

Buckeye Bulletin

Ohio Water Environment Association | Volume 88:3 | Issue 3 2015



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3

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FEATURES

Ohio Mixer & Buses to WEFTEC 2015 7-8 Kocarek Korner 9-11 Watershed Workshop 24 Ohio EPA Update 30-32 2016 Conference Save the Date & Call for Abstracts 37 Thank You 2015 OWEA Sponsors 38-39 2015 Conference Recap and Photos 40-45 Children's Water Festival 46-47 Plant Profile - Polk Run WRF 52-55 Collection Systems Hands-On Workshops 56 Emerging Issues in the Watershed 60-61 How Alkalinity Affects Nitrification 70-71 The State of the Flush 76-77

DEPARTMENTS

OWEA Officials 4 **OWEA News** 5 Calendar of Events 5 President's Message 6-7 WEF Delegates' Report 12-13 **Section Reports** 14-16 **Committee Reports and Updates** 16-23 26-27 **Operations Quiz** 21 Roll Call 24 Welcome New OWEA Members Utility Partnership Program 25 Advertiser Index 82

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Get Involved - Join a Committee Today

The Ohio Water Environment Association has 25 committees which focus on various aspects of the water quality field and association operations.

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

OWEA News and Calendar



OWEA NEWS

OWEA Summer Intern

Christine Darkes is a senior at The Ohio State University and will graduate December 2015 with a degree in Environmental Public Health. With a special interest in water issues, Christine hopes to pursue a future career in the field. She hopes to work specifically with the EPA or CDC, in which she has the opportunity to travel and work out in the field.



Christine is very thankful for her opportunity to work with OWEA, and is excited to see what is next in store for her.



400 Dayton students attended the Dayton Water Career Conference in May 2015 to learn about careers in the water quality field..



Joe Bates, Richard Stockton, and Brad Ault from the Village of Yellow Springs talked to students about possible water careers.



Amy Davis and Judi Henrich staffed the OWEA exhibit table and distributed water quality career information.

OWEA CALENDAR

August 2015

- 5 NW LAC Summer Meeting
- 7 NW Spouse and Friends Day
 12 Executive Committee Meeting
- 18 One Water Utility Management Workshop
- 22 SE Friends and Family Night

September 2015

- 17 SW Section Meeting
- 17 NE Collections Hands-On Workshop
- 26-30 WEFTEC in Chicago
- 27 Ohio Mixer at WEFTEC
- 29 OWEA Member Bus Trips to WEFTEC

October 2015

- 3 Race for Global Water
- 7 OWEA Mega Meeting
- 8 SW LAC Meeting
- 10 NE 2015 Clambake
- 15 SW Collections Hands-On Workshop
- 21-22 Plant Operations/Lab Analysis Workshop
- 29 SE Collections Hands-On Workshop

November 2015

- 5 NW Collections Hands-On Workshop
- 12 Watershed Workshop
- 18 OWEA Executive Committee Meeting

December 2015

3 Biosolids Workshop

Membership Services

If you need assistance with membership details, event registration, or coursework reports, contact us at 614.488.5800 or:

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Career Opportunities

The "Careers" page is the most visited page on OWEA's website.

- ♦ No charge for job seekers.
- ♦ No charge to post a position if you or a fellow employee are an OWEA/WEF member.
- **♦ \$143 for a 30 day posting** if not a member.
- ♦ \$143 for a Professional Membership We encourage you to join OWEA and reap all the benefits of membership. Same price as a posting!

Click on the Careers tab at www.ohiowea.org or contact OWEA (614.488.5800 or info@ohiowea.org).







President's Message

What a great conference we had at Kalahari! Thank you to the 2015 conference committee for their creativity, hard work, and dedication. A special thank you is extended to Judi, Amy, Amanda, and Christy. They are the glue that kept all the little details together. Thank you! Was the conference the same old, same old? I hope you learned something new, reconnected with old friends, and made new friends.

I'm from the Ohio EPA and I am your new president. Does that make some of you nervous? I hope not. One thing I have realized over my 28 years with the agency is that those of us in the wastewater field work for the same goal - clean water. None of us want to be blamed for the fish kill or the harmful algae bloom (HAB) in Lake Erie. I don't like to get the phone calls from my superiors asking what we

are doing about the wastewater treatment plant (WWTP) that is flooded, just as much you don't like getting calls from Ohio EPA or your customers about plant issues. At a conference or section meeting we have great opportunities to discuss experiences, problems, and solutions in a relaxed environment. Everyone is always willing to help out the operator in the next town. We are all champions for clean water and we need to say that to everyone. We need to toot our own horns about what a great job we do for the local streams and for our neighbors in our communities.

