rates:
☐ Speaking Day Only ($0) ☐ Additional Day ($135) ☐ Full Conference ($245)

Which additional day do you plan to attend?

Method of Payment: Please check the appropriate box(es).

☐ Check Enclosed (make payable to MWEA)
☐ Charge to my: ☐ VISA ☐ MasterCard ☐ Discover ☐ American Express

Account #_________ Expiration Date_________

Name as it appears on Card______________________________
Billing Address of the Card______________________________
Signature______________________________________________
Boyne Mountain Registration Form

**Group Name:** Michigan Water Environment Association  
**Dates:** June 24-27, 2018

Reservations must be made utilizing this form and be received by May 24, 2018. Reservation requests received after this date will be taken on a space available basis at current room rates. When making travel arrangements, please note the check-in and check-out times are on the right side of this page with the room descriptions. Check-in and check-out takes place at the Mountain Grand Lodge Front Desk for all room types.

**Accommodations:** Please indicate your 1st and 2nd lodging preference below. If room type requested is not available, the next available room type and rate will be confirmed. We cannot guarantee specific rooms/units. All rooms are non smoking.

<table>
<thead>
<tr>
<th>Room Type</th>
<th>Single</th>
<th>Double</th>
<th>Indicate 1st &amp; 2nd Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clock Tower Deluxe</td>
<td>$219.81</td>
<td>$158.34</td>
<td></td>
</tr>
<tr>
<td>Boynehoff Suites</td>
<td>$219.81</td>
<td>$158.34</td>
<td></td>
</tr>
<tr>
<td>Mountain Grand Lodge - Parlor</td>
<td>$287.31</td>
<td>$158.34</td>
<td></td>
</tr>
<tr>
<td>Mountain Grand Lodge - Queen</td>
<td>$287.31</td>
<td>$158.34</td>
<td></td>
</tr>
<tr>
<td>Mountain Grand Lodge - King</td>
<td>$287.31</td>
<td>$158.34</td>
<td></td>
</tr>
<tr>
<td>Mountain Grand Lodge - Suite</td>
<td>$383.75</td>
<td>$240.30</td>
<td></td>
</tr>
<tr>
<td>Mountain Grand Lodge - 2 Bedroom Suite*</td>
<td>$444.02</td>
<td>$270.44</td>
<td></td>
</tr>
<tr>
<td>Mountain Grand Lodge - 3 Bedroom Suite*</td>
<td>$444.02</td>
<td>$270.44</td>
<td></td>
</tr>
</tbody>
</table>

Rates are based on the Full American Plan per person, per day, which includes lodging and three meals. The package begins with dinner on the day of arrival and ends with lunch on the day of departure. Rates also include taxes, resort fees and meal gratuities. Boyne Mountain Resort has a two-night minimum on weekends (Friday and Saturday night).

* Triple Occupancy rate for 2 & 3 Bedroom Suites is $212.58.  
* Quadraple Occupancy rate for 2 & 3 Bedroom Suites is $183.65.

**Please print:**

- Arrival Day/Date ___________________ Departure Day/Date ___________________
- Share with _________________________
- Number of Adults in Party: __________  Number of Children in Party: __________
- Ages of Children 18 & under ___________________
- Name ________________________________
- Company ______________________________
- Address ________________________________
- City/State/Zip _________________________
- Phone / Business: ____________________ Phone / Home ________________________
- *E-mail Address: ______________________
- *Room confirmations will be e-mailed within 48 hours of receipt of reservation.
- Boyne Rewards #: _____________________

**Special Requests:** ________________________  
**Boyne does its best to accommodate requests, but cannot guarantee them.**

**Payment Method:**

- [ ] Check Enclosed $ __________
- [ ] American Express  [ ] VISA  [ ] MasterCard  [ ] Discover
- Credit Card #: __________________________ Expiration Date __________
- Signature __________________________ Security Code __________

All reservations must be guaranteed by check or credit card deposit. Credit card imprint is required at check-in for all guests.
MWEA Annual Conference Golf Event

Sunday, June 24, 2018
Golf Scramble, $110 per person

Sunday Golf Outing
This year’s MWEA Annual Golf Outing will take place on Sunday, June 24, with a shotgun start at 11:00am on The Alpine at Boyne Mountain. As always, the event will be a scramble format with prizes awarded to the winning teams. In addition, there will be special prizes for the longest drive and closest to the pin. Pre-payment is required. The cost for this event is $110 per person which includes a golf cart. If you have already checked in at the hotel and received your meal tickets, you may use one of the tickets to pay for lunch at the golf course. Check in at the pro shop no later than 10:00am. Registration is on a first-come, first-serve basis. Space is limited, so register early.

Fireman’s Rope
We will once again be offering each foursome the opportunity to purchase a ‘fireman’s rope’ for $20. These must be purchased the day of the event, prior to the start. Proceeds from the rope sale are contributed to MWEA scholarships.

Sunday Golf Scramble Registration
Please register the following person(s) for the ‘Sunday Golf’ event. $110 per person is due at the time of registration.

