Ohio Water Environment Association Volume 91:1 | Issue 1 2018

# DUCKEYE Uletin

Black River Watershed Read More Inside pg. 60-62



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The ideas, opinions, concepts, and procedures expressed in this publication are those of the individual authors and not necessarily those of the Ohio Water Environment Association, its officers, general membership, or staff.

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#### Photos in this issue provided by:

Cover Photo - provided by Chip Wendt, Coldwater Consulting.. Other photos WikiCommons, OWEA Section and Committee photographers, article contributors, advertisers, Mike Welke, and Megan Borror (list not all inclusive).

#### **Contact Hour Information:**

OWEA training is submitted for contact hour approval. Free Webinars are not submitted for contact hour approval at this time.

#### **Article Deadlines:**

1st day of January, April, July, and October

**Publication Dates:** 

Spring, Summer, Fall, and Winter

#### **Photo Requirements:**

Please contact the OWEA office regarding photo requirements for covers and articles.

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#### Water Environment Federation

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The Buckeye Bulletin is published four times per year by the Ohio Water Environment Association. Individual subscriptions included with association membership.

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Get Involved - Join a Committee Today

Contact OWEA at *info@ohiowea.org* or the chair of a committee that interests you for more information.

## **OWEA NEWS**

OWEA is excited to announce new Executive Administrator, Dawn Sink Kennedy. Read more about her on page 7.

## **Career Opportunities**

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\$170 for a 30 day posting if not a member.

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27-30 One Water Technical Conference & Expo

**OWEA** Calendar

**One Water Government Affairs** 

**OWEA Collection Systems Workshop** 

March

8

May

August

17

Are you a social media guru? Find out how you can become part of OWEA's social media team. Email us at *info@ohiowea.org* 

## **Welcome New Members**

October 2017 - December 2017

Cody Allison Brandon Averill Robert Billy Stephanie Booher Lorie Brengelman R. Tony Burgoyne Donald Captain John Capuano Joseph Danyluk Sarah Disario Johnston Duffey Walt Erndt Michael Fox David Fraley Norman Gadzinski Vanessa Glotfelter Sviatlana Haubner Diana Heitmeyer Cynthia Hengeli Lowell Howard Roger Jacobsen Paul Joseph Effram Kaplan Patrick Ludwig John Mackeigan Robert Malherek Louis McFarland Jessica McGrain Alyssa Miller Zachary Neuhart Katie Norris Alex Pantages Janet Popielski Alyssa Ramsey Gene Rigby Brian Roberts Jamie Schnuth Sam Schroeder James Shamrock Charles Shasho Alexandra Slawinski Angela Smith Erin Stefek Justin Waid Kevin Wood

Thank you for joining the Ohio Water Environment Association and the Water Environment Federation. We welcome your contribution to preserving and enhancing Ohio's water quality environment.

Visit http://www.ohiowea.org/memberships.php for OWEA membership information

## President's Message

## TO HELL WITH NEW YEARS RESOLUTIONS

In a blink, it's my 3rd Buckeye Bulletin and for me, my time as President is now waning (like the moon I guess). However, there's still a bit of time left and I promise I'll make the most of it.

Wondering about the tag line? I've never been a fan of New Year's resolutions. In the US alone, annual gym and health club revenues are close to \$22B. General statistics also show that volume of activity in health clubs increases 33 to 50% in January with a rapid drop off in February each year (go figure). When I use to work



Jamie Gellner OWEA President

out in a gym, I remember how crowded it would be in January and then my relief in February. About half of us make resolutions, and about half of those that do actually keep them (*www.statisticsbrain.com*). By the way, I work out at home now and I would label myself as somewhat obsessed with working out every day (you wouldn't know that by my appearance – HA!)

While I'm not a fan of New Year's Resolutions, I am a fan of establishing goals and continually working toward those goals. So maybe you could say these are resolutions that are continuous throughout the year, rather than made once per year, only to be kept / followed for a brief period. A compelling statistic is that people who explicitly make resolutions are 10 times more likely to achieve them (*www. statisticbrain.com*). I'll extrapolate this to the importance of establishing goals and to also say that it should be a continual process, both in your personal life and in your

> Jamie is a Vice President with Hazen and Sawyer, based in Cincinnati (and Cleveland). Jamie is a registered PE in Ohio and specializes in wastewater treatment plant planning and design. He has a Bachelors degree in Civil Engineering from West Virginia University and a Masters degree in Environmental Engineering from Michigan State University. He and wife Lili have five children, ranging in age from 5 to 14. In his "free" time, he enjoys family camping trips and fitness.

professional life.

The same is true for OWEA. In order for us to continually grow and improve, we must continue to develop goals and objectives. Goal setting is easy, thoughtful ones a little more involved – and achieving is all about sweat equity. I'll take this opportunity to acknowledge all of you who put in that sweat equity – that's a crucial part of who we are as an organization and who / what OWEA will be in the future. Thanks again for your involvement in OWEA and for your continued efforts to

improve the organization.

We're moving on from the setbacks we've mentioned in previous communications......In our last Buckeye Bulletin, I mentioned that operators now had access to all of their contact hours in e-biz. As of this Buckeye Bulletin, we are working with OEPA to officially close the contact hour issue. I wanted to extend thanks on behalf of OWEA to OEPA for working with us to quickly resolve this issue. We're also close to a complete overhaul of our financial monitoring system – modifications that will enhance our ability to monitor and make meaningful financial decisions moving forward.

I'm also pleased to announce our hiring of Dawn Kennedy as our new Executive Administrator (see also OWEA's Office Offerings in this issue). Dawn's hiring came after consideration of over 25 highly qualified applicants we identified. Dawn brings a wealth of nonprofit association experience and a high level of energy to this position and our organization – Welcome Dawn! If you have not already, you will quickly see the energy and talent that Dawn brings (and those who follow social media closely are already seeing this I'm sure)

So now onto those items I mentioned in my first President's message (yes – I'm forcing you to go back and review old issues for more details).....**SERVICE, SUSTAINABILITY, RELEVANCE, CULTURE**.....and here's to continual improvement of OWEA both now and into the future!

As always, don't hesitate to contact me if you have any thoughts / questions / comments at *jgellner@hazenandsawyer.com*.

## 2018 Executive Committee Meeting Dates

April 11, 2018

**OWEA Office** 



Curious about this new edition in the Buckeye Bulletin? Trying to figure out who Dawn Kennedy is? Well, I am OWEA's new Executive Administrator and this new article in the Buckeye Bulletin is to help our members be better connected to the OWEA office.

I am very excited to join the OWEA team and for the opportunity to serve the 2,000 plus OWEA members. I bring more than fifteen years of nonprofit/association experience as well as a corporate retail marketing background. I obtained my Certified Association Executive (CAE) designation in 2004. This designation distinguishes association professionals who demonstrate the knowledge essential to the practice of association management in a variety of areas including: leadership; membership; finance; strategic, legal and risk management; professional development and marketing. It would be similar to having your PE in engineering. I have worked for a variety of associations from construction to

healthcare, serving in positions ranging from Director of Education & Events to Executive Director.

Megan Borror and Chelsea Cameron are still keeping things running smoothly at OWEA, so there's a familiar voice on the line when you call, but you now have one more person to reach out to.

Now enough about me. Let's talk about YOUR association. One of my goals is to help OWEA go the next level. To become the association YOU want and need. I am working with the Executive Committee to propel the association forward with additional training opportunities, more interactions with the sections, a larger social media presence and long range planning that ensures the future of the water treatment industry and this association.

So what does that mean for YOU? It means you will start receiving additional communication from OWEA in a form that works for YOU. Whether it's through email updates, tweets, FB or LinkedIn we want you to know what's happening here. You can't make the most of your membership if you don't know what's going on.

It also means that you might hear from me or see me, Chelsea or Megan at your section events. We want to be more than a voice on the phone or someone answering an email. We want to see OWEA members in their backyard and we want to hear from you on what YOU need from OWEA.

And finally, it means we need something from you...but I promise it's easy! I am asking you to take a moment and



make sure you are following us on Twitter via @Ohio\_WEA, linked to us on LinkedIn and like us on Facebook. Most importantly if you haven't seen an email from us in a while, please make sure that *info@ohiowea.org* is on your approved senders list!

I can't wait to see where OWEA will go this year. We are growing and changing, all to better serve YOU. If you have an idea or just want to chat about the association, please call me at the office or email me at *dawn@ohiowea.org*.

# DAWN SINK KENNEDY, CAE, EXECUTIVE ADMINISTRATOR

www.ohiowea.org

## **Refining Our Image**

by Dale E. Kocarek, P.E., BCEE, Past President 2010-2011

#### **50 Years Ago**

While Issue 1 of the 2018 Buckeye Bulletin will be published after New Year's Day, I want to take the time to wish you a Happy New Year. I hope that 2018 is happy, healthy, and prosperous for all of you. It has gotten off to



a very cold start.

The year 1968 was an important year in American History. The events started with the Tet Offensive in Vietnam on January 30th and ended with the election of 1968. It was a pivotal time in our history and a public awakening to the state of affairs in America, the world,

Cuyahoga River Fire in 1969

and our environment. The environmental movement was reinforced by the burning of the Cuyahoga River on June 22, 1969. This was a galvanizing moment in our nation's history, and led to the signing of the Clean Water Act into law on October 18, 1972.

#### **New Logo**

One aspect that I have observed about OWEA during my tenure on the Board was a greater self-awareness of who we are, and what we want to become. We have ambitious goals. Approximately ten years ago, OWEA decided that we were, collectively as a body including committees and sections, good at what we did, but we were "preaching our message to the choir." If we wanted to take on a greater role of educating the public, beyond school age children, and achieve a greater sphere of influence, we had to evolve and develop a message that could be understood by both the general public and elected officials.

Like all organizations, OWEA wanted to do a "branding refresh" with a new logo. This logo, which was first seen in the most recent issue of the Buckeye Bulletin, is like the old one, but includes more color.



The tagline for our new logo is education, preservation, dedicated to your water environment. While this tag line does a good job in saying who OWEA is, it does not tell the complete story and what aspects differentiate OWEA from other organizations.

#### Parable of the Blind Men and the Elephant

The diversity and complexity of our organization reminds me of the ancient parable of the Blind Men and the



Elephant. The parable is famous and found in Buddhist and Hindu texts. Each man is blindfolded and allowed to feel one part of the elephant and then forms opinions on the type and size of animal they were examining. As the story goes, one man feels the trunk and thinks he is examining a snake. Another man while feeling the leg, thinks it is a tree stump, while another while feeling the tail, thinks he is examining a mouse. The intent of the parable is to discuss the limits of human perception and the risk of jumping to conclusions based on the lack of complete knowledge.

While this parable borders on hyperbole, many look at OWEA and see only parts of the organization. For example, few understand the regularity of ongoing discussion that the State Board has with WEF, particularly when we are working on joint events such as conferences or WEFMAX (WEF-MA- Exchange) meetings.

#### Who Are We?

OWEA is a complex organization. While our tag line states that we provide education, it does not explain the complete universe of all that OWEA does and stands for. In addition to our root identity, our relationship with the Water Environment Federation (WEF) can be challenging to understand. OWEA is not a "branch or department" of WEF. Rather OWEA is its own organization, who through its rules and regulations, status as a 501-c-3 organization and adherence to a common purpose, is affiliated with WEF. The best example from American History was the



way by which the United States was governed from 1776 to 1787, through the Articles of Confederation and Perpetual Union.

Another example of how WEF and the Member Associations relate is the United Nations. While the United Nations has a leadership structure akin to WEF, each member nation is essential to its function and viability.

With this said, I want to take

a moment to say that WEF is a high quality professionally run organization. They are helpful, approachable, and committed to helping member associations in many ways including sharing information, and providing instruction on issues of management and governance. WEF works with member associates as partners. They get as much from us, as we get from them. It is a good marriage.

OWEA has a diverse membership with members with many educational backgrounds and vocations including operations, utilities management, consulting engineering, teaching, law, and regulatory agencies. We also have members in each generational group ranging from the Traditionalists, and Baby Boomers to Generation X and Millennials. In past conversations with the public, I have been challenged to summarize our root identity in a few simple words.

The understanding of OWEA is also complicated by the vibrancy of our four sections, which are quasi unique. OWEA is unique among the different Member Associates (MA's) in the United States and Canada. While many MA's have sections, most are not active. In contrast, OWEA's sections are very active. For some members, their sole experience of OWEA is through their home section.

#### **Position Statement**

So, in closing, I hope that you appreciate the multiple facets of OWEA, and how we seek to serve the needs of a diverse membership. We also hope to do a better job in the future to take our core message to the public to tell the story of how OWEA is an advocate for the water environment.

Therefore, as we move forward as a body, it is important to craft what our positions are. Attention spans are short. This requires our position statements to be accurate and comprehensive, but also concise. If you have any thoughts on this, I would like to hear from you.

Until my next article, stay warm!





Tom Fishbaugh



Dale Kocarek



Ted Baker

The WEF House of Delegates (HOD) and Board of Trustees had its mid-year meeting February 7-9, 2018 in Atlanta. While not normally attended by most on the WEF HOD. Committee Chairs and those on the Board are required to attend. Midyear is a set of working meetings. Much gets done as the number of participants is much smaller than The following is a at WEFTEC. summary of work activities being undertaken by the HOD through its Speaker Aimee Killeen. Many of the notes presented below were modified from Aimee's report to the Board, so our appreciation is extended to her and Kelsey Hurst of WEF.

The HOD Steering Committee is essentially the management clearing house for the HOD. This Committee is led by Aimee Killeen. Each year, activities are tailored to meet needs and challenges of WEF. Based on these discussions the HOD Policies and Procedures will likely undergo some minor updates for you to approve at WEFTEC 2018, a dashboard type system is being tested for possible replacement of separate agendas, minutes and quarterly reports, and a mentoring program is in the works to ensure an effective transition and onboarding for new delegates.

The HOD **Nominating Committee** had early work to do this year in finding a replacement delegate for the WEFTEC Advisory Committee. Thanks, and congratulations to Dale Kocarek for filling that position for the HOD for the upcoming year. The real work for Todd Boling and the committee will get into full swing very soon as nomination season is quickly approaching. The HOD **WEFMAX Committee** is a well-oiled machine. Dianne, Doug and the rest of the group are planning a great program focusing on membership, engagement and workforce development for each of the four WEFMAX's this spring. The WEFMAX experience is truly exceptional and invigorating. OWEA EC members will again be attending each WEFMAX event.

The HOD **Outreach Committee** led by Eric Lynne, is playing a crucial role in HOD discussions as related to improving communication potential and pathways not only within the HOD, but from the Delegate to the MA and back from the MA to WEF. They are pulling together resources and templates for Delegates to utilize with the intent of make communications more simple and timely.

The HOD **Budget Committee** is busy preparing for a sit down at the Mid-Year Meeting with WEF staff, WEF Treasurer Jamie Eichenberger, and CLC Leadership to review the WEF budget and ensure it aligns with Strategic and Business Plans as well as WEF's critical objectives. Rob Coleman and the group plan for discussions at Mid-Year to be communicated out to all Delegates at WEFMAX.

Ted Baker and the **Membership Relations Workgroup** decided early on to divide and conquer their activities, goals and deliverables for the year. One sub-group is working closely with WEF staff Alison Heron to evaluate and communicate information related to the WEFTEC Membership Initiative. The other two sub-groups are working with WEF staff and the WEF Treasurer on providing messaging and tools for Delegates and MA's to utilize in communicating the recently developed Membership Dues Strategy. Tools will include talking points for Delegates to communicate the Strategy to MA Leadership as well as templates for communicating a dues increase to the MA Leadership and all members in the event WEF dues are changed in the future.

The **Operator's Initiative Workgroup** is a true representation of the great work that can be accomplished when volunteers from throughout the WEF organization come together to accomplish such worthy and needed tasks. With representation and guidance from the Board, WEF Staff, CLC, and Operator Advisory Panel (OAP), this group is supporting the undertaking of an Operator Census nationwide, identifying and developing tools and resources to advance Operator Programs, and partnering with the OAP to deliver operator content at each of the four WEFMAX meetings this spring. Todd Wibright and this group certainly deserve recognition for opening their meetings to HOD "outsiders" thus ensuring that their work is productive, meaningful and not duplicative of other WEF efforts.

Similarly, the **Student Chapter Workgroup**, led by Kari Brisolara, has worked closely with the Students and Young Professional Committee (SYPC) to further HOD and MA work as related to Student Chapters across the U.S. This workgroup is quickly realizing the numerous complexities associated with Student Chapter requirements and needs, not only within WEF but within each individual university. After much discussion, internally and with the SYPC, this group has realized that taking a step back to better understand and define the universe of active WEF Student Chapters will enhance their ability to identify Student Chapter needs and provide the necessary tools and resources later in the year.