100 years ago, in 1915, the average lifespan was 54 years. Today, thanks to improvements in our living conditions through medicine, better sanitation and clean drinking water, the average lifespan is 78 years. Sure, medicine has helped, but without our environmental improvements in sanitation and the growing knowledge of the experts in the field, we would not be living as long. The people that work in the wastewater field are extremely valuable!

When I attended my first OWEA Annual Conference, I was 23 years old! I have children that age and older now! I remember sitting in the audience while the outgoing and incoming presidents exchanged the gavel. I remember thinking, "Wow, I can't even imagine being the president of the state organization. Maybe someday I could handle section leadership; the whole state - no way!" And yet here I am today. Never say never.

We all have a mentor – someone who took us under their wing when we started in this field and taught us the ropes. Someone who encouraged us to work hard and get involved. A mentor or role model is an important part of career development. My mentor was Al Rupp. Even though he drove me crazy sometimes, as all bosses do, he taught me a lot and I would not be president of OWEA today if it weren't for him. He encouraged me and several of my coworkers to get involved in OWEA. I saw the value in OWEA and still encourage my staff to get involved. I have 22 staff in the district office. Twelve of us are active members of OWEA. We have the Operations Challenge team of which I am very proud, we have section Executive Committee (EC) members, as well as several members of various committees. OWEA provides a great place for us to forge relationships outside of the job with all of you.

If you have even a small desire to become more involved in our organization, reach out to a member who has served on the Section or State EC and ask them how they got started. If you have already served on a Section or State EC, encourage a fellow



Elizabeth Wick, P.E. OWEA President

member to step up into a section leadership role. Give them guidance and encourage them on the path to leadership. We should all bring a coworker to a section meeting or workshop, introduce them to members, and let them see what a great group of people we are and how much you can learn by simply attending.

OWEA is only as good as its leaders and the leaders are nothing without the members. Like many of the members of past boards, the current board members are passionate, enthusiastic, opinionated, and forward thinking. For a look at each one of their gifts or talents, read Mike Frommer's President Message in the last issue of the Buckeye Bulletin. This board is very interested in hearing what our members want from the organization and trying to make it happen. Please reach out to one of us and share your ideas

for projects, topics, or outreach that we should work on to make our organization more useful to our members.

Last June, the EC held a retreat to formulate a strategic plan. Some of the things I plan to focus on over the next year are right out of our strategic plan. This plan was not developed to just put on a shelf. We are going to continue to implement the actions in the plan over the next year.

OWEA's mission is:

- Educate our members through sharing information and networking
- Educate the public in preserving and enhancing water quality
- Be proactive in water environment issues
- Build a positive professional image within and outside the Association.

We cannot lose site of the mission. You will be seeing more of our mission statement.

The number one asset at a WWTP is the operator. A good operator can make the worst of plants run well and meet the permit requirements. OWEA's mission contains the word, "educate" twice. We have a committee working on operator certification courses. Soon, you will be able to come to OWEA for the classes necessary to earn your certifications.

Yes, there may be another One Water Conference, but in the meantime, we are putting on a joint utility workshop in August and other future joint events. If you have an idea for a joint event, let someone on the EC know.

WEFTEC is back in Chicago this year. We heard how much everyone liked taking the bus to the exhibit hall, so we are doing it again! Watch for details in the Buckeye Bulletin.

We need to educate the public about what we do and why we do it. They need to know that operators are professionals who do more than keep their toilets flushing. Operators keep streams clean and take pride in their jobs. We are working to develop an educational campaign that can be taken on the road to schools and local fairs. Educating students on the value of water and careers in the field will help us develop future employees and members.



You will see a change of venue next year for our workshops. To be more fiscally responsible, we chose to move away from Northpointe Conference Center to Columbus Doubletree at OH Route 23 and I-270. Don't worry, we will strive to have the same high quality, never ending snacks!

You may see a new logo next year. We are working with WEF on a review and possible upgrade of our logo.

In conclusion, I encourage you all to find or be a mentor to someone. Encourage coworkers to become involved in OWEA. Bring your staff or coworkers to a section meeting or workshop and make new friends, learn about treatment technologies, and see some old friends. Most importantly, let your Section or State Executive Committee know what you want the organization to do for you. And don't be afraid to be a leader!

I'm looking forward to the next year.