1. _______________________________________ email:_____________________________
2. _______________________________________ email:_____________________________
3. _______________________________________ email:_____________________________
4. _______________________________________ email:_____________________________

If you would like to sponsor a hole, please check this box ($125/hole)
I understand the event is a scramble format beginning at 11:00am and we are required to check in by 10:00am.

Name:
Address:
Phone:

*Note: Individual golfers and partial groups will be paired to complete ‘foursomes’ as available.

Mail completed forms to: MWEA • P.O. Box 397 • Bath, MI 48808
517-641-7377 • Fax: 517-641-7388 • E-mail: mwea@mi-wea.org

☐ Check (enclosed)   ☐ Visa   ☐ MasterCard   ☐ American Express
Credit Card Number: ___________________________ Expiration Date: ____________
Name as it appears on the credit card:
Billing Address:
Signature: ___________________________
Conference Sponsor Form

Register ONLINE at www.mi-wea.org or fill out the information below and fax to 517-641-7388.

Make the most of your company’s investment by participating as a Conference Sponsor. Conference Sponsors provide an invaluable service to the MWEA by supporting the learning and networking opportunities of the association. MWEA recognizes its sponsors in various ways depending on the level of support.

Register ONLINE at www.mi-wea.org or fill out the information below and fax to 517-641-7388.

MWEA ANNUAL CONFERENCE SPONSORSHIP OPPORTUNITIES

| Name/Logo displayed on a Sign Board at Conference | Superior | Michigan | Huron | Erie | Ontario |
| Number of slides on Power Point | $2,000 | $1,500 | $1,000 | $800 | $600 |
| Loop played during Conference | ✓ | ✓ | ✓ | ✓ | ✓ |
| Name/Logo printed in the Daily Program Guide | 6 | 5 | 4 | 3 | 2 |
| Name/Logo in MWEA Matters Magazine Conference Recap Edition | ✓ | ✓ | ✓ | ✓ | ✓ |
| "NEW for 2018" Name/Logo and contact info on the Conference App | ✓ | ✓ | ✓ | ✓ | ✓ |
| Name/Logo on the MWEA Website Conference Page | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1 Full Attendee Conference Registration | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1 Awards Banquet Ticket | ✓ | ✓ | ✓ | ✓ | ✓ |
| Name/Logo on Conference Journal – available until May 4th | ✓ | ✓ | ✓ | ✓ | ✓ |
| Name/Logo on the homepage of the MWEA Webpage | ✓ | ✓ | ✓ | ✓ | ✓ |
| Signage and Verbal Recognition at Awards Luncheon/Banquet | ✓ | ✓ | ✓ | ✓ | ✓ |
| One golf hole sponsorship for Sunday’s Conference Golf Outing | ✓ | ✓ | ✓ | ✓ | ✓ |

Please Note:
• Size of Name/Logo increases with level of sponsorship
• Conference Brochure is mailed to over 2,000 people
• Conference Journal is given to all conference attendees, speakers and vendors

Sponsorship Level:
☐ Ontario  ☐ Erie  ☐ Huron  ☐ Michigan  ☐ Superior

ADD-ON options to any of the above levels:
☐ $125 - Golf Scramble Hole Sponsor (Sunday)
☐ $150 - Bonfire Sponsor (Monday evening)
☐ $150 - Beer/Wine Tasting Event Sponsor (Tuesday)
☐ $200 - Snack/Beverage Table Sponsor (during Technical Session Breaks)
This represents a contract between the Michigan Water Environment Association and the following company:

Company: ________________________________________________________________
Contact Name: __________________________________________________________
Address: _______________________________________________________________
Phone Number: ___________________________ Fax: _________________________
E-Mail: _________________________________________________________________
☐ Check (enclosed)  ☐ Visa  ☐ MasterCard  ☐ American Express
Credit Card Number: ___________________________ Expiration Date: ___________
Name as it appears on the credit card: ______________________________________
Billing Address: _________________________________________________________
Signature: ______________________________________________________________

Mail Sponsor Contract along with payment, an electronic version of your logo or your PowerPoint slide(s) to: MWEA PO Box 397 Bath, MI 48808 – (fax) 517 641-7388 – (e-mail) mwea@mi-wea.org. You can also register online at www.mi-wea.org.
Register ONLINE at www.mi-wea.org or fill out the information below and fax to 517-641-7388.

Company: ____________________________________________
Contact Name: ___________________________ Title: ___________________________
Mailing Address: _________________________________________________________
City, State, Zip: __________________________________________________________
Phone Number: ___________________________ Fax: ____________________________
E-Mail: __________________________________________________________________
Brief description of product or service: _______________________________________

What’s Included
The Exhibit Fee includes standard booth equipment (see below). It DOES NOT include the meal on exhibit night. If you are staying overnight at Boyne Mountain, you will receive meal tickets when you check-in. If you are not staying at Boyne Mountain, you can purchase exhibit night meal ticket(s) at the hotel registration desk when you arrive.