The WEF Nominating Committee is also undertaking a review of the WEF Board itself. How do we ensure the Board represents the entire WEF Membership? Is the WEF Board composed of the right number of people? Are we actively developing rock star volunteers to become the Board of the future?

The Board and WEF Staff are also evaluating various membership models for non-profit organizations and federations across the globe. Questions such as, what is a member, what is a volunteer, what is a customer, and how do we serve these different groups are being asked. Is the current membership model the best option for WEF? Is our model representative of our different water sectors? Is there another model out there that better optimizes how WEF serves its members and MA's? I am eagerly looking forward to continued discussion on this topic.

One of the more exciting items the Board has recently initiated is the re-launch of the Water's Worth It campaign. WEF has made commitment to re-launching ล this grass roots campaign and communication strategy with a multi-year commitment. The kick-off is planned for WEFTEC 2018, with information and materials to be rolled out to MA's shortly before. Be on the lookout for updated information on Water's Worth It at WEFMAX and in your inbox.



The third Delegate position, currently held by Tom Fishbaugh, will become available this fall at WEFTEC. The Executive Committee will be appointing someone to that position at the June Executive Committee meeting.

This is a three year term including four WEFTECs. You are expected to attend the four WEFTECs and WEFMAXs during your term. You are the communication link between OhioWEA and WEF. You are expected to serve on two House of Delegates committees and assist fellow Delegates with an article in each Buckeye Bulletin.

## Send your letter of interest and intent to

Michael Frommer at *mfrommer@co.delaware.oh.us* by June 1, 2018. It is always a good idea to make sure you have your employer's endorsement. If you have any questions, contact Dale, Ted or Tom.





Walter Ariss, President

Believe it or not spring is just around the corner here in northern Ohio. I would like to thank all of our section committees for the great events put on in 2017 and we are looking forward to an exciting 2018. Our first event for the year is the annual Northwest Section 5S breakfast. It was held on February 26 at a local restaurant in Bowling Green. Welcome to our newest section 5S member, Albert Zamora, who was inducted at the 2017 annual conference in Cincinnati. Albert received the honorary Northwest Section 5S shovel at our section meeting last fall in Fremont. (picture below) Albert Zamora on the left and Dan Wickard, his inductor to 5S on the right.

Everyone in the section should have received notification of two great ways to get free attendance to the One Water Conference coming up this year in Columbus with AWWA and OWEA. Information was sent out for both an awesome operator award and for a YP paper competition. Please contact anyone on the section EC for information regarding these opportunities. The selected person for these competitions will receive at least a one day conference registration as well as at least one room night lodging in Columbus.

Our resident operations challenge team, made up of employees from the Northwest Water and Sewer District, are preparing for another run at the state title at the One Water conference and hopefully another trip to WEFTEC this year in New Orleans. If your utility is interested in putting a team together please contact our Plant Operations committee co-chairs Joe Tillison from Bowling Green and Todd Saums from the Northwest Water and Sewer District. They can provide some information and resources to get you started. Spring is a great time to get started on learning the events and getting prepared to compete.

Keep an eye out for information for two new events that the section is hosting this year; a rain barrel give away and a stream clean up coordinated by our Watershed Committee.

Walter Ariss, Northwest Section President





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Kris Ruggles, President

First off, Dawn Kennedy: Welcome to OWEA! I am sure many of you have heard or seen through emails by now that OWEA has added Dawn Kennedy as our new Executive Administrator. I recently had the pleasure of meeting Dawn at our SEOWEA Executive Committee meeting, which we hold monthly at the OWEA office in Columbus. Dawn came in, introduced herself, and started by saying to our group, "Thank you for volunteering!". This is an important point.

The busyness of work, life, and family obligations put us in a channel of task completion that is seemingly endless and can, at times, seem overwhelming. Many of our readers, are volunteers for OWEA at the section and state level, and many more at the national WEF level. In addition to OWEA/WEF, many of you volunteer for schools, church groups, and many other professional organizations. Without self-promotion or want for accolades, volunteers work just as hard at the nonprofits as at their careers, for the goal of a greater good that drives the cause they rally for. Those with a sense of service often put volunteerism into their life budget of time, and make it "part of their job". Because these (OWEA) volunteers go about the business of volunteering so matter of fact, it is often easily lost on others that our volunteers are not employees kept here by a salary, benefits, and a pension plan. Volunteers have no contract and are not bound to volunteerism by any fiscal ties, other than a self-generated sense of duty. Without volunteers, many non-profits and worthy causes would simply cease to exist, if monetary compensation and profit were the only driver for the existence of organizations. Volunteers are special people that share a vision of a greater good and OWEA is full of these heroes of time commitment.



Taking Dawn's lead, I'd just like to take this opportunity to thank all of our volunteers at the sections and state for making this such a great organization promoting the wastewater profession and industry. Especially the Southeast Section EC:

Past President and State Delegate, Brandon Fox; Past President, John Owen; Past President and State EC President Elect, Fred Smith; First VP, Brenda VanCleave; Second VP, Chris Tarr; Secretary, Tiffany Maag; Treasurer (and One Water co-chair), Melodi Clark; Third Year Director, Josh Holton; 2nd Year Director, Nathan Coey; First Year Director, Amy Eberhart.

The work our volunteers do is important, and it is not acknowledged often enough. When you are at a section meeting and see executive committee members or at the One Water conference this summer, and you see a

volunteer, please thank them for making our organization what it is.

As we crack through the cold of the winter, we have some fantastic events and opportunities for contact hours and PDH's coming up this spring. Please join us for the April 12th Plant Ops and Collections meeting. There will be no classroom learning,



only a business meeting lunch and Four Plant Tours! We will be visiting south central Ohio along the US 23 corridor making rounds to Circleville, Chillicothe, South Bloomfield, and Ashville.

May 10th will be our Safety/Regulatory/Biosolids/ Awards/Officer Elections/Past Presidents luncheon. Brandon Fox is helping to coordinate some tours with the City of Columbus of recent Plant and Tunnel Projects.

And finally, on Friday evening, May 18th we will be having our annual Friends and Family event at a Columbus Clippers baseball game. Tickets will be \$15 and

include food and beverages. We have had great success the last several years reviving this program to get together around a sporting event, and with any luck, it will be a great night for spring weather as we head into summer.

Please feel free to reach out to me at any time to volunteer or if you have interest in holding a committee chair or being part of the SE Section executive committee.



## Section Reports



Kathy Richards, President

Well, it seems that after a few years of relatively moderate winters, Ohio is one of many states that have been targeted with some pretty brutal temperatures and mixed precipitation events. At least those of us with some history with snow, ice and the dreaded wintry mix are well versed in layered clothing, kitty-litter in the trunk and community action to assist neighbors. We here in the primary & secondary snowbelts send our warmest wishes to those of our compatriots dealing with these and other weather-related issues.

NES held a Supervisors Seminar in the fall that ended with a directed roundtable discussion amongst the audience and some of our industry leaders. The final question posed was "What one action should you take now to ensure adequate funding and staff resources for clean water in the future"? I returned yesterday from the Association of Boards of Certification Conference where that question was also at the forefront. Everyone is (correctly) concerned about funding and staffing. I would like to take a moment to ask you to consider where the true effort should be focused in order to accomplish the necessary goal of obtaining adequate financial support.

In my mind, everything is underscored by education; education of our legislatures, education of our workforce, education of our ratepayers, education of regulators and even education of our friends in the environmental activism arena. Until the intrinsic significance of our work is understood, finding adequate funding to continue to excel in our efforts to provide exceptional value will be an uphill battle. Coming into this field a mere 14 years ago, following a career in the private sector, I was absolutely ignorant of the time, knowledge, engineering, analytics, insight and 'pressure of the moment' that is the day-to-day reality of wastewater treatment. We talk about branding, but it goes deeper than that. What we do is essential and invisible. There are so many significant and fundamental industries vying for the limited capital funds available, and we go largely unnoticed. It is not until there is a crisis (over-flow, back-up, main break) that our efforts are recognized. Wastewater treatment isn't sexy – but the lack of said treatment is even less so.

We all know this in our hearts and souls, and espouse it within our own ranks incessantly, but that is not enough. We must mount a sea change. Until our contribution to the basic necessity of clean water is understood and valued there will not be adequate funding to turn this floundering ship to ground.

So how do we do this? I will not pretend I have the ultimate answer, but here are some suggestions I have compiled.

Make it a point to network with our legislators. There are numerous opportunities to reach out to our law makers, especially at the local level, to help them become more informed as to what we do and how it affects their constituents. Rates are going up and will likely continue to do so. Explanations of the need and the desired final outcome must be broadcast widely and often.

We can be our own best advocates. When we talk to our friends, our neighbors, our social groups – don't shy away from extolling our contribution to this thing we call 'civilized living'. When you are in a social setting, be loud and be proud about your job! I doubt there will be many others in the room that are having such an immediate and direct impact on public health as wastewater workers!

Court the local news. Too long we have avoided the camera and missed opportunities to engage with the media to tell our story. Invite reporters to visit your facilities and construction sites for a tour and provide as much useful and pertinent information as possible. Transparency wins!



Photos from the January Operations Seminar



We **MUST** become a viable presence in social media. The North East Ohio Regional Sewer District (NEORSD) has been active in this regard for some time and we can all learn from their efforts.

And in closing I want to mention that the NES calendar is shaping up nicely. Our annual Industrial Wastes Seminar is once again a sellout for Feb.15th, and sadly this will be the final event our Industrial Pretreatment chair will be involved in. Bill Cleary is officially retiring this spring and has made extensive plans for traveling, fishing and generally lounging about. You have brought so much to our organization Bill and will be greatly missed! We all wish you nothing but blue skies. Also, save the date for our FREE Watershed Seminar on April 19th in Richfield and our Annual Business meeting on May 24th to be held at the North Olmstead WRF. And be sure to watch for updates about the BioMassters Golf Outing in July! I hope to see you at one or more of these events!





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Steven Reese, President

We hope everyone enjoyed the Holiday Season as we look forward to a New Year! Despite the cold, our group continues to thrive and plan for many more exciting events.

## **Continuing the Attitude for Gratitude**

We often need a reminder that our SWOWEA group is a not for profit organization focused on education. People may sometimes lose sight that our section is run solely by volunteers! We may grow accustomed to certain benefits, programs, features and added value our group provides at educational tours, section meetings, operator educational days and several other committee meetings and events... all done by volunteers (or "volun-tolds" in some cases). Next time you are wondering, "Where are the donuts?" also remember to appreciate all those serving our group. It's an attitude for gratitude.

We continue to strive to demonstrate our gratitude to our members and supporters. In that vein, we wanted to point out our most recent Top 3 employers with the most members:

- 1. Metropolitan Sewer District of Greater Cincinnati
- 2. Hazen and Sawyer
- 3. Montgomery County

Thanks to these employers and many other supporters out there for encouraging membership to SWOWEA and keeping their members involved!

## **Successful Events**

We are proud of our many successful events to finish out 2017.

- OWEA's Hand's-On Collection Workshop at MSD's Galbraith Road Facility
- Operator Education Day at Montgomery County
- Fall LAC meeting at Sidney
- Plant Operations Seminar at the Manor House in Mason
- Meet and Greet with YPs at the Rusty Bucket in Mason

I wish to extend my Thanks to the several committees for organizing these events and for the exhibitors who participated. Our members allow the SW Section to continue to provide educational events at reasonable prices and sometime even no cost!

#### **Thanks to our Past Presidents**

We also want to reflect on our past, our legacy and those that helped get us where we are today! In that light we held our annual Past Presidents' lunch in December following our executive committee meeting at the Manor House in Mason. This event is an opportunity to "Thank" our Past Presidents for their service to our Section and to the State. It was a great time seeing everyone (see inserted photo of past presidents at the event). The event included sharing memorable moments from everyone... this year's theme was "Retirement is Awesome!"

#### **Upcoming Events**

March 2018 will be our Section Meeting in Springboro. For more details about these and other events, please visit the OWEA website at *www.ohiowea.org* or view our latest Southwest WAVE newsletter. It is a great resource for the membership!



SWOWEA Past Presidents

#### **Call to Action!**

Maybe you are thinking as you read this... hey I want to get more involved in this awesome group; well no better time than the New Year. Now that you are inspired with gratitude, get in touch with me at *sreese@* hazenandsawyer.com and I'd be glad to bring you on board with our group!

Best Regards, Steven Reese *sreese@hazenandsawyer.com* 

## **Certification Committee**

by Kathy Richards, Certification Chair

Welcome to the month of February, when Cadbury Cream Eggs are once again available! Of course, it is also the month that contains national PANCAKE DAY (the 13th)! What's not to love?

Thank you to all that have renewed your Laboratory Analyst Certificates. As of this writing nearly 350 highly trained and dedicated individuals have completed the very simple online application to ensure their certification does not lapse. I know there are more of you out there, don't delay and risk having to sit for the examination(s) again!

The next opportunity to test for all Voluntary Wastewater Laboratory Analyst, Industrial Pretreatment Operator or Industrial Pretreatment Inspector classification levels is Friday, April 20th and the application deadline is Friday March 23rd. Application forms can be found at http:// www.ohiowea.org/lab\_analysts.php.

Need to know criteria plus additional information can be accessed at *http://www.abccert.org/testing\_services/ default.asp.* If you are uncertain as to whether you qualify to take the exam contact me before you send in your application and testing fee.

My most sincere apologies for failing to recognize in the last Buckeye Bulletin those who passed the fall exam! So, an extra enthusiastic WELL DONE to those listed to the right! And good luck to those of you testing in April! Don't hesitate to contact me with any questions or concerns regarding certification or pancake recipes!

Kathy Richards

Director, OhioWEA Board of Certification certification@ohiowea.org



## **Class I**

Elliot Cantwell Regan Fox Larry Garberich Viktor Gravenstein Stacy Hobbs Norman Jackson Zachary Markiewicz Emily Mazur Walter Schroder Thad Spencer Seth Wilson

## **Class II**

Robin Shafer Melanie Warren

## **Class III**

Nicole Erkkila Michelle Nelson

## **Industrial Inspector**

Thad Spencer

## **Government & Regulatory Affairs Committee Update**

by Dale E. Kocarek, PE, BCEE, Chair

The OWEA Government and Regulatory Affairs (GARA) committee met on December 13, 2017. This meeting was the first under a new format to refocus the direction of the committee. Topics of discussion included the following:

- Purpose: Committee Revitalization
- Workshop Planning (One Water) for March 8, 2017 at Nationwide
- Ethics (Mini) Workshop on November 28, 2017
- Advocacy Letters (Tax Reform Bill, 12/4/17 Letter)
- Position Statements/Buckeye Bulletin Articles
- National Water Policy Fly in Planning: April 17-18, 2018 and Post Fly In Follow Up
- Proposed Nutrient Rule, 2018
- Interorganizational Coordination (WEF GAC, AOM WA, AWWA, etc.)
- Section Committees

As we move forward, there are several things that I wish to highlight. The first is that GARA will maintain close association with the WEF Government Affairs Committee and sister organizations including AOMWA and OAWWA. I believe that we are stronger together and can reinforce each other's messages.

Our annual workshop will continue to be one of our key deliverables to our members. We are putting the final touches on the March 8, 2018 workshop. Our mini workshop held on Ethics on November 28, 2017 was well received and the beginnings of more mini or localized workshops to come. Future topics are under development, but will be "spin offs" of our annual workshop or hot topic.

Second, for OWEA to be a viable force and relevant in our industry, GARA must take a position in writing letters and position papers as needed. While many letters typically received by our elected officials are "form post cards," our letters, while simple and concise, are customized preparations. Based on feedback that I received from WEF, I believe that they are noticed. Our advocacy letter on the Tax Reform Bill, which was prepared with input from several, is a good example of our advocacy. While we may not always achieve a goal, we become a known and trusted group of professionals. Also, in these days where many messages are "fake news" with aggressive posturing, OWEA will continually strive for our message to be gently stated, fact based, and with the purpose of "education" first and foremost. We also had a brief discussion on Water Week and our annual Fly In to Washington DC.

I would also like to see more traction with Section GARA committees. While the Northeast and Southwest Sections have their own committees, I would encourage other sections to consider them as well. Section involvement is a great way for member engagement. If there is one thing I have learned in the past 20 years as a board member at the section and state level, it is that OWEA has great sections!