Elizabeth Wick, OWEA President elizabeth.wick@epa.ohio.gov



2015-2016 OWEA President Elizabeth Wick receives the gavel from outgoing President Michael Frommer at the 2015 Annual Banquet on June 24, 2015.

2015-2016 Executive Committee Meeting Schedule

August 12, 2015	Wednesday	OWEA Office in Columbus
November 18, 2015	Wednesday	OWEA Office in Columbus
January 13, 2016	Wednesday	OWEA Office in Columbus
February 10, 2016	Wednesday	OWEA Office in Columbus
March 9, 2016	Wednesday	OWEA Office in Columbus
May 11, 2016	Wednesday	OWEA Office in Columbus
June 30, 2016	Thursday	Bertram Inn and Conference Center*
*subject to change	·	







• weftec 2015

the water quality event"



88th Annual Water Environment Federation Technical Exhibition and Conference

September 26–30, 2015 McCormick Place, Chicago, Illinois USA Register Today.

www.WEFTEC.org

Free Exhibit Hall Pass & Free Bus Ride for OWEA Members Reserve Your Seat on the Bus to WEFTEC 2015 on September 29th

OWEA will provide three buses from Ohio to give members the opportunity to participate in the 88th Annual Water Environment Federation Technical Exhibition in Chicago, on September 29th. WEFTEC is offering free admission to the Exhibition (preregistration required). With complimentary Exhibition registration, this will offer up to 150 members the chance to go to Chicago WEFTEC for a day for free. 4-6 Hr travel time one way. Snacks, soda, water, and a box dinner will be provided.



Date: Tuesday, September 29, 2015

Departure and Return Locations

Northwest: Findlay (Wal-Mart) and Maumee (Meijers), OH

Northeast: Richfield, OH at the Days Inn and Suites

Southwest: West Chester, OH at BL Anderson Parking Lot

Members must complete the complimentary exhibition registration (http://www.weftec.com/Register/) prior to registering for the bus transportation. You will need your WEFTEC registration number.

Bus registration at www.ohiowea.org under the Event

Registration tab.

Not a member? Visit http://www.ohiowea.org/memberships.php.

Not A Member? It's a great reason to join OWEA!



NOW FOR SOMETHING NEW AND DIFFERENT

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

Creating Opportunity for Others

Over the last few months, several members of the Executive Committee of the Ohio Water Environment Association (OWEA) have expressed interest in taking over my column, or at the very least, introducing their own columns in alternating issues of the Buckeye Bulletin. I am not adverse to this idea as it gives others a chance to continue service to our organization. I have heard concepts such as the Frommer Forum or the Sullivan Soliloquy. They may also find that they are so talented, this may open the door to a new career as a mystery writer similar to Jessica Lansbury of *Murder She Wrote* in the 1980s. But what is certain is that I will not stand in the way of those who are ready, willing, and able.

With this being said, I have enjoyed writing my column for the past eight years. I have now written more than 25 Kocarek Korner articles. When I think I am nearing the end of finding good material to draw from, a new idea suddenly arises. For the record, I have no intentions of ending my column in the near future. But everything has a beginning and an ending. I know that the time will come when I do not find it enjoyable to write or feel that our members are tired of it. Presently, I write two other articles for the Buckeye Bulletin, so temporary relief from the deadlines that come four times per year would be welcome. The other reality is that in order for me to take my column to a new level, it involves more research than I am normally able to do at the present time.

A Storied Publication

The story of Playboy Magazine had its basis in the 1950s and was founded by Hugh Hefner (1926-). The story is an interesting one in that it created the persona of the self-assured successful man in the 1950s who had everything. While many find the contents of the magazine unacceptable for public discussion, one thing stands out: this is the quality of the interviews over the last six decades. This gave rise to the saying "I only bought it (the magazine) for the interview!"

Notable interviews included presidential candidate Jimmy Carter in 1976 to former Beatle John Lennon in 1979. What has been interesting is the longevity of the magazine and the mystique surrounding the playboy culture considering that Hugh Heffner is 89 years old! Of the half dozen or so interviews that I have read, including those mentioned above, I found them candid, free flowing, very interesting, and fun to read. The interview was cast as a friendly, earnest, and forthright discussion and not the "gotcha" style of interview popularized by shows such as 60 Minutes.

With this Introduction, Let Us Begin

The two people whom I selected for this first style of interview for the Buckeye Bulletin are outgoing President Michael Frommer and myself. There are several reasons for this selection:

- Michael and I are both former OWEA Presidents who survived the rigors of the office to tell the story from a different perspective
- ♦ We represent two different generations: I am from the Baby Boom generation while Michael is from Generation X. This is significant in that generational issues are a big topic at WEF and for our profession.
- ◆ I believe that we both understand where the organization has been and where it should go. To this end, we have experienced things going well and other things going wrong.
- We have different personalities, which our readers will find interesting. Like everyone else, we are all shaped by the time in which we were born, our genetics, our opportunities, and experiences.