Booth Equipment
- 8’ x 10’ Exhibit Booth space
- Exhibit booth draping with 8’ high backs and 3’ high sides
- One covered and skirted 2’ x 6’ display table
- Two chairs and One waste basket
- **Electrical Outlet – only if you selected YES and paid the additional fee

For details on modifications to the Standard Booth Equipment, go to the conference page on the MWEA Website.

Exhibit Registration
Cost to Exhibit in Main area within Civic Center (see map at www.mi-wea.org)
$590 x _____ (# of booths) paid in full through May 11, 2018
$690 x _____ (# of booths) paid in full after May 11, 2018

Cost to Exhibit Outside
Exhibits/equipment will be placed outside the Entrance of the Civic Center
$1200 x _____ Includes Outside Exhibit of equipment from Sun. June 24 - Wed. June 27

Additional Charges
Number of Additional Exhibitors at your booth _____@ $30 each (list their names below)
Electric in booth (circle): _____ $10 for 110-volt _____ $20 for 220-volt

Exhibitor Names
The Exhibit Fee includes registration for one individual for Monday Night Exhibits. It does not include General Conference, lodging, meals, or other activities. The charge for additional exhibitors at your booth is $30 each. Fill in the names of your representatives as they should appear on their name badge:

Name: ___________________________ ($30)
Name: ___________________________ ($30)
Name: ___________________________ ($30)

If you need additional equipment or services, you can download order forms using the following procedures:
- Go to the following website: www.artcraftdisplay.com
- Click on: “Get Exhibitor Kit”
- Enter Event Code: 282542
Advance order deadline is Tuesday, June 12, 2018, 5:00pm

Meals are NOT INCLUDED in the exhibit fee.
Total Amount Due

Total Due For Exhibit Booth(s) $ ______________________
Total Due For Extra Exhibitors $ ______________________
Total Due For Electric $ ______________________

Grand Total Due For Booth(s), Extra Exhibitors and Electric $ ______________________

Agreement
I hereby contract to participate in the 2018 MWEA Annual Conference Exhibit Night and agree to pay the appropriate Exhibit fee, as explained above. I agree to all of the terms of the “Liability and Responsibility Clause” which is a part of this contract. I realize that meals ARE NOT included in the exhibit fee.

Authorized by: ___________________________ Company: ___________________________

Signature: ___________________________ Date: ___________________________

Method Of Payment
☐ Check (payable to MWEA) Amount: $ _______ Check #: ______________________

☐ Charge my: ☐ Visa ☐ MasterCard ☐ American Express Amount: $__________

Credit Card Number: ___________________________
Expiration Date: ___________________________

Credit Card Billing Address: ___________________________

Daytime Phone: ___________________________

Signature: ___________________________

Liability and Responsibility
In signing the Exhibitor’s Contract, the Exhibitor agrees to assume total responsibility and liability for losses, damages, and claims arising out of injury or damage to exhibitor’s displays, equipment, and other property brought upon the premises of the exhibit site; and shall indemnify and hold harmless the MWEA and the conference site host facility and the agents, servants, and employees of each organization, for any and all such losses, damages, and claims.

MWEA abides by all the music licensing organizations’ (ASCAP, BMI, etc.) requirements. You are responsible for securing the appropriate license(s), for any and all music played at your booth during the vendor show.

Signature: ___________________________

Setup Times & Exhibit Hours
Setup Times: You will be notified of your setup time.
Booth Exhibit Time: Monday, June 24 from 5pm – 8:30pm
Outdoor Exhibit Days: Sunday – Wednesday, June 24-27.

Exhibit Theme - Disney
Each year a theme is chosen for Exhibit Night. This year’s theme is “Disney.” Decorate your booth and dress as your favorite Disney character! Attendees will be asked to vote for the booth that best illustrates the theme. The winning booth will receive $100 off the price of their booth for the 2019 MWEA Annual Conference.
From DETROIT, MI
Take I-75 North (230 miles)
At Gaylord turn off onto 32 West (12 miles)
Turn right onto 131 North
Travel North 7 miles turn left onto Boyne Mountain Rd.
End at One Boyne Mountain Road

From LANSING, MI
Take US127 North (140 miles)
Merge onto I-75 North (32 miles)
At Gaylord turn off onto 32 West (12 miles)
Turn right onto 131 North
Travel North 7 miles turn left onto Boyne Mountain Rd.
End at One Boyne Mountain Road

From GRAND RAPIDS, MI
Take US131 North (170 miles)
Turn left onto Boyne Mountain Road
End at One Boyne Mountain Road

From TRAVERSE CITY, MI
Travel West on M-72 (17.1 mi)
Turn LEFT (North) on US-131 (34.6 mi)
Turn Left on Boyne Mountain Rd. (7 miles North of M-32)
End at One Boyne Mountain Road

Boyne USA, Inc.
P.O. Box 19, Boyne Falls, MI 49713
Fax: (231) 549-6844
Phone: 1-800-GO-BOYNE

Michigan Water Environment Association
PO Box 397, Bath, MI 48808
Phone: 517-641-7377
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E-mail: mwea@mi-wea.org