# 2018



## **Government & Regulatory** Affairs Workshop

# Thursday, March 8, 2018

# Nationwide Hotel & Conference Center

100 Green Meadows Drive South Lewis Center, Ohio 43035 866.233.9393





## Register online *www.onewaterohio.org*



www.ohiowea.org

# MORNING



DALE KOCAREK, P.E., BCEE **GOVERNMENT & REGULATORY AFFAIRS COMMITTEE** CHAIR STANTEC, DALE.KOCAREK@STANTEC.COM

JOHN OWEN, P.E., BCEE **GOVERNMENT & REGULATORY AFFAIRS WORKSHOP VICE CHAIR** OHIO EPA, JOHN.OWEN@EPA.OHIO.GOV

> **ROBIN RUPE, P.E. TECHNICAL PROGRAM COMMITTEE CHAIR** NEORSD, RUPER@NEORSD.ORG

7:30 – 8:00 AM	REGISTRATION
8:00 - 8:15 AM	WELCOME AND INTRODUCTIONS
8:15 - 9:00 AM	<b>CRAIG W. BUTLER, DIRECTOR, OHIO EPA</b> Ohio EPA Director Update
9:00 - 9:45 AM	JOHN C. GONZALEZ, NEORSD Youtility: Public engagement, customer focus, and facing common communication challenges
9:45 - 10:00 AM	BREAK
10:00 - 10:45 AM	<b>DAVID NASH, PARTNER, MCMAHON DEGULIS LLP</b> Taking Control of Regulatory Compliance Messaging in the Communication Age
10:45 - 11:30 AM	<b>CLAUDIO TERNIEDEN, DIRECTOR OF GOVERNMENT</b> 2018 Washington DC Water and Wastewater Update
11:30 - 12:45 PM:	LUNCH

## WASTEWATER SESSION

TODD DANIELSON		
CHIEF UTILITIES EXECUTIVE, AVON LAKE REGIONAL WATER & JERRY ROUCH ASSISTANT CHIEF, OHIO EPA DEFA An Innovative Public-Private	1:30 - 2:15 PM	BETH MESSER DDAGW ACTING CHIEF, OHIO EPA & AMY JO KLEI DDAGW ACTING CHIEF, OHIO EPA Ohio EPA DDAGW Chief Update
Partnership for Removing Clean Water from Sanitary Sewers	2:15 - 2:30 PM	BREAK
BREAK	2:30 - 3:15 PM	KEVIN CAMPANELLA UTILITY PLANNING LEADER, BURGESS & NIPLE
<b>ELIZABETH TOOT-LEVY</b> <b>PROJECT SCIENTIST, GEOSYNTEC CONSULTANTS</b> The Case for Integrated Wastewater and Stormwater Planning		Service Levels and Performance Management: Step 1 in Meeting Ohio EPA Asset Management Requirements
for Ohio's Communities	3:15 – 4:00 PM	SUSAN SCHELL
<b>DESMOND CULLIMORE</b> ASSOCIATE, BRICKER & ECKLER LLP Design Build – Construction Management at Risk		Development of Design Criteria to Supplement TSSs for a Selected Ohio EPA Emerging Technology
	4:00 PM	ADJOURN
	REGIONAL WATER & JERRY ROUCH ASSISTANT CHIEF, OHIO EPA DEFA An Innovative Public-Private Partnership for Removing Clean Water from Sanitary Sewers BREAK ELIZABETH TOOT-LEVY PROJECT SCIENTIST, GEOSYNTEC CONSULTANTS The Case for Integrated Wastewater and Stormwater Planning for Ohio's Communities DESMOND CULLIMORE ASSOCIATE, BRICKER & ECKLER LLP Design Build – Construction Management at Risk ADJOURN	REGIONAL WATER& JERRY ROUCHASSISTANT CHIEF, OHIO EPA DEFAAn Innovative Public-PrivatePartnership for Removing Clean Water from Sanitary SewersBREAKELIZABETH TOOT-LEVYPROJECT SCIENTIST, GEOSYNTEC CONSULTANTS The Case for Integrated Wastewater and Stormwater Planning for Ohio's CommunitiesDESMOND CULLIMORE Associate, BRICKER & ECKLER LLP Design Build – Construction Management at RiskADJOURN



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WATER SESSION

Buckeye Bulletin - Issue 1 | 2018

# **SAVE THE DATE**

- MARCH 8, 2018 ONE WATER GOVERNMENT AFFAIRS NATIONWIDE HOTEL & CONFERENCE CENTER
- MAY 17, 2018 COLLECTION SYSTEMS NATIONWIDE HOTEL & CONFERENCE CENTER
- AUGUST 27-30, 2018 ONE WATER TECHNICAL CONFERENCE GREATER COLUMBUS CONVENTION CENTER
- OCTOBER 11-12. 2018 PLANT OPERATIONS & LAB NATIONWIDE HOTEL & CONFERENCE CENTER
- **OCTOBER 30, 2018**
- WATERSHED THE FAWCETT CENTER
- DECEMBER 6, 2018 BIOSOLIDS NATIONWIDE HOTEL & CONFERENCE CENTER

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## **Plant Operations Update**

by Kim Riddell and Joe Tillison, Co-Chairs

The Plant Operations Committee met on January 23, 2018 at the OWEA office in Columbus to start planning for Ops Challenge 2018 and our 2018 Plant Operations and Laboratory Two-Day Workshop. Planning is in full swing for the 2018 Operations Challenge Invitational which will be held during the One Water Conference and Exhibition on Monday, August 27th and Tuesday, August 28th in Columbus, Ohio at the Columbus Convention Center. The event will run Monday (Process Control and Laboratory Events) and Tuesday (Safety, Maintenance and Collections events). Awards will be Tuesday during the Exhibitor Reception. Registration will be open later this spring and contest rules will be available on the website so keep an eye out or contact Kim or Joe to be put on a mailing list for all pertinent information.

We are extremely excited to announce that our 2018 workshop will be held once again at the Nationwide Conference Center (formerly North Point Conference Center) on Thursday, October 11th and Friday, October 12th. **PLEASE NOTE THE DAY OF THE WEEK CHANGE FOR THIS WORKSHOP!** We are working on a great line-up again this year! Topics will include plant profiles given by operators from each section, asset management, capital project management, inline instrumentation and automation, other operations innovation and disaster management presentations given by utility folks who've lived to talk about them. Of course, the return of our much anticipated cocktail hour round table forum is also on the agenda. Save some money in the training budget and be sure not to miss this great opportunity to learn from some Ohio "home-grown" bests! We look forward to seeing you there!

In addition, we have plans to host a **Troubleshooting** Activated Sludge – An Advanced Course for the Experienced Operator again this year. We are looking for host plants. If you have a training room that will hold approximately 30 attendees and are a medium sized wastewater treatment facility, please touch base with us to let us know you'd be interested in hosting this event. This is an advanced three day, hands-on course.

We are also in the process of developing a beginners and advanced operator training course to assist operators in preparing for their exams or just gaining a better understanding of the activated sludge treatment process. We plan to have these courses available by Spring 2019 and are very excited to offer this type of

## Test Your Knowledge - Take the Operations Quiz

- What expresses the average time that a microorganism spends in the activated sludge
- process?
- a. Waste Activated Sludge Rate
- b. Return Activated Sludge Rate
- c. F:M Ratio
- d. MCRT

Boards that scrape the settled sludge to the collection hopper in a clarifier so that they can be removed are known as what?

- a. Scrapers
- b. Flights
- c. Trenchers
- d. Sludge boards



What is the primary difference between a CBOD5 and a BOD5 test?

- a. Incubation at 20 degrees C
- b. The use of BOD bottle stoppers
- c. The use of nitrification inhibitor
- d. The use of the Winkler method

The most abundant source of pollutants entering natural waterways is:

- a. Nonpoint source waste
- b. Domestic sewage
- c. Hospital waste
- d. Industrial waste

In addition to high energy costs, excess

- dissolved oxygen in the activated sludge system can cause:
  - a. Solids to float to the top of the aeration basin
  - b. Filamentous growth
  - c. Damage to the floc particle from excess aeration
  - d. Denitrification in the clarifier

## Answers noted below. Questions, comments, or submit a suggested question? Email OWEA at *info@ohiowea.org.*

Answers: 1-D; 2-B; 3-C; 4-A; 5-C

training to our membership!

Lots of interesting stuff coming your way soon and lots of new things to get involved with on the operator training side of things. So if you are interested in putting a team together for Operations Challenge, becoming a member of the committee or assisting as a judge / volunteer for Operations Challenge, please contact Kim Riddell at 419234-4507 or kim.riddell@alloway.com or Joe Tillison at JTillison@bgohio.org or 419-354-6274.

Kim Riddell, *kim.riddell@alloway.com* Joe Tillison, *JTillison@bgohio.org* 

PLEASE WATCH FOR ANNOUNCEMENTS VIA YOUR SECTION EMAILS AND ON THE OWEA WEBSITE OWEA IS SPONSORING AN "AWESOME OPERATOR" AWARD. AWARD WILL VARY BY SECTION BUT EACH WILL OFFER AT LEAST ONE ONE DAY FREE ADMISSION TO THE ANNUAL CONFERENCE! NOMINATIONS SHOULD BE MADE BY A SUPERVISOR OR SOMEONE WHO WORKS WITH THE NOMINEE ROUTINELY IN THE FIELD.

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## Accidents and Near Misses Safety Committee Update

by Patricia Tebbe, Ohio EPA NWDO-DSW

Yesterday when I was donating blood, the technician came over to me and asked if I was still Patricia. In all the years and times that I have donated blood, the question has always been, "What is your name?" At another point, while the technician was finishing my draw, her cell phone rang. The phone was on a table about ten feet away and she walked toward her phone to see who was calling, all the while handling the donation kit which was still attached to me. The thought that went through my mind was that this is how accidents happen. We don't follow proper procedures, and we allow ourselves to be distracted and not give full attention to the task at hand.

OSHA recently announced the top 10 standards that were cited for safety violations for the fiscal year 2017. They are

- Fall Protection 6,072 violations
- Hazard Communication 4,176 violations
- Scaffolding: 3,288 violations
- Respiratory Protection: 3,097 violations
- Lockout/Tagout: 2,877 violations
- Ladders: 2,241 violations
- Powered Industrial Trucks: 2,162 violations
- Machine Guarding: 1,933 violations
- ◆ Fall Protection Training Requirements: 1,523 violations
- Electrical Wiring Methods: 1,405 violations

This is the seventh year in a row that fall protection is the most cited standard and the rest of the list doesn't change very much from year to year. A new addition this year is Fall Protection- Training Requirements.

The safety hazards that these standards cover are present at some time or another at every wastewater treatment plant (WWTP). Hopefully, every WWTP has a safety program with a written plan where every hazard present has been identified and addressed. And yes, that includes the small, one man or even package treatment plants. If your plant doesn't have a program, it should. The plan should include trainings for every employee on every hazard that they may face. Don't assume that every employee knows or can identify every hazard or how to prevent each hazard.

While the number of OSHA violations listed above may not seem like many in the greater world of employers that exist in the country, we must remember, it is only a small fraction of facilities that are inspected. How many more safety violations are out there that haven't been caught? Or how many near misses have occurred that are never reported? Haven't we all experienced a near miss because we weren't following proper procedure, or were not paying full attention to the task at hand or allowed ourselves to be distracted? Having a safety plan in place and reviewing proper procedures on a regular basis can help assure that near misses don't occur and/or become accidents that involve, injury, damage to property, or even death.

Examples of sample safety plans can be found on the OSHA website at: https://www.osha.gov/dcsp/ compliance\_assistance/sampleprograms.html

Or at the Ohio Bureaus of Workers Compensation website at:

https://www.bwc.ohio.gov/employer/programs/ safety/sampleprograms.asp

As a final note, I ask that everyone consider donating blood if they are able. Donating blood is a very worthy cause and the need is always there. During winter, holiday plans, bad weather, and seasonal illnesses keep eligible donors from giving so the need for donors becomes greater.

My experience above was a rarity that I had never experienced before in all the gallons of blood that I have donated. As a matter of fact, I didn't even feel the needle stick at the start of my blood draw. Please consider donating blood. The need is there every day as we never know when an accident or tragedy may occur.

## Safety Committee Contact Info

#### **Safety Committee Co-Chair**

Mike Welke City of Warren *mwelke@warren.org* 

#### Safety Committee Co-Chair

Nathan Coey City of Pataskala ncoey@ci.pataskala.oh.us From the American Red Cross - Some Facts About Blood Needs, the Blood Supply, and Donors:

- Every two seconds someone in the U.S. needs blood.
- Approximately 36,000 units of red blood cells are needed every day in the U.S.
- A single car accident victim can require as many as 100 pints of blood
- Although an estimated 38 percent of the U.S. population is eligible to donate blood at any given time, less than 10 percent of that eligible population donate each year.
- A donor must wait at least eight weeks before they can donate again.
- Blood cannot be manufactured it can only come from generous donors.

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- The number one reason donors say they give blood is because they "want to help others."
- Two most common reasons cited by people who don't give blood are: "Never thought about it" and "I don't like needles."
- Among Red Cross donors in a given year, 24 percent donate occasionally, 26 percent are first-time donors, and 50 percent are regular, loyal donors.



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## **Lab Analysis Committee Update**

by Denise Seman and Melodi Clark, Committee Co-Chairs

#### Happy New Year everyone!

It's hard to believe we're this far into 2018 already... where has the time gone? I hope everyone had a great holiday season, and that we're all looking forward to an amazing new year.

#### SW LAC – Karen Tenore and Jim Davis

The SWOWEA LAC had a meeting on November 2, 2017 hosted by the City of Sidney WWTP in Sidney, Ohio. 25 people were in attendance. Topics included Fecal coliform testing using Quanti-Tray method by IDEXX, ORP control of a side stream treatment process, Sidney WWTP Expansion, and a tour of the Sidney WWTP. An application for 2.75 contact hours was submitted.

Meetings for 2018 will be announced in a future Buckeye Bulletin article.

To inquire about being added to our e-mail list or to get information about attending, hosting, sponsoring or presenting at a future LAC meeting, please contact one of the co-chairs listed to the right or a committee member:

Committee Members:

Lynette Hodnicki, City of Fairfield

Lori Kyle, Greene County

Gregg Mitchell, City of Sidney

Roger Rardain, City of Fairborn

Teresa Shinkle, Greene County

Rob Smith, YSI

#### **NE LAC – Beverly Hoffman and Tom Zocolo**

Thank you to everyone that made 2017 a successful year. The LAC offered 4.75 free contact hours during 2017 with 38 people attending the meetings.

We are looking forward to offering more meetings and contact hours during 2018.

We will be planning our first meeting soon, so if anyone has a topic they would like to have presented or knows someone who would like to present a topic, please let me know. If you would like to be added to the NES LAC membership directory and receive automatic email updates for training events and other news, please send your contact information to Beverly Hoffman at NESOWEALAC@gmail.com.

Committee Members:

Marie Simon marie@northcoastlabs.com

Amy Starkey ajstarkey@co.stark.oh.us

## SE LAC – Melodi Clark

Happy New Year! I hope everyone had a wonderful holiday season and are ready to tackle 2018! This is a big year for OWEA and our annual state conference as we are having another One Water Conference at the end of August. I am one of the co-chairs for the conference and one of our focuses is to bring in more topics and items that involve the lab, operations, and maintenance. I am looking to you all to help with the lab component. This year if you go to an event and hear a topic that is lab related that you think is awesome please get it to me so we can get it in to the One Water program.

On the SE LAC front, my goal is to hold four meetings this year and again have them at no cost to you all. Two of the events have been decided: one at YSI and one at Alloway labs. My hope is to hold the Alloway labs meeting sometime in March and the YSI meeting sometime in June. I would love to have some ideas on the last two meetings of the year and venues to hold them. If any plants in our area have had some upgrades done that would be a great meeting as we always try to incorporate a plant tour into our lab meetings.

Please reach out to me with your locations and topics for the remainder of the two meetings for 2018. Let's have an awesome 2018 and get the focus on the lab and what we all do that benefits our wastewater fields!

## **NWLAC- Tony Hintze and Terri Brenner**

Happy New Year from the Northwest Section!! It's hard to believe 2017 went by so fast. As we move forward this year, Terri and I hope to keep you well informed and we will continue to support you and help answer any questions that you may have.

We would like to thank everyone that made our last meeting a success. We had 38 attendees at our December 5th meeting. Alloway stepped up supplying our food and drinks. We had three excellent presentations: How to Utilize Your Lab Data to Optimize Process Control by Kim Riddell; The New MDL Procedure How To's by Marcy Bolek; You Can't Control What You Don't Monitor by Jim Borton. The attendees that took advantage of our free meeting received a total of 2.75 contact hours.

Our next meeting is already coming together. As soon as all the details are worked out we will be sending out an email, so keep your eyes open. If you have a suggestion for a topic or would like to host a meeting please let Terri (*tbrenner@ci.perrysburg.oh.us*) or I (*thintze@fremontohio. org*) know. Terri and I are looking forward to the coming year and hope to see you at our upcoming meetings. And of course, always remember, working in the lab is just like cooking in your kitchen, just don't lick the spoon!