Dale E. Kocarek, PE, BCEE Stantec Consulting Services, Inc. dale.kocarek@stantec.com

The Interview

Conducted by OWEA's Amanda Goodwin

OWEA: How long have you been a WEF member and active in OWEA?

KOCAREK: Today is actually my 32nd anniversary with the organization. Although I've been with the group for 32 years I didn't start out as an active member. In Spring 1996 I became a Southeast Section Delegate. Prior to that I was an OWEA Conference presenter in 1988 and a Southeast Section presenter in 1992.

FROMMER: I joined in 2001 and hit the ground running. By 2002 I was active at the section level with the Section Executive Committee.

OWEA: What inspired you to get involved in OWEA – did you seek the organization out on your own or were you introduced by a mentor?

KOCAREK: Bill McCarthy and Larry Moon were very influential for me. People say Larry Moon's name now and don't know who he was - but I knew him. Also, I credit Matt Tin for encouraging me to get on the Southeast Section

Board and then encouraging me to go all the way. While there were a lot of people from Ohio EPA who were members of OWEA, some were more active than others. For me it got into my blood really fast.

FROMMER: Mary Lou Fairall, the board president for Southwest Licking Community Water and Sewer District and my boss, encouraged me to get involved with OWEA. I was general manager for SWLCWSD. It was a newer utility and she encouraged me to get involved with OWEA so I could network with other utility managers and professionals in the industry. Although she was not a member of the group, she thought it would be a good opportunity for me. It was kind of neat being at the conference last week and seeing that one of the award winners (Josh Holton) was from SWLCWSD. It was as if everything was coming full circle as my presidency was coming to an end.

OWEA: How would you describe yourself and your leadership style?

continued on page 10





Dale Kocarek (OWEA President 2010-2011), Amanda Goodwin (OWEA Staff Interviewer), and Michael Frommer (OWEA President 2014-2015)

FROMMER: I'm someone who rarely sits still and only rests when everything is done, which has increasingly become a rare occasion with my professional career and family activities. I've been through a lot of leadership training and have been described as a "Type-A" personality. How I balance that assessment is with the ability to focus on the root cause of a problem and develop a solution that hopefully doesn't result in an undesirable outcome.

KOCAREK: I see myself as a high functioning introvert who is content with thinking. I think of it as JFK described himself, "an idealist tempered by realism." I am somewhat like JFK but I am also a realist and practical problem solver. I am an optimizer and a pragmatist. I am collaborative by nature and viewed the OWEA Presidency much in the way that US President Woodrow Wilson did - as a first among equals. I love to hear how each individual feels about a topic. Above all else, I want to foster the environment of inclusiveness. I am also against "group speak" where only the loud voices are heard.

OWEA: What leadership quality do you most admire in the other?

FROMMER: It's a common phrase to 'lead by example' but there's no one who matches Dale's passion. Dale has set a very high bar for all future leaders of the organization.

KOCAREK: The corporate environment has had a good effect on Mike. I've always liked that there is an introspective side to his leadership. He'll step back and say, "Look behind the curtain." This in addition to being someone who also evokes good business practices.

OWEA: What was your greatest challenge as President?

KOCAREK: You become quickly aware of the limited amount of time you have as president. You have to come out of the starting gate really fast, really strong, with a realistic and clear agenda. What you do in the first 90 days sets the tone for your entire term. But you can't do it alone. You need a coalition with our President Elect and Vice President at a minimum. It was also a challenge for me to become a public person. You become very conscious of this as every word you say may be interpreted incorrectly or taken out of context.

FROMMER: The limited time was definitely a challenge for me but another challenge was maintaining a work-life balance. There are the things you plan for and the things you don't. For me, it was a perfect storm. When I began my terrm, my kids were transitioning into high school, we were building a new house, my company was acquired, and OWEA was working on its first collaborative conference, One Water. We held One Water and all our normal workshops in a nine month period. As Dale said, when you start as president you want to start strong and push, push, push but I had many thoughts after One Water about if we were pushing too much to the detriment to the organization.

OWEA: What would you believe is your legacy as an OWEA President?