## **Committee Reports**

## LAC Contact Info

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> NE Co-Chair Bev Hoffman wwlab@genevaohio.gov

NE Co-Chair Tom Zocolo tzocolo@akronohio.gov

## Join Your Section's Lab Analysis Committee

Certified wastewater analysts are a valuable resource to the industry. Network with and learn from other certified wastewater analysts in your area. Learn how to become certified by contacting the LAC Chair in your section.

## Committee mission statement:

The OWEA Laboratory Analysis Committee (LAC) strives to provide relevant and timely information on laboratory regulation and policy for the collection and analysis of wastewater and surface water samples. We strive to provide training in a relaxed, stress-free manner, to ensure the ability for participants to gain knowledge and skills to benefit them in their professional environment.



## **Operator Quandries** Implementing Solutions for Daily Operator Challenges

by Nathan W. Coey, City of Pataskala

## **City of Pataskala WRF**

Our staff operates a 1.25 Oxidation Ditch Wastewater Treatment Our drive Facility. units have 16 bearings that require weekly operation of the units. maintain the bearings it was necessary to look at an auto grease



system to provide daily lubrication to the bearings. We researched the options for auto lube units; many were costly and required a 120 volt electrical supply.

A local distributor introduced us to the Electro-Luber ™ MD 2000 unit that operates off of a microprocessor that is powered by replaceable battery pack. The microprocessor allows a variety of interval settings for the release of grease to the bearing via the enclosed pump and motor of the unit. The reservoir is easily replenished with a manual grease gun.

This product was the solution to meet the desired lubrication schedule; however it required the ingenuity of our Wastewater Department Staff to install the units. It was not desirable due to location to thread the Electro-Luber<sup>™</sup> directly onto bearings. The unit would not fit or it would be subject to areas that could potentially be flooded with the Oxidation Ditch contents.

The staff came up with this parts list and installation solution for the Pataskala WRF Oxidation Ditch Auto Grease Bearing Project.

(16) Electro-Luber <sup>™</sup> MD 500

(16) 1.5 inch angle iron to desired length

(16) 4.5 inch muffler clamps

(16)  $\frac{1}{4}$  inch union fittings

(16)Desired length of grease hose with 1/4 inch connectors

1. It is suggested to apply a protective coating to the angle iron and muffler clamp prior to installation to prevent corrosion.

2. Drill holes on each end of the 1.5 inch angle iron for securing to motor mount, support, or wall.

3. Drill two holes on the front face of the angle iron 4.5 inches apart to accommodate the muffler clamps.

4. Attach the Electro-Luber<sup>™</sup> to the angle iron with the muffler clamp.

5. Remove the grease zerk fitting from the bearing and thread the grease hose fitting into the bearing.

6. Install the <sup>1</sup>/<sub>4</sub> inch union on the supplied grease fitting on the bottom of the Electro-Luber™ and then attach the grease hose fitting to the union.

7. Fill Electro-Luber™ reservoir with desired grease and set the dip switched to desired lubrication interval.

I would like to thank the following people for their involvement in this project.

Mr. Harry Litton with Ohio Electric Motor Service for introducing us to the Electro-Luber<sup>™</sup> product line.

Mr. Mitch Rader and Mr. Rich Obar for their collective efforts to make this project a success at the Pataskala WRF.





## **OPERATOR QUANDARIES – IMPLEMENTING SOLUTIONS FOR DAILY OPERATOR CHALLENGES**

Attention Operators, Lab Technicians, and Maintenance Mechanics! OWEA invites you to share a challenge that you faced at your facility and the ingenious solution you found!

Each wastewater treatment plant is unique. The basic treatment method might be the same, some of the challenges might be the same, but each facility may approach the challenge differently. These challenges must be overcome to ensure proper facility operation. The solutions to these challenges are not always found in a WEF manual. An offspring of necessity is invention. Treatment facility operators, laboratory technicians, and maintenance mechanics are the most valuable resources in this great field. The unsung heroes of the daily mission of clean water are made possible through fantastic skills sharpened by every day experiences. At every facility there is an enormous amount of experience and expertise that keeps the water flowing.

What quandary have you faced and what have you implemented to create a success story? What projects or procedures of ingenuity have you implemented to attack a specific issue? Did your efforts result in plant optimization, a simplified procedure, eliminate a safety hazard, or the coveted reduction in operational expense? Operator quandaries are not limited to a plant, collection system, day of the week, or even the weather. No matter how large or small your solution, let's get your experience out to our readers of the Buckeye Bulletin. Let's take time to brag about your efforts behind the scenes. Your shared solutions may benefit other facilities. Consider sharing any details and pictures to create an article to share in the Buckeye Bulletin.

If you have a quandary turned solution, please reach out to Nathan Coey via email at ncoey@ci.pataskala.oh.us

## TOM MERRITT

H.R. Gray has named "Tom" Thomas Merritt as president. Since joining the H.R. Gray team in March 2003, Merritt has served in many capacities overseeing administration, marketing business and development. Most recently, he served



**WE** 

as vice president of business operations. In his tenure, he has directed the firm's communications, marketing, advertising and media strategy development; led human resource and financial initiatives; as well as served as the lead of business development.

A graduate of The Ohio State University with a master's degree in public administration, Merritt has more than 20 years of public sector as well as 15 years of private sector experience in the professional engineering and construction management field.

Before joining H.R. Gray, Merritt served as the City of Columbus director of the public service department.

"I'm excited for this opportunity to lead our efforts as we grow our construction management and program management services throughout the country," said Merritt.

# **ROLL CALL**

## **KEVIN STILWELL**

Kevin joined the American Structurepoint team as a Project Manager last August, and is located in their Cincinnati office. He specializes in small and large diameter water distribution design and wastewater collection design. Kevin attended the University



of Tennessee where he earned a Bachelor of Science in Civil Engineering. He also serves as the Public Education Committee Chair for OWEA. He is excited about this new venture in growing the utility infrastructure group for ASI in Ohio.

> NOMINATE YOURSELF OR A FELLOW OWEA MEMBER FOR ROLL CALL ON OHIOWEA.ORG.



## **DAN VAN DAM**

Daniel Alfred Van Dam, 75, passed away peacefully on Saturday, Dec. 9, 2017, at his residence.

"Dan" was born Nov. 19, 1942, in Bronx, N.Y., the son of Alfred D. and Olive (Wilkinson) Van Dam.

Dan was a 1964 graduate of Youngstown College.

He was the owner and operator of D.A. Van Dam & Associates, LLC.

He was a member of National Association of Sewer Service Contractors (NASSCO), Ohio Water Environmental Association (OWEA), American Society of Plumbing Engineers (ASPE), American Public Works Association (APWA), American Water Works Association

(AWWA), Water Environment Federation (WEF), Michigan Association of Distributors (MAD), Southern Wholesalers Association (SWA), Central Wholesales Association (CWA), Water Environmental Federation (WEF), American Supply Association (ASA), and Michigan Ground Water Association.

Dan enjoyed working, gardening, shopping, historical cars, and especially spending time with his family. Dan was a generous, kind man who loved helping people and will be sadly missed by all who knew him.

He leaves to cherish his memory, his wife, Cecilia "Cissy" A. (Hale), whom he married March 19, 1994; his children, Cynthia "Cindy" (David) Blech of Chagrin Falls, Jeff (Sonsheehray Robinson) Van Dam of Pennsylvania, Laurie (Belus) Morgan (John) of Geneva and Steve (Danielle) Belus of McDonald; and his grandchildren, Justin, Janessa, Brielle, Veronica, Lily, Jacob and Shayleigh.

Visit blackstonefuneralhome.com to send the family condolences and view this obituary.





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## **NW Hands-On Workshop**

#### by Matt Witter

The Collection Systems Committee held their annual Operator Hands-On Workshop series in the Northwest Section on November 16th at the City of Fremont Water Pollution Control Center. Over forty people attended the Workshop, ranging from Collection Systems Operators to City Service Directors to Consulting Engineers. The main objective of these annual Workshops, which are held at each of the 4 Sections, is to bring people in the collection system industry together to learn about common issues experienced in the field and to provide up to 5 Contact Hours. This year's topics included the following:

• Proper Sewer Nozzle Selection & Application – Joe Aquilino from Best Equipment discussed the various equipment available for cleaning sewers and how to select the correct nozzles for the right application.

• Green Infrastructure Operation & Maintenance – John Hazlett with Williams Creek talked about the maintenance side of green infrastructure solutions. Topics included proper selection of materials during the design and installation phase, common maintenance activities required to maintain proper operation of the infrastructure and maintenance schedules for various solutions.

• CIP Point Repairs- Matt Gabrielse from HammerHead Trenchless provided a discussion and live demonstration on the installation of short CIP point liner. The point liner may be installed by a contractor but is simple enough and the associated equipment is affordable to the point that nearly any municipality can install with their own personnel.

• Latest Advances in CIP Liners – Mike Moore with HammerHead Trenchless presented on the use of CIP in pressure pipe applications, including both water mains and force mains. For pressure pipes, the liner must be able to withstand tensile forces which requires a more thorough design and tighter controls on the cleaning, wetout and installation process to ensure a fully structural pipe.

• Design & Construction Challenges of the Valley Conveyance System – Mike Ellerbrock with Strand Associates presented on some of the unique challenges experienced with the design and construction of the CSO separation project for the Metropolitan Sewer District of Greater Cincinnati in the 2,700 acre South Fairmont neighborhood. The project provided cost savings compared to collecting and treating the combined sewer flows, but provided many challenges in conveying storm water through a new storm system while avoiding numerous utility conflicts in a high traffic volume area.

The OWEA Collection Systems Committee sincerely thanks all of the wonderful presenters and attendees for making this another successful year for the Hands-On workshops and we will see you again next year!



**CIP** Point Liner Demo



NW Hands-On Crowd

## SAVE THE DATE - MAY 17<sup>TH</sup>, 2018

# **COLLECTION SYSTEMS SPECIALTY WORKSHOP**

## **Why We Need More Female Engineers**

by Tom Merritt

My mom was the smartest person I knew who never went to college. She read and talked about the most interesting things—science, culture, politics. But during her lifetime, prevailing social norms directed her to stay home and raise a family. She was a homemaker. Her legacy, however, transcended the limitations of her generation. She instilled in each of her children (both male and female) the importance of getting a college education as well as treating others with equity.

As I embarked upon my own career more than three decades ago, I realized that my mother probably missed out on

opportunities simply because of the era in which she lived. It was a realization that took root and grew during my 20-year tenure in the public sector. I've served as a program manager with the State of Ohio, the deputy director of public utilities for the City of Columbus and, finally, as director of the city's Department of Public Service. While in these positions, I was fortunate enough to work with very strong women who were driven to excel. Through my interactions with these inspirational women, I've ascertained that the engineering industry has also missed out on opportunities by not having



more women working in the field.

Take the company I now work for as an example. H.R. Gray provides construction management services to public utilities and agencies. Oftentimes, our success lies in leading established teams at the project site. This requires a high level of communication and coordination. I've found that some of our best communicators—and the ones inclined to be more collaborative in their approach to problem-solving—are female.

Perhaps this is an anomaly. Perhaps women don't bring "unique" skills to the

table. But they do bring skills—as well as much-needed diversity to an industry dominated by men. Whether we're addressing a particular project, department or the industry as a whole, I believe that diversity makes groups better. Project teams work better when team members have varied backgrounds from which to shape their opinions and fuel their ideas. Having this type of access to differing perspectives moves us beyond the "this is how it's always done" mindset and into the realm of better decision-making and greater innovation, which also enhances our ability to meet customer needs.

## **The People Place**

This Buckeye Bulletin series focuses on the people side of our industry, hence the title: The People Place. Traditionally, the Buckeye Bulletin comes loaded with mountains of technical pieces: plant profiles, industry trends, regulatory insight, project overviews, etc., which, without proper 'people-care' would not be possible! After all, your organization can only be as successful as the health, wellness, and productivity of your people and culture. Focus areas of this series are topics such as leadership, management, health and wellness, succession planning, work/life balance, recruiting/retaining, change management, knowledge transfer, career laddering/ branding, etc. We hope you enjoy this series as much as we are excited to bring it to you! If you are interested in submitting an article or specific focus area, please contact Jason Tincu. *(jtincu@brwncald.com)* Thank you!



In my own company's case, we have purposely built a diverse workforce. Because of this, we are able to tap into the unique strengths and experiences that individual employees bring to the collective table, which often leads to more effective approaches. One-quarter of our employees are women, with nearly half of that percentage being either registered professional engineers or engineers in training. We have exceeded national averages (in 2014, 15 percent of U.S. architecture and engineering jobs were held by women and five percent of water- and wastewater-treatment plant and systems operators were female, according to the Bureau of Labor Statistics), and we plan to increase our own percentages by recruiting more women engineers.

We are also seeing our public-sector clients' management teams become more diverse, with women taking on greater roles in upper management. We plan to mirror that change, in part, to remain competitive and open up more relationship-building opportunities with our customer base. Female engineers at H.R. Gray are heading projects like the City of Columbus, Ohio's \$75 million Hap Cremean water treatment plant improvements, which includes renovating existing filters and installing an ozone disinfection system, and the \$40 million Southerly Wastewater Plant improvements, which



of US architechture and engineering jobs were held by women in 2014

to me that she loved math and it was one of her more rewarding classes in school. Keen math skills are always a plus in the services that we provide our clients, so I asked her if she might consider an opportunity working with our firm.

As her skill set grew, she passed the EIT (engineer-intraining) test and was ready for her first in-field assignment: a collector well project. It was fun to watch her confidence grow as she became a seasoned construction engineer and then a construction manager. Although she was an asset to our company, her career path was based on a chance meeting with somebody (me) from the industry. If I did not have that conversation with her, we would have missed out on an exemplary employee. How many other employers are missing out because they aren't initiating conversations with women about engineering?

According to the American Society for Engineering Education, women received 20 percent of undergraduate engineering degrees and 24 percent of engineering master's degrees in 2014. And, as I've previously stated, the Bureau of Labor Statistics (BLS) reports that 15 percent of U.S. architecture and engineering jobs were held by women in 2014 and five percent of water- and wastewater-treatment plant and systems operators were female.

Meanwhile, the government sector and private industry are facing engineer shortages in several areas. The BLS stated in a 2015 report that government and governmentrelated employers are finding it difficult to fill positions at the doctorate level (e.g., materials science engineering, nuclear engineering), advanced-degree levels (electrical and mechanical engineers) and in general (civil engineers, systems engineers, cybersecurity and intelligence professionals). In private industry, fewer non-degreed people are pursuing skilled trades (e.g., machinists, operators, craftworkers, distributors and technicians).

Imagine the possibilities if we were able to double the percentages of women in engineering fields and earning engineering degrees. That could translate to gaining tens of thousands of new creative thinkers, innovators

includes installing a biosolids land application facility.

But another vitally important reason why we need more female engineers is really rather simple: We are an industry faced with a dwindling pool of workers. We need more people. Smart people. We need more students feeding into engineering schools. Women represent an under-represented resource. If we can encourage more women to enter engineering fields, we can begin to conquer the engineer shortage.

#### The Importance of Recruiting Female Engineers

Several years ago, I met an unemployed 27-year-old biomedical engineer who was looking for "real-world" advice about her employment search. She mentioned

95% of water and wastewater treatment plant systems and operators were male in 2014.



## The People Place

and problem-solvers (aka engineers) ready to tackle global issues like climate change, the water supply and renewable energy.

To do this, we need to:

- Spark an interest in engineering while students are young, preferably before they reach high school.
- Provide female role models who can dispel the stereotypical images of what engineers do and look like (which, of course, includes gender).
- Build supportive environments through mentoring and peer-based groups.

It all boils down to initiating the conversation with female students, and even recent graduates, about the opportunities waiting for them in engineering.

## **Put the Thrill in Engineering**

As director of business operations at H.R. Gray, I have championed company efforts to reach out to students and especially women—to promote careers in engineering. When addressing younger audiences, I've found that the goal is often to make engineering look "cool." When it comes to encouraging female students to consider careers in science and especially engineering, the challenge is in showing them that there is a place for them in these fields.

But first, let's address youngsters in general. The following are a few simple ways for engineers and those who employ engineers to help students in grades K-8 get excited about engineering:

- Volunteer! Check in with professional organizations i.e., Society of Woman Engineers, Women in Engineering, ACE Mentor Program —to see if they host workshops or mentorship programs promoting science, technology, engineering and math (STEM) to students.
- Host kid-friendly open houses, tours or even project competitions during National Public Works Week or National Engineers Week. For help brainstorming ageappropriate STEM projects and activities for children, perform a quick Internet search for "STEM activities."
- Visit schools and youth groups (i.e., Girl Scouts). Talk about your work. Show them STEM examples through hands-on experiments (for examples, see below).
- My company participates in a STEM expo each February as part of National Engineers Week. The free event is organized by the American Society of Civil Engineers' Central Ohio Section. In the past, we've used interactive, hands-on activities to help students discover:
  - •The friction of rice on a pencil allows them to pick up a water bottle full of rice (by using the pencil wedged in the bottle).
  - ♦Round versus flat pieces of materials have different strength characteristics when it comes to building bridges. (Students constructed individual bridges made out of different types of pasta and marshmallows.)

•Some shapes have greater stability than others (which

was demonstrated when students made different shapes out of drinking straws.)

•Paper cups filled with sand can withstand a great amount of compression. (The students weighed themselves and then were asked if they believed paper cups could hold them without crushing the cups. Most did not believe it. Our team then set cardboard across multiple cups, which distributed their weight, and had them stand on the cardboard. No cups were crushed thus, proving the theory!)

H.R. Gray also reaches out to college students by partnering with nearby colleges and universities including The Ohio State University (OSU), the University of Dayton and Akron University for career fairs and coop opportunities. We also provide scholarships to the Women in Engineering program at OSU.

Additional high school and college-level outreach examples include:

- Holding Q&A sessions with students about engineering disciplines, either in the classroom or via student organizations.
- Volunteering to advise on or evaluate student projects.
- Offering job-shadowing opportunities.
- Participating in resume review/critiques and mock interview sessions—for both high school and college levels.
- Sponsoring/hosting student groups, such as the Society of Women Engineers, with both financial and in-kind service support

Our parent company, Haskell, also supports community and volunteer activities focused on youth. According to Amanda Leno, ARM, MHRM, who is the talent acquisition manager with Haskell, "We partner with individual schools to inform and teach students the value of planning for their future. Time shared with young people continues to send a strong message about our dedication to their future success."

Leno says Haskell team members are very generous with their time. Many of the design, engineering and construction firm's employees are actively involved with mentoring programs in local schools, including ACE Mentoring; Big Brothers Big Sisters of America Inc.'s "Beyond School Walls" program, in which companies host kids from local schools at their corporate offices at least a couple of times a month; and programs at Construction Career Academy magnet schools. Several employees also serve as leaders for youth-enrichment programs, such as Girl Scouts of America and Young Life. Other popular endeavors include coaching youth athletics, teaching practical skills or providing career guidance.

## **Role Models Give Engineering a Fresh, New Face**

One of the most effective ways to encourage students to consider "nontraditional" career choices is to introduce them to role models from those fields with whom they are able to relate. When we introduce students to female engineers, for instance, we begin to shift the status quo and transform popular but outdated images of who "belongs" in engineering.

This is why I encourage the women engineers in my company to speak at conferences, speak to engineering students at college career days, visit schools and participate in STEM events geared for students. If you are a female engineer, your presence is critical in showing young girls that there is a place for them in the engineering field—that they can potentially do the same things as you.

During National Engineers Week each February, a special day is designated for introducing female students to engineering disciplines. Introduce a Girl to Engineering Day was launched in 2001 as a joint effort between the National Society of Professional Engineers, IBM and the National Engineers Week Foundation. This is a great time for female engineers and their male colleagues to get involved with schools and industry associations to show girls the creativity behind engineering—and how engineers are changing the world. In 2018, "Girl Day" falls on Feb. 22.

If you are looking for ways to get involved, try contacting schools in your local area as well as local chapters of professional and industry associations.

## Using Mentors, Peer-Based Groups to Retain Female Engineers

Role models are not restricted to setting examples for students. The engineering profession has a long tradition of establishing mentor-mentee relationships to help, for example, engineers in training become professional engineers.

Assigning mentors to female engineers just may be a game-changer when it comes to retaining employees. Statistics show that although about 20 percent of undergraduate engineering degrees are held by women, only 13 percent of the engineering workforce is female. Theories for this discrepancy include lack of mentorship in the field, factors that make women less confident about their place in engineering, and demands on women to maintain a balance between work and family. We can at least address the first two reasons by providing mentors and connecting female engineers with peer-based support groups.

The ideal mentor for a women engineer, of course, would be a seasoned female engineer who can impart wisdom on lessons learned and guide young engineers through daily activities. A good mentor will let their mentee(s) know that there are no bad questions. Given the statistics, an older female mentor may be hard to find within your organization, so male counterparts will have to fill that role for now. At H.R. Gray, we are fortunate to have a couple of rising stars on payroll who are female and also great role models. I am encouraging them to become mentors to newer employees.

The mentor should also work to connect the mentee with a nonthreatening support network. This could be in the form of professional organizations that help members communicate with and find support from peers in the industry. This is especially important for an engineer who may be feeling isolated due to being the only woman on staff. We encourage our employees to be involved in the Water Environment Federation, the American Water Works Association, American Concrete Institute, Women in Concrete, the Underground Construction Association and the Construction Management Association of America.

H.R. Gray's parent company, Haskell, has also developed several training and mentoring programs specific to both understanding and promoting diversity and inclusion in the workplace.

"We have formal and informal mentoring programs for female professionals—engineering included—and also encourage open dialogue about career-path opportunities and how to 'grow' females into leadership roles," says Amanda Leno, ARM, MHRM, talent acquisition manager with Haskell. "Many of our female leaders have taken the lead to create open forums for discussion with other female colleagues, whether monthly 'off-site' luncheons or more specialized activities."

Additionally, says Leno, the integrated design, engineering and construction firm's goal over the next three years is to increase the proportion of females and minorities by 30 percent.

To put it simply, if we want our people to be the best they can be, and provide the best services to our clients or constituents, we need to provide the tools and support they need to reach their full potential. This includes training, mentoring and support networks.

And if we want to attract—and keep—the best and brightest people, we have to stop looking at just half the population.

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## **Ohio EPA Update**

## The Responsibilities of a Certified Wastewater Operator

By: Elizabeth A. Wick, P.E.

Class III certified operator | Ohio EPA, NWDO | Division of Surface Water

Are you a certified operator? Are you an Operator of Record for a facility? If you answered yes to one or both of these questions, you are automatically held to a higher standard of professionalism. Maintaining a wastewater treatment



plant to provide the highest quality effluent possible is an important responsibility. A certified wastewater operator is the front line of defense in protecting the local water resource. Discharges from even small wastewater treatment plants can significantly impact the local and statewide water quality. Just like any other professional with a certification (P.E., licensed optician, M.D. etc.) there are certain expectations for ethical and professional conduct.

Ohio EPA's National Pollutant Discharge Elimination System (NPDES) permit program is a self-reporting program. Having certified operators in responsible charge of wastewater treatment plants is one way that the Agency ensures protection of receiving waters from dischargers. Keep in mind that wastewater treatment is not just a job, it's a responsibility.

Ohio Administrative Code (OAC) Section 3745-7-09(B), outlines the obligations of a certified operator.

(B) A certified operator shall:

(1) Perform their duties in a responsible and professional manner consistent with standard operating procedures and best management practices;

(2) Operate and maintain public water systems, sewerage systems, treatment works, and appurtenances so as not to endanger the health or safety of persons working in or around the facility, the public at large, or the environment due to negligence or incompetence; and

(3) Report all instances of noncompliance with applicable regulations to the operator of record or facility supervisor.

When you pass the exam, and earn a Class A, Class I, Class II, Class III or Class IV certificate, you are expected to do all the above.

If you are an operator of record, OAC 3745-7-09(C) outlines your additional duties.

(C) The duties of an operator of record shall include, but not be limited to, those outlined in paragraphs (B)(1) to (B)(3) of this rule (above) and the following additional duties and responsibilities:

(1) Responsible and effective on site management and

supervision of the technical operation of the public water system, treatment works, or sewerage system;

(2) Immediately notifying the permittee or owner of a public water system, sewerage system, or treatment works, and ensuring

the agency and, if applicable, the local regulatory agency, is notified of items that require notification in accordance with sections 6109. or 6111. of the Revised Code, the rules adopted thereunder, or the facility's NPDES permit; and

(D) In the event that there are issues related to OAC 3745-7-09 paragraphs (A) to (C) of this rule that are within the area of responsibility of, but beyond an operator of record or a certified operator's ability to address, it shall be the operator's responsibility to document any efforts to rectify the problem.

Therefore, by being an operator of record, there is an additional level of responsibility expected. In summary, as a certified operator, you are in a very important position with a lot of responsibility that should not be taken lightly.

The most common NPDES permit violations observed by agency staff are:

- Failure to submit discharge monitoring reports (DMR) or provide periodic sample results;
- Exceeding permit limits;
- Failure to provide notification for exceeding permit limits;
- Failure to ensure proper sampling (preservation, type, method, records);
- Failure to operate/maintain/calibrate wastewater treatment equipment;
- Missing compliance milestones.

If these violations occur, a notice of violation (NOV) can be sent to the permit holder. In some instances, a separate NOV can also be sent to the operator of record.

If the following violations are noted during a routine inspection or DMR review, the Agency may choose to address NOVs to the permittee and the operator of record.

1. Violation: Logbook could not be produced, is damaged, inaccessible, illegible, or dates and times of arrival and departure are not entered or not compliant with minimum staffing requirements.

This would be considered a violation of OAC 3745-7-09(A): Recordkeeping requirements and responsibilities of a certified operator.
2. Violation: Bypassing tertiary treatment resulting in untreated or partially treated sewage discharging into waters of the state or the facility repeatedly discharges partially treated wastewater.

This would be considered a violation of OAC 3745-7-09(B)(2): Operate and maintain public water systems, sewerage systems, treatment works and appurtenances so as not to endanger the health or safety of persons working in or around the facility, the public at large, or the environment due to negligence or incompetence and OAC 3745-7-09(C)(1): Responsible and effective on site management and supervision of the technical operation of the public water system, treatment works, or sewerage system.

If the following violations are noted during a routine inspection or DMR review, the Agency may choose to address an NOV to the operator and copy the permittee.

1. Violation: For any certified operator - Failure to report all instances of non-compliance to the operator of record or facility supervisor.

This would be considered a violation of OAC 3745-7-09(B)(3): Report all instances of noncompliance with applicable regulations to the operator of record or facility supervisor.

2. Violation: For an operator of record - Failure to report violations to the permittee or owner and the Ohio EPA of items requiring notification under Ohio Revised Code chapter 6111 or the facility's NPDES permit.

This would be considered a violation of OAC 3745-7-09(C). (written out at the beginning of this article)

3. Violation: For any certified operator - Failure to display a copy of their certificate for public examination at the treatment plant or principal office of the owner.

This would be considered a violation of OAC 3745-7-05(C): Operators of record of a public water system, sewerage system, or treatment works, shall display a copy of their certificate for public examination at the treatment plant or principal office of the owner.

As always, if you receive an NOV from Ohio EPA, you must reply within the timeframe required. It is ok to ask for additional time to reply provided your request is received before the deadline to respond. Failure to respond to an NOV can result in additional enforcement by the agency.

Keep in mind the director has the authority to suspend or revoke an operator's certification upon finding that the operator performed the duties of an operator in a negligent or incompetent manner (OAC 3745-7-12(A)(2)) or operated in a manner endangering the public health or welfare. (OAC 3745-7-12(A)(4)). The effective rules can be found on Ohio EPA's webpage at epa.ohio.gov/ddagw/ rules.aspx#110542563-effective-rules

Another primary responsibility is to renew your certification before it expires. The renewal process is very easy using Ohio EPA's eBusiness Center. If you do not renew within the grace period to become certified, you must reapply for the examination, pay all required fees and pass the examination again. If your certification expires, it puts your livelihood and the owner of the facility in jeopardy.

As an owner or operator of a wastewater treatment system, you are the first line of defense for protection of our water resources and public health. Proper treatment also increases property value, protects wildlife and fish and allows access to recreational activities without the fear of getting sick. That's a lot of responsibility.



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Contact Bill Horst, Collections Committee Chair, at *HorstB@mcohio.org* or Ohio Water Environment Association at *info@ohiowea.org* or 614.488.5800 with any questions.

# 

# **WEF Utility Partnership Program Member Utilities**

The WEF Utility Partnership Program (UPP) is designed to allow Ohio utilities to join WEF and OWEA while creating a comprehensive membership package for designated employees. Utilities can consolidate all members within their organization on to one account and have the flexibility to tailor the appropriate value packages based on the designated employees' needs. Key benefits include:

• UPP is fully customizable, based on the needs of each utility, and a WEF team member will be on-hand to walk each utility through the enrollment process.

• ALL members at the utility will be enrolled, with synchronized begin and end dates, on ONE invoice, for an easy one-time per year payment.

• All members, who were already WEF members, retain original membership number, credit for all years of membership, and remain a full-voting WEF member.

• ALL employees at the UPP utility will be eligible for membership registration rates at WEFTEC, as well as the early-bird rate for Premium and Standard WEFTEC registration at anytime throughout the registration period.

• ALL employees at the UPP utility will also be eligible for member rates for the OWEA Technical Conference and Exposition, OWEA Workshops, and events. • All employees at the utility will be eligible to register for a WEFTEC Exhibition-only pass at NO-Charge.

• WEFTEC registrations can be included in the UPP Membership transaction, at the time of enrollment or can be grouped and submitted closer to WEFTEC.

• UPP also includes a special, NO-Charge membership for Public Officials designated by the Utility, at their discretion.

• Up to five new WEF/OWEA members can be added by the utility each year, at no charge for the first year of membership.

• UPP utility will be eligible for distributor pricing on all WEF products and services – that's 40% off list pricing. In addition to traditional items this discount also extends to online learning in the new WEF Knowledge Center.

• UPP members will be eligible for special discounted registration for other WEF Conferences and events.



**OWEA** currently has 29 municipalities signed up for the Utility Partnership Program. To learn about the benefits for your utility visit *http://www.wef.org/UtilityPartnership/* Or contact OWEA, *info@ohiowea.org*, 614.488.5800

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## **The Village of Ada Wastewater Treatment Plant**

by Paul Fletcher, Peter Latta, Kyle Brueggemeier (Jones & Henry Engineers) and Philip Epley (Village of Ada)

The Village of Ada is located in central Hardin County. The Village consists of residential and commercial properties and the Ohio Northern University campus. The population has been stable over the last 30 years. During the census of 2000, there were 5,580 people residing in the village; this includes a University population of roughly 2,400 students. There are wide variations in population-based flows depending upon whether the University is in session or not. The University has longterm goals to increase enrollment to approximately 4,500 students.

The Ada WWTP is located on approximately 5 acres bordered by a railroad, Grass Run Creek, and County Road 44. Prior to this contract, the Village was served by an activated sludge treatment process built in 1955 and designed for an annual average wastewater flow of 860,000 gallons per day. Average flows between 2007 and 2009 were 1,000,000 gallons per day with the University in session and 590,000 gallons per day with the University not in session. Treatment consisted of grit removal, influent pumps, primary settling tanks, fine bubble aeration, final settling tanks, nitrification towers, chlorination and dechlorination. Waste activated sludge and raw wastewater solids were co-settled in the primary settling tanks, stabilized by anaerobic digestion, and stored as a liquid before land application. Drying beds on site were not utilized. With the equipment being almost 50 years old, it was becoming difficult to maintain.

The WWTP is permitted by both concentration and load on 7-day and 30-day averages. While the WWTP did an excellent job of treating the influent and achieving permitted concentrations between 2007 and 2009, it had been missing its effluent limits on ammonia with students in session. There were 23 NPDES exceedances for ammonia concentration (15 for 7-day, 8 for 30-day) and 21 for loading (15 for 7-day, 6 for 30-day) in this period. In addition, there were 3 exceedances for both BOD and suspended solids. These all occurred at higher

flows.

With the renewal of the NPDES Permit in 2007, the Village hired Jones & Henry Engineers, Ltd. to plan modifications required to the WWTP to allow it to consistently meet the permitted levels. Jones & Henry Engineers prepared a WWTP Expansion report which included a summary of the preceding years' flows, concentrations and loadings and predictions for future flows which accounted for the expansion of Ohio Northern University. Based on an average influent flow range of 1.30 to 1.55 mgd, and to allow for population growth and a possible significant water-based industry to move into the Village, the capacity selected for the new process was 2.0 mgd. Maximum peak : average flow ratio for the period studied was approximately 4.6; average ratio was roughly 3.6. Based on this average ratio and the selected design average daily flow, the peak daily flow capacity of the plant was set 6.0 mgd with a peak hourly flow of 8.0 mgd.

The Jones & Henry Engineers' WWTP Expansion report proposed a number of treatment solutions including addition to the existing process units, construction of a complete new treatment plant, and replacement of the liquid stream only. Although the option of adding to the existing process units had a marginally lower capital cost than construction of a new liquid stream, the latter was chosen by the Village.