KOCAREK: I wanted to evoke the function of the governance to the fullest. I would look at the totality of the organization in terms of both form and function – *What are we doing, who is our audience, and can we do it better?* I wanted to make sure that everyone on the Executive Committee was being highly productive and making good decisions based on high level, thoughtful discussions.

FROMMER: I tried with strategic planning to take us in a different direction. I wanted everyone to take up their natural passion, work on their cause. I really enjoy working with a team of individuals to maximize the collective efforts. I wanted to change our structure to empower younger leaders to take up their cause.

OWEA: How has your experience with the OWEA Board changed you?

KOCAREK: It has made me a kinder and more thoughtful person with a better understanding of human nature. I came to understand that nothing will ever be perfect but you can do good things and feel the rewards of accomplishment.

FROMMER: Yes, the time on the board has really broadened my experience. It's like the movie *The Breakfast Club*. My life might not have crossed paths with these different folks, but after spending time together you come to realize you have more in common that you thought. Through this group, I was able to broaden my experiences and learn from and collaborate with a variety of professionals.



KOCAREK: I wholeheartedly agree with what Mike said about the people in this group. There have been a few times throughout my time as a member when I had to deal with a personal crisis or tragedy, and the support and response I received was overwhelming. It's the people and you can't put a value on that. It's a very precious thing.

OWEA: How do you think that OWEA has changed since you joined the organization?

KOCAREK: It has changed a lot in its identity since I first joined the organization. When I became a member 32 years ago, the group was focused on and in Ohio. But since then we have grown and evolved to become a more WEF centric MA.

FROMMER: There used to only be one kind of member, the roll up your sleeves, get in the middle, and basically do everything that's needed type of member. Now there's still that option but we have a very talented staff that can allow people to participate at different levels of involvement.

KOCAREK (laughing): It was like *The Godfather*, "Some day you may be asked to do something for the family, and I would like for you to agree."

OWEA: Looking back on your successes within the organization, what advice would you offer to a Young Professional just starting out with OWEA?

FROMMER: It's overwhelming and unbelievable the people that you'll meet once you get involved. Don't just look at your membership as a chance to collect business cards but as a chance to get to know people and make personal and lifelong connections.

KOCAREK: It's important not to think of this as an instant gratification type of thing, it's about the long term. Look at this organization in the context of relations and relationship building and a lot of other good things will follow. It's also important that when you commit to OWEA you follow through, make sure your "yes" is a "yes". But it is very important to get involved in a meaningful way, and it is up to the Board, the Section Boards, and Committees to help create opportunities for those that are passionate.

FROMMER: Early and active involvement is key. Starting in the Sections is a great way to get introduced to the organization. Just be careful not to spread yourself too thin. Because what happens is we get new volunteers, they jump in too quickly, and then scurry away from the organization because they feel bad they can't give the necessary time.

KOCAREK: I also encourage young professionals (YPs) to search for opportunities beyond the YP committee.

OWEA: What are your future plans?

FROMMER (laughing): I'm looking forward to my year as the past president! I'm also looking forward to being an Awards Chair. It will give me a chance to learn even more about the talented individuals and leaders in our outstanding organization.

KOCAREK: After my recent health episode at the annual conference, I am reminded of what Beatle John Lennon, said, "Life is what happens to you when you are making other plans." But it is my goal to finish my term as WEF Delegate and get elected to a second term to continue the work I have been doing. Depending on how things go, my current passion may lead me to apply for the WEF Board of Trustees, but this is a few years in the future.

Interviewer's Notes:

It was an honor for me to spend the afternoon chatting with Michael Frommer and Dale Kocarek. Having the chance to speak directly to two highly influential members of OWEA made me feel proud to be part of a group that provides these types of opportunities to all its members, not just those who rest comfortably at the top. Their different personalities and leadership styles led to two unique and successful terms. They added to the OWEA foundation that has been built brick by brick, year by year, by all the leaders who came before and will continue to be added to by the leaders to come. Each president is an important link in the chain that forms the Ohio Water Environment Association. The organization gets stronger with each passing year, each new member, and each strong leader – past and present.

Amanda Goodwin amandagoodwin@ohiowea.org

Side note. The two presidents interviewed represent the Baby Boomers and Generation X'ers. The interviewer is a member of the Millennial generation.

WEF Delegate Vacancy 2016-2019

The OWEA Executive Committee is soliciting letters of interest for the WEF Delegate position to represent OWEA on the WEF House of Delegates beginning at WEFTEC 2016. This appointment is open to any current WEF/OWEA member in good standing.