Project scope was to demolish the liquid stream and replace it with new equipment on a site adjacent to the existing WWTP which the Village purchased and to reuse selected existing process units for the solids stream. This allowed the existing treatment plant to remain fully operational while the construction of the new facility was completed. Funding for the WWTP Improvements project was through a 20 year, \$14,200,000 WPCLF loan. A separate loan covered design fees.



Final clarifier converted to chlorine contact tank

Process design included diverting the incoming sewer to a new channel containing screening followed by grit

> and grease removal, an oxidation ditch, three final clarifiers and a new chlorine contact tank. Separate return and waste sludge pumping systems were used. Land is available for future expansion should it be required.

> Flows gravitate to a mechanical fine screen channel and to a submersible headworks pump station. Owing to the wide range of design flows, the pump station has separate pump systems for low and high flows. Plant recycle flows are also collected in the headworks pump station. Flows are pumped to a covered aerated

grit / grease removal tank. Grease is removed using pressurized spray nozzles and a shafted screw conveyor. Grit is removed using a submersible pump connected to a travelling bridge which discharges into a concrete channel; an adjacent room houses grit classification equipment.

Raw wastewater flows from the grit/grease tank to a stirred tank for mixing incoming wastewater and return activated sludge with the potential to be converted to an anoxic tank. From this tank, flows are conveyed through a concrete channel into a three ring Orbal for biological treatment. Selection of which Orbal ring the flows pass to is made using gates in the concrete channel. Flows run around the outer ring and pass through a submerged orifice to the middle ring. From the inner ring, aerated wastewater passes over a weir and is piped to a clarifier splitter box. All rings have surface aerators which operate based on a dissolved oxygen feedback loop. The depth of submergence of the aerators and thus the amount of oxygen transferred is dictated by the flow through the Orbal; higher flows result in greater submergence which increases oxygen transfer. Speed of rotation is controlled by dissolved oxygen probes.

Ferric chloride for phosphorus removal is pumped to the final clarifier splitter box. Three concrete clarifiers are installed with bridge supported mechanisms. Effluent



Aerial view of entire project site



Aerial view of clarifiers, headworks building and Orbal

flows over peripheral weirs to the chlorine contact tank. Settled solids pass to a partitioned return activated and waste activated sludge pump station. Sludges from two of the tanks pass to one side of the partition and the third tank to the other side. Partitions are connected by a low level gate.

One of the existing final clarifiers was converted to a chlorine contact tank by making the tank bottom flat and installing concrete baffles to eliminate short circuiting. Clarified effluent passes to this tank for disinfection. The WWTP uses 1 ton gaseous chlorine cylinders delivered to site and transferred to the chlorine building using a hoist and monorail. A v-notch weir on the chlorine contact tank outlet is used for effluent flow measurement. Dechlorination using sodium bisulfite is performed in the chamber downstream of the weir and is controlled by ORP feedback.

Waste activated sludge pumps operate on an adjustable timer and transfer sludge for stabilization in three aerobic digesters with fine bubble diffusers and supernatant decant valves. Two repurposed tanks and the existing anaerobic digester were converted to aerobic digesters. The building associated with the anaerobic digester was converted to house two positive displacement blowers feeding all three aerobic digesters and the aerated grit system.

Once stable, sludges are pumped from the digesters either to a belt filter press for thickening or to an existing tank for storage. Thickened sludges are either transferred to a repurposed drying bed using a screw conveyor or pumped back to the sludge storage tank using a progressing cavity pump. Drainage from the drying bed and the sludge storage tank, as well as supernatant decanted from the aerobic digesters, are routed to the recycle pump station which pumps back to the headworks pump station.

The final part of the project was construction of a service building to accommodate laboratory and office space, a restroom, an electrical room for the controls and motor control center, and a garage with chemical storage for phosphorus removal.

Jones & Henry Engineers assisted the Village with start-up of the new treatment plant. The new process equipment was tested, commissioned and operational for plant start up on November 30, 2015. At this time, all incoming flows were redirected to the new plant and the old plant was shut down. During start-up, mixed liquor was pumped from the old aeration tanks to the Orbal. No seed was hauled in. Following startup, it took about a month to get the system stabilized with a consistent effluent quality. Since January 2015 there has been only one monthly ammonia exceedance.

Following startup of the new plant, the contents of the remaining existing tanks were pumped to the head of the new plant. The existing laboratory building and structures not re-purposed for the project were demolished and backfilled. Conversion of three of the clarifiers to a chlorine contact tank and two aerobic digesters began in early 2016. All processes at the existing plant were

### **Plant Profile**

operational by the end of April 2016.

The plant has received a peak flow rate of 8.0 mgd three times since January 2015. The staff learned to operate the treatment plant in "storm mode" during rain events. Under this mode, the RAS is directed to the outer channel while raw wastewater is sent to the inner channel, creating a contact stabilization type process. The "storm mode" process 'anchors' the RAS and prevents a washout of biological mass while not resulting in effluent concentration limit exceedances. Storm mode has been utilized several times since the plant was brought online. The plant goes into storm mode depending on flow rate and duration. Operator experience has determined when the influent flow rate is 2500 gpm for greater than 20 minutes; the collection system starts to fill up. Once storm mode is initiated, the collection system is pumped down by the raw water pumps at the maximum flow rate of 5556 gpm.

Jones & Henry Engineers, Ltd. Paul Fletcher, Project Engineer Peter Latta, Project Manager Kyle Brueggemeier, Field Engineer Village of Ada Philip Epley, Operator



3 ring Orbal



Aerated grit/grease tank

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## **Chemists are not Magicians!**

by Melodi Clark, Surveillance Lab Manager, City of Columbus

Sitting in the lab just staring at a sample that has been collected in a coffee can. The person swears, "I cleaned the can. It will be fine!"

I look at them and say, "What exactly would you like me to do with this sample? We can't run analysis on this sample. It is collected in a nonsterile container."

The person looks at me and says, "Why not?"

My reply is, "I am a chemist, not Houdini!" My motto in the

Chemistry world is "Good Quality Data Starts in the Field!" If the way a sample is collected is poor, then there is nothing any chemist can do that will give a person good quality data. This is why field sampling is a critical step in laboratory analysis and is often overlooked as having any impact on the actual data.

There are two types of samples that can be collected in the field: grab samples and composite samples. Each of these has a set of quality control parameters that should be done in the field while you are collecting the samples. Taking quality control samples in the field ensures good quality data in the lab. This will show that the samples were collected in the proper fashion and no contamination has occurred in the field.

There are four types of Quality Assurance, Quality Control (QA/QC) samples - Field Blanks, Trip Blanks, Equipment Blanks, and Field Duplicates. Each of these are unique and give the sampler and the chemist the confidence in the samples being collected. Ohio EPA requires that certain quality control data be collected for samples to be used in reporting. QA/QC is not only done at the bench by the chemist but also in the field and this is how we can ensure that good quality data is being put out to the public.

Field Blanks mimic the extra sampling and preserving process but do not come into contact with the ambient water. These samples are exposed to the sampling environment and site. They are processed in the same manner as the actual samples. These will provide information on contamination resulting from handling technique and through atmosphere exposure.

Trip Blanks are associated with volatile organics. They consist of vials that are filled with deionized water from the lab with zero headspace. The vials are then taken out into the field along with the sample containers. They are used to detect any widespread contamination resulting



from the container and the preservative during transport and storage. The chemist will analyze the trip blank with the samples once they are back in the lab.

Equipment blanks have two forms: the composite sample which uses an auto sampler and the grab sample that uses a stainless steel bucket or cup. Deionized water is used to rinse out these two pieces of equipment and that water is then collected

in the sample containers for the parameters that you are looking for and analyzed in the lab. This type of QA/QC is meant to show if the equipment is being cleaned and sanitized properly between sites and events. This ensures that there is no cross contamination happening with the samples.

Field Duplicates or split samples are duplicate samples taken from the same container and analyzed independently. These show errors due to contamination, random and systematic errors, and any other variability. Care must be taken to ensure the sample is homogenous in nature so the data is not skewed one way or the other.

Criteria for passing QA/QC for the field data varies by each type of sample. The equipment blanks should not be greater than 10% of the method detection limit (MDL) and the field blank should not be in greater concentration than the laboratory blank. Trip blanks should be lower than the blanks that are run in the lab and be no greater than five times the MDL. Field duplicates or split samples should have less than 20% relative percent difference (RPD).

If you are not meeting these requirements then you need to take a look at your sampling protocol and make adjustments. The first place to start is the cleaning and decontamination of the equipment. There should always be log books that accompany the field crews to record how they are handling this process. All equipment needs to be washed with phosphate free soap and if necessary a weak acid or solvent to ensure there is not residue left from washing or samples. The tubing on the auto samplers needs to be inspected weekly if not daily to ensure that it hasn't worn out or has visible contamination. If it does then it needs to be replaced. The carboys are an area that can pose a big threat to contamination. If they are not cleaned regularly they can have mold growth and introduce contamination to all the bottles and equipment that it comes into contact with. We also overlook proper training for the field crews. This is just as important as chemists having proper training in the lab. Once again, Good Quality Data starts in the Field! If your field personnel don't have the proper training, your samples will suffer.

The frequency of your sampling QA/QC is up to your program. The City of Columbus uses once a week and each crew collects QA/QC. We try to cover all tests that are being collected during each week to ensure we are looking at everything that is coming into the lab.

In the lab we calibrate our equipment each time we run samples. The same thing needs to happen in the field. If the equipment is out of calibration you will not collect good samples which in turn means you will not get good quality data. For things like pH you need to make sure you have fresh standards to calibrate with and record these things in your sample log book.

It is funny how the lab and field mirror each other in many ways on how things need to be done to ensure that the data is reliable and accurate. In many labs the chemists themselves will go out and collect the samples which shows how closely related the field and lab are.

There are few ways to help make sure your samples

that are being collected and arriving in the lab are at the highest quality possible. A properly filled out chain of custody is a must as this is a legal document that can and will be used in the courts if you need to defend your data. The field personnel need to ensure these are filled out accurately and completely. Once the samples get to the lab the chemists will in turn check the chains for the same accurateness and completeness. The lab will also do a check on proper preservation and temperature of the samples once they get to the lab. If there are any problems with this, the samples should be recollected.

Overall, I can't stress enough how important good quality field sampling is to the laboratory data that we all use on a daily basis to run our plants, produce studies for the EPA, and go after violators. Field sampling takes a back seat to the actual data at times and people need to understand it is the driver of the data because without good quality samples that come from the field the data is not going to be good quality data. Chemists are not magicians and can't make bad samples give you good data.





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# YOUR HEALTH

As much as 60% of the human body is water. The brain is 70% water. The lungs are nearly 90% water. We are made of water and we can't survive without it. But the water we need also must be clean. Water and wastewater treatment has changed the lives of millions of Americans—all but eliminating fatal diseases such as cholera, typhoid, dysentery, and hepatitis. America has some of the cleanest, safest drinking water in the world and it must be preserved. Your life depends on it.

#### Did you know?

- Water makes up more than two thirds of human body weight. We would die in just a few days without it.
- Water is one of the most essential elements to health and is so important that your body actually has a specific drought management system in place to prevent dehydration and ensure your survival.<sup>1</sup>
- Just as a car cannot run without gas and oil, our bodies cannot work without water. All of the cell and organ functions that make up our entire anatomy and physiology depend on water to function.<sup>1</sup>
- Drinking eight glasses of water daily can decrease the risk of colon cancer by 45% and bladder cancer by 50%, and it potentially can even reduce the risk of breast cancer.<sup>2</sup>
- The World Health Organization estimates that globally 1.1 billion people still lack access to safe drinking water and 2.4 billion people lack access to basic sanitation. That's nearly three times the size of the entire U.S. population!<sup>3</sup>
- If we did nothing other than provide access to clean water and sanitation, without any other medical intervention, we could save two million lives a year.<sup>4</sup>

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## Small actions can make a BIG difference.

- Support and invest in your water infrastructure.
- Don't take water for granted. The water we have now is all that we will ever have. Use it wisely.
- Think before you flush. Everything you send down the pipe ends up at your local wastewater treatment plant. We are all part of the water cycle. We all live downstream.

- Educate yourself. Take a tour of your local water and wastewater treatment plant to learn what happens to the water that you drink and use.
- Read and understand your water and wastewater bill.
- Stay informed about the water quality issues facing your community by contacting your local municipality and attending public meetings.

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We must all work together to keep our water clean and healthy. To do that, we each need to learn to value water. **To learn more, visit** www.WatersWorthIt.org.

# 

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By joining WEF, you also become a member of a local Member Association (MA). Please enter your membership category (Box 1) and the Local MA you wish to join from the list on the next page. Note: District of Columbia, Illinois, Maryland, and Virginia residents have two MA choices. Please indicate your primary choice in box 2 below. If you join both, please add your secondary selection as a Dual MA with the corresponding Dual MA dues in box 3 below.

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1

10 Million Ohioans



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## **Leadership Reflection**

by Nathan W. Coey, City of Pataskala

2017 is in the books and what a year. We embark now on a new year filled with opportunities, goals, and challenges. A new year is filled with hope as we meet each day with passion and gratitude. I recently read an article that outlined gratitude as a discipline to practice and achieve. A quote from the article continues to ring in my head as a form of encouragement. "Gratitude is an invitation to not only gnaw on the bone of existence but to suck out its marrow. It is a gateway to greater wonder, awe, and magic."

Please take a moment to ponder the word leadership. Leadership is all around us and we are daily impacted by the fruits of leadership. You may serve in a professional leadership role in your organization or you may serve as leader in your social circles. Either case, you are a leader in some aspect of your daily life.

As I "gnaw" on the meaning of leadership in my life, I cannot help but be in awe of the magnitude a simple word can convey. As I seek inspiration in my words to you, I am faced with dichotomy as two leaders come to mind. Both, by definition, are leaders in capacity and action. Leader One is inspirational and motivates me to be a better man and strive for excellence. Leader Two causes division, offers petulance for the sake of argument, and a deterrent to positive growth. Both individuals understand the power of their leadership and subsequent influence.

Leader One understands the serious nature of responsibility seeking solution in the trivial and profound. Leader One understands the importance of motivating positive in the darkest reality. Leader One inspires hope. In contrast, Leader Two brandishes a sword of authority to simply smite the dissenters with indifference. Leader Two is most concerned with self-preservation. Leader Two squanders the cup of hope in attempts to satisfy cynicism.

Both leaders traveled the path of experience to the current position. Experience has the power to make us better or make us bitter. It is not fate that guides one to bitter or better, it is an active choice to respond. The individual must decide the placement of an "i" or "e" and its impact on life. It is profound to see that past bitterness provides focus and emphasis on "i" or "me", just like with Leader Two. It is no mistake that using experience to focus on better provides a focus on others like Leader One. Life is a test filled with challenges of which we all can agree. The choices we make frames our reality, experience defines our existence.

Due to a path of bitterness, Leader Two fashioned a sword from experience. All bitterness, anger, insecurities were used in the forging process with a sole focus to reflect retribution in the weapon. It is on hip and drawn ready at a moment's notice. No one is safe in the span of the blade. Due to seeking a better path, Leader One used experiences to grow in knowledge and built a tool box. Inside the tool box are examples of growth and knowledge. Success and failure provided the precise implements needed for success. The tool box comes with pride to complement the craft. There is humility knowing there is a tool to help anyone with any job.

We have opportunities every day to build the legacy of our leadership. Will your legacy leave a weapon of selfpreservation loaded with conceit? Or a tool box loaded with implements of humility? The choice is yours.

The \$29.99 Better Leader Program.

1. We must acknowledge the gravity of our leadership. We must understand that in the darkest moment inspiration can be found. How can we positively lead?

2. We must reflect on collective goals. We must understand that our focus is not on "I" but others. How can we positively exhibit success?

3. Never quit learning. We must understand wisdom complements positive leadership and take advantage of the intelligence from great leaders. How can we lead by example?

Be encouraged. You have the ability to be a superhero every day. We have the super power to choose to use the power of positivity in all we do. Take a look around, look up from your device and you will see a world so desperately in need of hope. Positivity and optimism is a power that needs awakened in leaders and implemented with strength and boldness.

I leave you with a quote from Delaware County Sheriff Russell L. Martin via his Twitter account.

Godspeed friends, Nathan W. Coey



Sheriff Russell L. Martin · 1/6/18 When #leadership goes to your head (#pride) & is not a byproduct of the heart (#humility) perspective will be lost. The authentic #leader should be reminded it is not about you, but them. This can only be achieved thru routine and regular personal #evaluation & #accountability.