The successful candidate would be one who has shown past interest in positively supporting OWEA and WEF by serving on committees, serving on an Ohio Section Executive Committee, serving on OWEA's Executive Committee, or other relevant service. The position would require a 3-year commitment to serve on the WEF House of Delegates. The position would start in October 2016 and serve through WEFTEC in 2019. The successful candidate would succeed Dale Kocarek, who will be completing his first HOD term. To learn more about House of Delegate responsibilities, please contact Dale Kocarek, Doug Clark, or Tom Angelo.

If interested, please send an email with appropriate supportive information to OWEA at *info@ohiowea.org* by November 1, 2015.

WEF Delegates' Report









Doug Clark



Tom Angelo

In addition to myself, I am also writing on behalf of my fellow WEF Delegates, Doug Clark and Tom Angelo. I am nearing the completion of my second year as WEF Delegate, while Tom is completing his first. Doug is in the final few months of his term as Delegate.

On June 24, 2015, WEF announced that its proposed modifications to its Constitution & Bylaws (C&B) passed with the required 5% of WEF members voting. I would characterize the proposed changes as minor clarifications to enhance the flexibility of WEF in order to meet the critical objectives set forth by WEF's Strategic Plan. Most of the changes pertained to wordsmithing, providing enhanced discussions of committee functions and eliminating ambiguities.

Tom Angelo has been named to participate in the House of Delegates Awards Subgroup. The purpose of the subgroup is to better promote the WEF Awards. These include the Bedell, Hatfield, Burke, and Lab Analyst Awards. Overall Ohio does a good job of recruiting candidates for these awards; however, there may be some minor revisions to the process in the future to provide more clarity between the Bedell Award and the (Ohio only) Larry Moon Award.

For my current report, I wish to focus the remainder of this column on our recently completed WEFMAX meetings. This year the Water Environment Federation held four meetings: Virginia Beach, Virginia; Kansas City, Missouri; Coeur d'Alene Idaho;, and Quebec City, Quebec, Canada.

WEF values its relationship with its Member Associations (MAs), and the purpose of the meetings is to continue to foster its relationship and share new information. WEFMAX meetings are typically held between late April and mid-May. OWEA Executive Committee members are encouraged to attend one WEFMAX meeting of their choice. In recent years, we have tended to spread out across the United States to gather different experiences, as all WEFMAX meetings reflect regional flavor including the preferences of the host and are each slightly different.

So what is WEFMAX? In sort, WEFMAX stands for **WEF - Member Association - Exchange**. There are 74 MAs in the WEF organization, and Ohio WEA (or OWEA) is one of the 74 MAs. WEFMAX meetings last 2 ½ days. The purpose of the WEFMAX meetings is fourfold:

- ♦ It builds relationships between WEF Staff, the WEF Board of Trustees (WEF's Board), and MA Leaders. These relationships are essential for sharing information relative to the function of the MAs and WEF alike. I have attended ten WEFMAX meetings and I can tell you that my relationship with WEF Staff is priceless. I consider WEF Staff member Dianne Crilley to be a good friend. Dianne and her husband Frank, whom I also know, visited me in the hospital during my recent illness during the OWEA 2015 Annual Conference.
- WEFMAX also builds relationships between MAs, which I found invaluable when I was OWEA President in 2010-2011. Relationships formed with different MAs helped me immeasurably as OWEA President, particularly as we were increasing staff. This type of interaction has been continued by the MA Leadership Work Group under the House of Delegates. I am pleased to announce that the MA Leadership Work Group will become a standing committee in the House of Delegates called the Outreach Committee.
- WEFMAX educates MA Leaders regarding how WEF operates. WEF is a complex organization and it is very helpful to understand how the House of Delegates (HOD) interacts with the Board of Trustees (BOT), the Central Leadership Committee Council(CLC), and WEF Staff. As an introduction, the House of Delegates is a policy setting body for WEF, while the BOT is essentially equivalent to the OWEA Executive Committee (or Board). The Central Leadership Council (CLC, comprised of all the Chairs and Vice-Chairs of WEF's Committees and Council) is a clearinghouse that helps organize the technical committees under WEF and determines role and purpose and facilitates communication between the WEF committees.
- WEFMAX gives MAs the opportunity to provide the HOD and BOT feedback on attitudes, concerns, and challenges that MAs are facing and provides a forum for sharing success stories which others may learn from.

I believe that many of the WEFMAX meetings had similar discussion points. Many of the general concerns articulated at the WEFMAX meetings in 2015 reflect the following points:

1. One of the key concerns articulated by my fellow WEF Delegates is that new delegates are thrown into the fray at WEFTEC, and it takes a long time for them to learn about the WEF organization. WEF admitted to needing to do more to get the new delegates trained before WEFTEC and is committed this year to developing two webinars in advance of WEFTEC for orientation.

WEF Delegates' Report



- 2. Student Chapter formation was a big topic of discussion. Some MAs have a lot of success with this and others do not. All agree that much effort is required to get the momentum going to foster greater student involvement. It is important to understand that student chapters for WEF must also compete with other organizations such as ASCE, AWWA, NASCO, and others. It takes a passionate and energetic core group with the understanding that a lot of time and effort will be needed, perhaps more time and effort than our current YP leaders are able to deliver. It is well understood that students are all about getting jobs. We were encouraged to participate in job fairs and build relationships with interested professors. We can also be guest speakers in classes, etc. Alicia Adams, our new OWEA YP Chair, also attended WEFMAX and will be working with the Section Chairs to explore options for having "Professional Panels Career Opportunities in the Water/Wastewater Industry."
- 3. We talked a lot about operators and how there is no clear path to entering into the operator business. It was a very interesting discussion. There is no singular path to becoming an operator. Every story is unique. The BOT has appointed a committee to address WEF's Operator Strategy and address what training needs operators have, how WEF can best assist MAs in delivering that training. This strategy includes the development of what is being called the Knowledge Framework, which is a much more developed companion to the Need to Know Criteria developed by ABC on skills that all operators should have. OWEA's Kim Riddell is a work group leader on this developing project. It is also important for OWEA to promote the fact that operators are certified water professionals, and as such can use the acronym CWP after their names.
- 4. There was a good discussion regarding hiring staff and the best way to go about doing this. It is amazing that many MAs do not have staff. Many are quite small and in the < 500 member range, with budgets less than \$50,000/year. It is important that MAs balance cost and level of volunteer engagement in determining staffing needs. Different staffing models exist and it is important that volunteers not be so overtaxed that they experience premature burnout. Indiana uses a management company and other MAs retain part time staff. It is important for MAs to hire the right staff because this gets to the crux of volunteer burnout. The right staffing model goes a long way to help MAs reach their potential.
- 5. The WEF House of Delegates Speaker, Duyen Tran, gave many insightful comments about the work that she is doing in coordinating with the Committee Leadership Council (CLC) and Board of Trustees. Tran's insights, along with BOT members Jenny Hartfelder and Ed McCormick, were excellent. I believe that there has been a steady string of good leaders in the HOD Speaker position. Jamie Eichenberger, the Speaker Elect following Duyen Tran, will also do very well. The take away point also applies to MAs. It is imperative that Boards be strong and that leadership continuity be excellent. This is true of MAs as well.
- 6. There was also an extended discussion on experiences that MAs have had in joining forces with AWWA. Most MAs reported reasonable/good experiences. If there was a take away point it was that it takes a lot of time and the right combination of people to meld cultures. Awards presentations for all MAs were challenging. Some MAs, such as New England, join for specialty workshops and not annual conferences. This appears similar to where we are heading in Ohio with the joint 2014 One Water Conference and upcoming joint Utility Workshop on August 18, 2015. A number of our OWEA committees are joint already. Water For People and Young Professional/Student committees have been working together for years now.
- 7. WEF talked about the Utility of the Future. This is a publication, which is a blueprint for action (WEF, WERF and NACWA) and a visionary look to the future. Treatment plants are being re-cast to become energy self-sufficient or a net energy producer. Cities are redesigned from the ground up to focus on the environment, using innovative systems and looking at ways to meet the water crisis out west. It is a true paradigm. WEF also discussed the Energy Roadmap, which is a great way for utilities to investigate ways to save energy and money. WEF has coined the term Water Resource Recovery Facilities or WRRFs and all publications are being revised as such. A take away from all WEFMAX meetings was that these facilities are the beginning and not the end of the water cycle.
- 8. There was a good discussion on MA Financial Sustainability. There were multiple discussions at each WEFMAX location on how much reserve an MA should set aside for a rainy day. This is a topic that our MA will need to further discuss.
- 9. Ohio's point system for the Sponsorship Program got a lot of positive attention. Several other states such as Indiana have something similar, and there was interest from a number of other states to emulate OWEA's successful model.
- 10. While more of a hot topic from 2014, there was continued discussion on how MAs purchase equipment for Operations Challenge teams.
- 11. MAs recognize that they need to market the benefits of being a WEF member in conjunction with their MA membership. Some are working on developing an elevator speech 2 minute conversation with business cards that highlight the benefits of membership.