## **A Chat with Christen Wood**

by Megan Borror, OWEA Staff

#### THIS OWEA MEMBER IS A UNIT PROCESS MANAGER AT NEORSD AND CAPTAIN OF

### NEORSD'S OPERATIONS CHALLENGE TEAM, MINIMAL HEADLOSS.

**STAFF:** What is your educational background?

**WOOD:** I actually went to University of Findlay for Pre-Veterinary Medicine. That was where I got started and about three years into the program, I realized it was not really quite the right fit for me so I graduated with a Biology Degree and a Minor in Chemistry. I didn't know what I wanted to do. I went back to get my Masters in Business, MBA. I was just working a bunch of weird,



odd jobs just trying to figure out what I was going to do because no one wanted to pay me to learn about Biology.

#### STAFF: How did you get into Wastewater from there?

**WOOD:** It was an accident. I was working for my dad selling office equipment and doing purchasing for him. It was not necessarily what I wanted to be doing because it had absolutely nothing to do with Biology, Chemistry, and Physics, and all of those things that I love, but it was the paycheck so I was grateful for it at the time.

A local newspaper ran a series of articles about "The Brain Drain" in my hometown of Ashtabula and it was about how there was a disconnect between kids going to college and not being able to get a job and businesses and companies were not able to find people with the college degrees as well. It was kind of a weird disconnect and they were exploring ways to bridge that gap. I wrote to the guy that was writing the article and I said, "Oh my gosh, I'm so glad you wrote this! This is about me. This is the same thing that I'm going through." He said he was writing another article the next week and he asked if he could take my picture to go with the article. I said, "Sure." There was a picture of me standing on Main Street with a pile of Accounting and Biology books. The day that article ran the Wastewater Treatment Plant called me and said, "We need you to get down here and apply today." I started in the lab in Ashtabula and they doubled my salary on the spot. I was doing Biology and Chemistry and Physics and it was exciting. It was a career opportunity instead of just trying to pay the bills, which was really exciting to me.

**STAFF:** How did you end up at NEORSD?

WOOD: I worked in Ashtabula's lab for about three

years and then I came to NEORSD in their lab for another year. They are two very different environments. When I was in Ashtabula you were out in the plant and taking samples. It was really hands-on. Then I came to NEORSD. Instead of having a broad focus you have a very specific and deep focus, which is fabulous. I was able to learn about whole effluent toxicity testing and fecal coliform and e-Coli in way better depth than I ever did before but I missed the connection

with the actual process. Samples showed up in jars but there was no connection to what that meant in the wastewater treatment process. After about a year at the NEORSD lab I decided to head on down to the plant and I've been in operation down there ever since.

**STAFF:** What is your specific job title and what are you doing for NEORSD now?

**WOOD:** Right now I'm what's called a Unit Process Manager. Because Southerly's plant is enormous—it's 270 acres—we have an average flow of right around 100 MGD but you can go up to above 600 MGD really quickly during rainstorms. There's a huge amount of equipment and processes that goes along with that so we have to divide the plant into sections. I am in charge of coordinating the operations for the primaries, the ferric chloride addition for phosphorous, the cyclone degrit facility, and our new chemically enhanced high-rate treatment system which is a combination of chemically enhanced primary treatment and highrate disinfection. I kind of am the interface between the maintenance department and the engineering department and the operations department. It's my job to make sure we're all moving in the same direction and making sure that we treat the wastewater in the best way possible. Not necessarily what's the easiest thing for operations, or the best thing for mechanics, you know sometimes it's a compromise situation and that's my job.

**STAFF:** What are your career aspirations? Where do you want to go with this?

**WOOD:** I definitely want to be in wastewater. The cool thing that I found about wastewater is that anything that I've gotten involved with, I like. Probably in the

next year or so I am going to look more into the SCADA and programming side of things but I think operations will probably always be where I end up.

Here's my base story on why I know I'm an operator. We have 270 acres so I have a bicycle. Some of the other people do too to be able to get to meetings on time. There

was one day my tire was kind of running low and I ran into one of the engineers who was also on his bike and I said, "I have to go get some air in my tire," and he goes, "Wait, you don't pump your bicycle up to 65 psi every day? That's what the tire pressure is supposed to be." At that moment I realized I was an operator because I was waiting and looking for a problem and trying to solve the problem as opposed to looking at the design specs and finding the theoretical best. I think operations suits my natural tendency to look for and solve problems as opposed to some of the other departments that are really, really helpful but maybe I don't have an aptitude for.

**STAFF:** What would you say is your absolute favorite thing about your career?

**WOOD:** There's so many great things about my career. I like that we are the good guys when the news comes on and there's all kinds of bad things happening in the world. I know that the people in my industry are the ones that every day put their heads down and save lives. They do not need recognition for it and they don't need politics for it. They are just out there doing really good, really important work saving people. Most of the time they do not want the recognition that goes with that. Probably my second favorite thing-which would be a close runner up—is that it's so exciting. The technologies coming along are always changing, the process is always changing, there is always something new to learn, and there is always a new avenue to explore. I cannot get bored in wastewater and I really like that.

**STAFF:** What advice do you have for individuals looking to advance in the industry?

**WOOD:** Probably the best advice is just to learn everything you can and if you are excited about the learning, everything else will fall into place. If you are excited about learning about the technical side of the process, you are going to be really good at the technical side of the process. If you are excited about learning about the management side of the process, you are going to be good at that. As long as you love to learn and quite frankly—to fail and to try again and you love that process, you're going to be fine. Everything else is just on the side.

STAFF: What is the biggest challenge you face in the

## "I think operations suits my natural tendency to look for and solve mave problems." over

industry?

WOOD: For me personally, I have so much passion for the industry that I love to share that with everybody and sometimes it comes off a little bit overbearing because I truly believe in what we do. Sometimes I have to back off on my excitement a little bit. It is hard for

me to understand why other people aren't already really excited. They don't throw a little celebration every time they flush the toilet or they turn on the tap and it is clean water. That should be exciting to people and when it's not it's a little difficult to reconcile all of that with the reality that people just expect this magical, clean water to happen.

**STAFF:** Do you have any advice specifically for young women in the industry?

**WOOD:** The biggest thing is just you absolutely can be whatever you want to be. I never thought about myself as an operator growing up because I never saw anybody being an operator. All the women operators, all the women engineers, all of the women managers are some of the best people that I work with and for. Sometimes women in the industry or outside the industry think that it is not for them and I just argue that it absolutely is and that we need them. So just jump in and get in there.

**STAFF:** What is something that you want to see change in the wastewater field over your lifetime?

**WOOD:** The number one thing that I would love to see change is the level of respect for all of our professionals from within our industry, people looking at themselves and realizing that they are saving lives and they are professionals and they deserve to be respected. To be respected from the outside world that never thinks about what we do. For different departments to respect all the inputs from other departments. That would be what I would love to see. I see too many people that just do not realize what a great thing it is that they are personally putting in and I also see sometimes that they don't see what the other people are doing. That is my biggest goal and hope for the industry is that we would raise the level of respect for people in our industry across all fields.

STAFF: How did you get involved with OWEA?

**WOOD:** When I was working for the City of Ashtabula I actually had a really great mentor there and he made sure I knew that joining professional organizations was kind of the linchpin of making it a career instead of a job. At first it was mostly NE Section's Lab Analyst Committee. I would go to their meetings and their contact hours and started meeting people. It really took

off when I was finally able to put together an Operations Challenge team. In 2016, our Operations Challenge team competed at state conference and we actually won a spot at the national conference. That was the time where I really started to dig in and get involved because I realized how many different facets that the group was involved in, and how important the work was and how great the people doing it were. Somewhat naively, I thought between Ashtabula and NEORSD I had seen and done it all and I had not even scratched the surface. I had to meet people outside of those areas and see what they do, and how they do it, what technologies they use, and what they had to overcome. There is a whole world of wastewater professionals out there doing really great things. OWEA was instrumental in introducing me to them.

STAFF: How did you get involved with Ops Challenge?

**WOOD:** I saw an article in the Buckeye Bulletin once. I believe it was the Volatile Solids team way back when I started my career and I remember asking our tiny plant, "What is this? How do we get involved?" And they said, "Yeah, that's the best" but no one else was really interested in it. I kept watching it and I kept wanting to be a part of it and when I got to the Southerly Plant, I managed to find some other people that were crazy enough to get involved and we were able to convince people that it was worth it to let us have the time to practice and travel. I originally looked at it as "I just really like competition" but the more that I researched it, got into it, and competed, the more things I realized were in the program. We were building that respect that I was talking about where people are really respected for being some of the best in their industry and here is the proof for it. "We beat the score here" or "We did it faster this way." I also noticed my team members were better employees after practice. For example, one of our team members is in charge of calibrating instruments in the field. He is an electrician by trade so the calibration was just a part of the instrumentation. Because he was competing in the lab event, his calibrations were taking a third of the time they were before because he was nailing that meniscus every single time because he had been training for Operations Challenge.

Then the networking aspect of it has been incredible, as well. I had a question about one of our technologies so I can call up the people from the Cincinnati team and ask them if they have it and if they like it. It is just really a great community and I did not expect it when I started down that path but when I saw all of the benefits of it, I am in with both feet, that's for sure.

**STAFF:** What advice do you have for other municipalities that would want to start an Ops Challenge team?

**WOOD:** The good news for them is that you do not have to have a full team. You can mix and match from different municipalities if you only have two guys that

are interested, you may be able to join up with another plant that has two guys that are interested. The capital investment—you don't have to buy the equipment. Most of the other Ohio teams either have it or are willing to share it. OWEA purchases some of it. These are probably the two biggest barriers that I hear people talk about and they are not. The benefits of sending a team are well worth any investment that you have to put in up front. Even with that, there is very little that you would have to pay for if that is one of the major concerns.

**STAFF:** Is it true that you were pregnant while you competed at WEFTEC?

WOOD: It is true!

**STAFF:** What was that like?

**WOOD:** It was exhausting! I do not think I would do it again knowing how hard it was going to be but my team was incredible. I had assumed that I would need replaced by WEFTEC and they were the ones that encouraged me to stay in. We had to modify some of the events a little bit, like the safety event. I could not be the person going down the manhole because we weren't sure if I was going to fit going down the manhole. They were so understanding and helpful but it was probably the most exhausting thing I have ever done. It was a brutal contest over the course of two days anyway, but I was either seven or eight months pregnant while competing at WEFTEC, so it was intense.

**STAFF:** That is impressive! Who is someone that you admire in the industry and why?

**WOOD:** There is so many really, really great people. Jim Borton from the Operations Challenge has been



Christen Wood in "We treat the water (right)" music video.

instrumental in supporting our team, getting us prepped, so I would give a shout out to him. Also at NEORSD, Kathryn Crestani has been an incredible mentor for me. As a woman in wastewater she has shown me how to carry myself in the field and she has been supportive of everything that I've done. She is not afraid to give me honest feedback, which I really appreciate. Kim Nordquest- he is retired now, but he was at City of Ashtabula and he encouraged me to get involved with OWEA and made sure I knew that the wastewater field wasn't just a job, it's a career. He showed me what it meant to be a professional and how to go about doing everything with a lot of passion instead of doing exactly what you are told every day. They are probably my three

biggest. There are so many other people. We could do an Academy Awards speech right now.

**STAFF:** How do you feel about writing WEF's new fight song?

WOOD: That was a really fun experience. If anybody wants to follow me on Twitter. I am @ Sewer\_Chic. There is a really great wastewater Twitter community. Jason Tincu from Southwest had sent me the link for it and said, "Oh my gosh, you have to do this!" I didn't mean to write a rap about... water but I had an app on my phone that played different genres of music. It can lay down a backbeat and I was just flipping through them and putting dishes away and the hip-hop backbeat came on and, "we treat the water, we treat the water right" just kind of happened. When my husband was singing it around the house I knew I had something. It just kind of went insane from there. I got to go out to Chicago and perform live at the Jammin4 Water fundraiser. It

# WE TREAT THE WATER (RIGHT )

IS IT SEWER CHICK OR SEWER CHIC? LOOK BENEATH YOUR FEET, UNDERNEATH THE STREET.

INFRASTRUCTURE BRINGING A FAMILIAR BACKBEAT. WE BUILD IT UP LIKE CONCRETE ATHLETES MODERN MARVELS, SEWER SYSTEMS ARE A GRAND FEAT.

WE TREAT THE WATER RIGHT SHIFT WORKIN ALL NIGHT BRING THE FIGHT TO THE ALGAE BLIGHT WE TREAT THE WATER RIGHT

PRY THE MANHOLE UP SEE THE FLOW DOWN BELOW TAKING SAMPLES LIKE A LABORATORY PRO. SAFER CLEANER H20 BY THOSE WHO KNOW

RIVERS RUNNING BUT MY COLLEAGUES NEVER WILL, YO.

was really cool and I got to meet a lot of really great people. There are a lot of really talented musicians in the wastewater industry. The song has so many views on YouTube and Facebook and it took on a life of its own. It is something that I accidentally got involved in but I'm really glad that I did.

**STAFF:** What would you say is your biggest career accomplishment thus far?

**WOOD:** My biggest career accomplishment thus far was getting the Operations Challenge team at WEFTEC 2016. The fact that we were able to get the team together, to perform well enough to be on that national stage and

WE TREAT THE WATER RIGHT SHIFT WORKIN ALL NIGHT BRING THE FIGHT TO THE ALGAE BLIGHT WE TREAT THE WATER RIGHT

NOW LET ME SET THE SCENE: YOU WANT YOUR RIVERS CLEAN,

YOU WANT YOUR LAKES PRISTINE,

FISH LIVING IN THE STREAM. SEE THE TOILET AND THE TAP NOW WHAT'S BETWEEN? YOU MUST RESPECT ALL THE WORKERS WHO ARE UNSEEN.

WE TREAT THE WATER RIGHT SHIFT WORKIN ALL NIGHT BRING THE FIGHT TO THE ALGAE BLIGHT WE TREAT THE WATER RIGHT to perform as well as we did considering we did not have the experience. No one from our team had ever been there before. To be on that stage with that caliber of people was definitely the most wonderful thing that I have ever been involved in and I am hoping to go back and do that again.

**STAFF:** Is there anything else you want to share with the membership?

**WOOD:** We already talked about it but I want everyone to know that they are respected and they should be passionate about what they do. They should be passionate when they are talking to people outside of our industry and inside of our industry and recognize how really, vitally important we are. Doctors save lives but we save more. You need to remember that.



# "Doctors save lives but we save more. You need to remember that."



LEFT: Christen Wood in "We treat the water (right)" music video. RIGHT: NEORSD staff, from left, Mike Canfield, Ryan Kelly, Chad Leasure, and Christen Wood, celebrate a job well done at their facility. Photo courtesy of Leasure.



### **Fireside Chats - Looking for Recommendations!**

The Fireside Chats is a series for the Buckeye Bulletin focusing on leaders in the industry. The Question and Answer Feature will dig into their leadership role and how it has had an impact on the industry. We will be focusing on leaders from OWEA to Plant Superintendents and every leader in between. Please nominate your boss, coworker, or someone you admire for a future article by emailing Megan Borror at: meganborror@ohiowea.org.

## **Christen Wood Pens New WEF Fight Song**

As the operators, engineers, and scientists on the frontlines of the fight for clean water, Water Environment Federation (WEF; Alexandria, Va.) members know that inspiration can strike at any moment. For Christen Wood, the winner of WEF's Sound Off for Clean Water Song Contest, it struck while she was putting away dishes.

WEF's first-known song titled was written in 1979 by Bertha Lang, wife of Martin Lang, WEF president 1978– 1979. This original song inspired the contest.

WEF launched the contest for a song in August. Members were asked to write a song reflecting on WEF's focus of protecting public health and the environment. After learning about the competition, Wood, a unit process manager at the Northeast Ohio Regional Sewer District (NEORSD; Cleveland), knew she wanted to enter.

"After someone told me about the contest, I knew I wanted to try to write something, but I didn't know what," Wood said. Using an application on her phone, she sampled music from different genres during her down-time. The chorus that would become the name of her winning song, a catchy, two-minute rap called "We Treat the Water (Right)," "wrote itself" when the right hip-hop beat began to play, Wood said. "I had to work a bit harder to write the verses, but I knew I had something when my husband was humming the song around the house."

Northeast Ohio Regional Sewer District's communications team developed a music video for the new WEF fight song. Photo courtesy of Northeast Ohio Regional Sewer District.

Once Wood decided on music and lyrics, she entrusted the song to NEORSD's communications team, who produced a music video in a single day. The quick turnaround was not out of the ordinary for the team, which releases videos combining entertainment and responsible water stewardship messaging regularly on the NEORSD YouTube channel. Creating the music video involved combining footage from previous productions – and since Wood features prominently in many of those videos, making her the star was not difficult.

"They're amazing," Wood said of her communications team. "They're real professionals who love both wastewater and social media, a mix you don't see often in this industry."

Wood and many of her coworkers, including another operator, Ryan Melton, are featured in the music video. Photo courtesy of Northeast Ohio Regional Sewer District.

While "We Treat the Water (Right)" was Wood's first original song, her interest in music spans decades. Before deciding on a career in water, middle-schoolaged Wood was set on a career in show business, and was an active participant in her school's choir and band, she said. Most of her previous songwriting has involved adding a wastewater-themed twist to already popular songs – for example, rewriting Drake's "Started from the Bottom" to educate viewers about how pumps work.

In line with her new status as one of the wastewater world's top performing artists, Wood performed live during Jammin' 4 Water at WEFTEC 2017. The annual, open-mic concert event allows water professionals to show off their musical chops while fundraising for water charities. Despite a healthy dose of stage fright, Wood said she was "absolutely 100% in" when asked to perform.

Since entering the water sector, Wood has worked as a laboratory analyst, operator, and unit process manager. Photo courtesy of Wood.

In addition to laughs and smiles, Wood hopes her song inspires viewers to pay more attention to the crucial work water professionals perform every day.

"I hope the people in the industry realize how incredibly important their work is. They are saving lives, but most of the world doesn't know that. For anyone outside the industry, I hope this song helps to recognize the true value added by clean water and the people who do the work."

"We Treat the Water (Right)" has been chosen as WEF's new official fight song.

Keep up with Christen Wood on Twitter by following @ Sewer\_chic, and with NEORSD at @neorsd.

Reprinted with permission from WEF Highlights.

## How Fish Shelves in the Black River Area of Concern are Contributing to Ecological Recovery from an Industrial Past

by Chip Wendt, Water Resources Specialist, Coldwater Consulting LLC



(Figure 1. Aerial Map of River Miles 0-5)

The Black River, a tributary to Lake Erie, is generally characterized in its lower reach as being heavily modified as a result of industrial and urban development. Stretching back to the early nineteenth-century the City of Lorain, Ohio served as a significant Great Lakes port with a variety of heavy industries flourishing along the river including steel and automobile manufacturing, ship-building, and raw material transport. To facilitate shipping and commerce, the Lower Black River lacustuary has been periodically dredged and subject to other hydromodifications throughout its industrial history. From the mouth of the river at its confluence with Lake Erie to five miles upstream, these activities have altered the river's geomorphic form and have effectively removed nearly all structure utilized as habitat by fish and other aquatic organisms (e.g., rocks and woody material). More than a century of industrial activity has led the U.S. EPA and Environment Canada to classify the Lower Black River as an Area of Concern (AOC). Such a designation is given only to severely degraded waters failing to meet a set of criteria established to quantify the level of impairment; categories include, but are not limited to, loss of fish and wildlife habitat, degradation of fish and wildlife populations, degradation of benthos (bottom-dwelling organisms), and degradation of aesthetics. There are currently four AOCs in Ohio (Ashtabula, Black, Cuyahoga, and Maumee Rivers) in addition to 23 other AOCs within the United States across the Great Lakes.

The City of Lorain, Ohio has received approximately 27 million dollars and has completed eleven projects to date. Federal and state funding has been awarded to fund projects in the Black River AOC from the U.S. EPA, U.S. Fish and Wildlife Service, U.S. Forest Service, National Oceanic and Atmospheric Administration, Ohio EPA, and Ohio Department of Natural Resources which have

provided for multi-faceted environmental remediation and restoration activities.

One of the more notable strategies employed in the Black River to address the loss of fish and wildlife habitat and the degradation of fish and wildlife populations is the physical placement of aquatic habitat structure, herein referred to as fish shelves. The concept, design, and construction of fish shelves within the river varies based on existing conditions as well as specific project goals, permitting restrictions, and future climatic conditions. Two types of fish shelves have been designed for use in the Black River; a traditional naturalized design mimicking native riverine habitat features as well as a hybridized design that utilizes natural habitat components that are incorporated into the hardened (bulkheaded) shoreline. Fish shelves have been installed between river miles 3-5 and are currently being constructed at river mile 0.2 within stretches of the Lower Black River that were previously devoid of in-stream cover.



(Figure 2. Traditional Fish Shelf Rendering)

In general, fish shelves are designed to replicate natural habitat features desired by fish and other aquatic organisms and are often used in conjunction with stream restoration techniques to provide ecological benefits through bank stabilization, erosion reduction, and riparian buffer enhancement. This is certainly the case in the Lower Black River between river miles 2.8-4.7 where existing conditions are characterized by active erosion and legacy non-point source pollution associated with steel manufacturing.

To construct fish shelves in this scenario, a varied thickness of appropriately sized limestone aggregate (3"-12") is placed on the streambed parallel to the shoreline and

extending approximately twelve feet water-ward towards the middle of the channel. This small sized aggregate rock transitions to larger boulders (18"-30") which serve not only as a means to provide habitat heterogeneity, but also as a stabilization measure ensuring that smaller rock does not migrate from its installed location. To further increase the habitat complexity, random boulder clusters are placed upon the fish shelf. As time progresses, soil material naturally accumulate on the fish shelf and eventually supports emergent vegetation within the landwater interface.



(Figure 3. Construction of Traditional Fish Shelf)



(Figure 4. Traditional Fish Shelf at Low Water)

Not unlike many industrialized and urban rivers or streams, the banks of the Lower Black River have been hardened with steel sheet piling and/or concrete along the first three miles to facilitate shipping and commerce. Shoreline hardening or armoring is a widely used technique intended to protect shoreline-adjacent infrastructure from the forces of water generated by flooding, ice, storm surge, or commercial vessel traffic. Hardened structures further exacerbate the strain upon fish and wildlife populations as they provide little ecologic value. Fry and juvenile fish are especially vulnerable as they travel downstream from spawning locations to Lake Erie; lacustuary areas once dominated by backwaters and coastal marshes critical for fish at that life stage are instead now characterized by a deeply dredged channel and miles of river devoid of any refuge habitat.

In the interest of protecting infrastructure and large economic drivers like steel manufacturing and associated commerce, it is clear that hardened shorelines will continue to be the reality in much of the Lower Black River. Still, the need for ecological improvements remain and the approach to addressing the loss of fish and wildlife habitat considering the constraints simply requires a hybridized methodology to fish shelf design and construction as compared to the more traditionally naturalized techniques.

Construction is underway on a project aimed at incorporating fish shelf components on a steel bulkhead. The site is situated near the mouth of the Black River and is subject to high wave energy that necessitates the steel armor. Due to the proximity to the dredged shipping channel and depths exceeding 30 feet, a hybridized approach to designing and installing fish shelves was warranted.

To incorporate desirable habit features in this scenario, 42-inch semi-cylindrical structures are welded to the convex surfaces of the sheet piling in intervals and filled with a combination of 6-inch to 18-inch stone and hardwood logs such that enough capillary space exists between the rock and wood to provide refuge areas for passing aquatic life. Appropriately sized, spaced, and oriented access openings are fabricated along the semicylindrical structures to permit ingress and egress by





(Figures 5 & 6. Bulkhead Fish Shelf Construction Details)

### **Watershed**

juvenile fish species. The corrugated nature of sheet piling also permitted the utilization of the concave surfaces of the sheet where cribbing is employed to hold the rock and wood habitat structures against the face of the sheet. Utilizing both convex and concave surfaces to house habitat materials maximizes the volume of habitat space created. To further increase the complexity of the habitat, horizontally oriented box-like structures filled with 6-inch stone are installed on intervals opposite of the semi-cylindrical structures, at various depths to encourage spawning by species commonly associated with the mouth/harbor area. Designing and constructing heterogeneous habitat complexes maximizes the potential for multi-species utilization and serves to ultimately positively impact fish and wildlife populations.

Fish population assessments are completed periodically in the Lower Black River and the metric used to quantify the value of fish species richness and abundance with regards to river health is the Lacustuary Index of Biotic Integrity (L-IBI). Prior to construction of the fish shelves during 2010-2011, only 27% of sites generated L-IBI scores meeting criteria targets. Following construction of the fish shelves during 2012-2015, 67% of sites met L-IBI criteria targets. This represents a significant increase from historical population assessment data.

Well over a century of industrialization and urbanization

has obviously impacted the Lower Black River. Over time, the remediation and restoration activities taking place within the Lower Black River AOC aim to drive recovery towards a healthy river. It's important to note that while fish shelves are markedly effective, they merely represent a component of a multi-faceted effort to address the degradation within the watershed and the river. Constructed fish shelves have direct benefits to the Lower Black River AOC and periodic monitoring suggests increases in species diversity, abundance, and health in addition to increases in overall habitat quality. Coupled with bank stabilization techniques and riparian buffer enhancements, fish shelf projects in the Lower Black River exhibit ecological restoration techniques that positively impact fish and wildlife populations.

The Lower Black River AOC Remediation and Restoration Program Manager, Kathryn Golden, is the Stormwater Manager at the City of Lorain Engineering Department. Visit http://www.cityoflorain.org/engineering/lower\_ black\_river\_restoration to learn more about the program and other projects within the Lower Black River AOC.

The author, Chip Wendt, is a Water Resources Specialist with Coldwater Consulting, LLC. Visit www. coldwaterconsultants.com to learn about additional projects that work towards environmental recovery within the Black River Watershed and beyond.





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## **UNLEASHing the Sustainable Development Goals**

Eight WEF young professionals explore global issues

by Fidan Karimova



This year, an inaugural event, called UNLEASH (www. unleash.org), brought together more than 1000 talents from around the world to tackle the United Nation's Sustainable Development Goals. The Water Environment Federation (WEF; Alexandria, Va.) sponsored eight young water professionals to attend Great Water Cities Conference in Denmark to represent the North American water sector.

After several days of a facilitated innovation process, conceiving solutions and testing them with leading experts and companies, one the WEF-sponsored professionals, Fidan Karimova, was selected to receive the Most Visionary award. Ashton Kutcher presented this award in front of thousands of attendees, which included the Princess of Denmark.

#### **The Sustainable Development Goals**

The Sustainable Development Goals (SDGs) originated in 2016 to continue the work of the United Nation's Millennium Development Goals (MDGs) that originated in 2000 with 189 countries signing on to seek their achievement by 2015. Between the two lists, the number of goals increased from eight to seventeen, adding areas that were not previously covered. The SDGs is the largest global partnership agreement and development plan for the planet ever made, according to the UNLEASH website. SDG 6 seek to "ensure availability and sustainable management of water and sanitation for all."

#### **WEF's role and contributions**

Although North American countries are not automatically associated with vulnerable water sources, the Flint, Mich., water crisis in the U.S. and radioactive particles in northwestern Ontario in Canada prove that no region is immune to water issues. The Water Environment Foundation (WEF) was established exactly for this reason — to protect public health and the environment through increasing the awareness of the affect and value of water. WEF supports young professionals in the water industry and encourages them to take on more proactive roles in the industry.

Once in Denmark, the eight WEF-sponsored participants mixed with the other 1000 participants and were placed

in groups with people from throughout the world. For example, Karimova's team consisted of four men from Mexico, Denmark, Canada, Brazil. They named their team OTWOH, which is a play on words — H2O reversed into O2H/OTWOH. It stands for Ocean Plastics to Heat.

This team, led by Karimova, proposed an alternate source of energy at water resource recovery facilities. The proposal calls for harvesting pollutant plastics from the ocean and using them as a fuel source via the process of gasification. The idea originally generated with Karimova's organization, Global Water Girls (www.globalwatergirls. com), and the UNLEASH group developed it further.

The group is continuing to work on the project after the UNLEASH event and hopes the solution will eventually help disrupt the waste and energy industries.

#### Why seek the SGDs?

Water and sanitation are key to thriving communities in promoting the growth of future healthy generations and access to a cleaner environment. This goal gains even more importance when taking into consideration that 1.8 billion people globally use a source of drinking water that is fecally contaminated and 2.4 billion people lack access to basic sanitation services, such as toilets or latrines, according to the UN. However, since 1990, 2.6 billion people have gained access to improved drinking water sources; so progress has been made and needs to continue.

To quote Leonardo Da Vinci, "water is the driver of nature." Once we learn to better take care of our water systems, we will be able to meet many of the other SDG goals. The UNLEASH event helped highlight, once again, that SDG6 is at the core of all the other issues. If addressed, it could help simultaneously meet many other SDGs.



Fidan Karimova is water technology collaboration manager at the Water Environment & Reuse Foundation (Alexandria, Va.).

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## As Flushable Manufacturer Sues, We Push Back

WEF and NACWA File Amicus Brief in Support of

District of Columbia's Wipes Law

by Brianne Nakamura and Steve Spicer



On Nov. 14, 2017 the Water Environment Federation and the National Association of Clean Water Agencies filed an amicus brief in support of a District of Columbia law to regulate disposable wipes.

This law, the Nonwoven Disposable Products Act of 2016, aims to protect the sewer systems from backups by defining the term flushable for any disposable wipes sold within Washington, D.C., and requires manufacturers of non-compliant products to "clearly and conspicuously label" them as products that "should not be flushed."

#### **The Law**

This law is the first successful attempt by any jurisdiction to enact legislation to define flushable officially for labeling, the brief states. The law provides that a "nonwoven disposable product" that is offered "for sale in the District" can be labeled as "flushable" only if it: "(A) Disperses in a short period of time after flushing in the low-force conditions of a sewer system; (B) Is not buoyant; and (C) Does not contain plastic or any other material that does not readily degrade in a range of natural environments."

The D.C. Council passed the law unanimously in December 2016. As introduced, the bill prohibited the advertisement, packaging, or labeling of any nonwoven disposable product as flushable, sewer safe, or septic safe unless the claim is substantiated by competent and reliable scientific evidence. The bill authorizes the District Department of Energy and Environment to impose civil fines and penalties to sanction non-compliance with its provisions. The law requires the labeling rule to take effect Jan. 1, 2018, a deadline that the district is unlikely to meet.

#### **The Call to Action**

Since Washington, D.C. is a federal city, Congress has granted the city home rule authority to make and implement its own laws. But, the U.S. Congress also has retained jurisdiction over policies and budget matters; on occasion Congress has revoked district laws. In July 2017, some members of Congress suggested that they would take full advantage of this policy, by introducing a rider to the DC Appropriations Bill that would prevent the district from moving forward with the wipes legislation.

In response, WEF sent a letter of support to D.C.'s non-voting member of Congress Rep. Eleanor Holmes Norton and members of both the House and Senate Appropriations Committees to protect the district's new law. Additionally, WEF issued a "Call to Action" to the WEF membership urging them to contact their senators and representatives to oppose the rider. The WEF Water Advocates program had a resounding response with 232 letters sent in just one week.

### The Lawsuit

The Kimberly-Clark Corp. has sued the district to stop enforcement of the law. The plaintiff's case states that requiring manufacturers to adhere to the definition set forth in the new law "restrains commercial speech and compels speech by private actors," which would violate the First Amendment. The manufacturer's claim further says that the law violates the Commerce Clause because it invalidly seeks to regulate the conduct of manufacturers in other states by imposing civil sanctions on conduct that is entirely lawful in other states.

#### **The Amicus Brief**

In the brief supporting the district's right to enforce the law, WEF and NACWA state that they "have a strong interest in the Court rejecting the current challenges to the authority of state and local governments to decide which products may safely enter their own sewer and wastewater systems and to create mechanisms to enforce those standards."

The 32-page brief describes the burden that wipes place on sewer systems in Washington, D.C., and nationwide. "The increased popularity of wipes marketed as 'flushable' has been accompanied by a rise in costly burdens associated with handling flushed wipes — burdens borne directly by municipalities, utilities, and ratepayers," the amicus brief states.

The brief explains the effects of wipes that do not readily degrade. They can combine with fats, oils, greases, and other debris to cause major clogs in sewer and wastewater systems. They can accumulate in pump impellers; this leads to reduced efficiency, increased electrical power used by pumps, and, potentially, complete malfunction. To restore service, workers must perform the costly, time consuming, and hazardous task of physically unclogging the pumps.

The full brief can be read on the WEF website at *http://* 

### **WEF Headquarters**

#### bit.ly/DC-wipes-amicus.

WEF continues to support the District of Columbia law, as well as convey the burden that flushable wipes and other products can cause our infrastructure. We encourage our members to continue to share their stories and hardships with their communities and representatives, along with the messages to "Only Flush the 3Ps" and "Toilets are not Trashcans."



Steve Spicer is the director of Content Creation and managing editor of Water Environment & Technology

magazine at the Water

Environment Federation (Alexandria, Va.). He can

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Brianne Nakamura, PE, ENVSP, is the manager of Collection Systems and Sustainability in the Water Science & Engineering Center at WEF. She is the staff liaison for both the Collection System Committee and the Flushables Task Force. She can be contacted at bnakamura@wef.org.



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