Dale Kocarek, Senior WEF Delegate, dale.kocarek@stantec.com (provided WEF Delegate Update)
Doug Clark, Junior WEF Delegate, douglas.clark@bgohio.org
Tom Angelo, Junior WEF Delegate, tangelo@munitreat.com





NEOWEA
Tom Voldrich, President

Hello fellow members. My name is Tom Voldrich and looking forward to another year of service to the NESOWEA on the executive committee. Each year has been a learning experience and I am grateful for all that I have learned from good leaders while serving. My fellow officers are a group of dedicated, talented individuals and I am confident the Section is in good hands for years to come. I want to especially thank Denise Seman outgoing President for all her mentoring and being an example of service, and also MaryAnn Driscoll who has sustained her commitment through her past presidential year.

I have been an environmental engineer for 36 years having received my BS from Cleveland State University and have been with CT Consultants for the past 26 years and a principal there; having been a past department manager and currently a project manager. I am a long term Scouter and an active parishioner at St. Rita's in Solon. I am an avid outdoor enthusiast and enjoy fishing, camping and hiking. My dear wife Debby, son Brad, and daughter Katy are 'the spring in my step.'

The NE Executive Committee is busy planning a new year and we are dedicated to providing diverse and relevant contact hours. This year we are planning three plant visitation based meetings, and numerous specialty seminars including: operations, industrial pretreatment, watershed, collection system, lab analyst, and biosolids. We will again hold our annual scholarship fund raising BioMassters Golf tournament, our fall social clambake and several YP socials. (Yes Ashley I know the YP's do more than just socialize.) Our fall meeting is set for September 23rd at Lake County's Madison TWP facility with an afternoon meeting at Geneva State Park.

I want to thank our numerous committee chairs, and the executive committee members and their respective places of employment in supporting these individuals in their service. (ARCADIS, Burgess and Niple, CT Consultants, ADS-pipe, and the Cities of Youngstown, Akron, Canton and Solon). Also - Congrats and welcome aboard to Mike Cook our 1st year officer.

As a member of WEF (for let's say over 30 years), I am so grateful for our organization; having met so many good people and many of my best friends. I am certain networking in a professional association is among the top recommendations one can make to students and young adults beginning their careers. I encourage you to please do this. Invite new members and 'be the necessary spirit of welcoming' to sustain our critically important industry; while passing on the best advice for career success.

Tom Voldrich, tvoldrich@ctconsultants.com



SWOWEARoger Rardain, President

Hello, my name is Roger Rardain, and it is my honor to serve as the Southwest Section President for 2015-2016. I would like to thank my predecessor, Tom Brankamp, for his leadership and guidance during the past year and for his years of service for the Southwest Section members. Tom is a tough act to follow. Special thanks are also deserved for the rest of the Executive Committee, as they are the people who make things operate smoothly in the organization. I would also like to welcome Keith Heffner of MSDGC as our incoming 3rd Year Director.

I am originally from the Hocking Hills region of Ohio, and graduated from Rio Grande College (now the University of Rio Grande) in 1982 with a BS in Math and Chemistry. I currently live in Fairborn Ohio with my wife Dolly (only 30 years of marriage, however). We have 2 adult daughters, Angelica and Clarissa.

I first entered the environmental field in 1988 with Howard Labs in Dayton OH. In 1995 I was hired by the City of Fairborn at the Water Reclamation Center as a Lab Analyst. I am still in the position after 20 years. I hold a Class IV Wastewater Analyst Certificate and a Class III Wastewater Operator Certificate.

I became involved with the Laboratory Analysis Committee, eventually serving as co-chair (with Jim Davis, Montgomery County). With the LAC, Jim and I emphasized contact hour availability at no cost to the attendees. This continues to be successful, with excellent attendance at LAC events.

The Southwest Section is quite active, with meetings and seminars coordinated by the Industrial Waste, Laboratory Analysis, and Plant Operations Committees throughout the year. During 2014-2015, a total of over 40 contact hours were made available at low or no cost by the dedicated individuals on all committees. I would like to extend my thanks to them.

This year, my goals include recruiting more members and to have more current members become active in the organization. I also believe it is important to give the Executive Committee and the Committee Chairs the support and guidance to keep up the excellent service for the membership.

I look forward to having opportunities for environmental education, networking, low cost contact hours and good food - beginning with our Section Meeting on September 17th at Butler County Environmental Services (LeSordesville). Please join us at LeSordesville!

And finally, I wish to extend my congratulations to Bluyé DeMessie (from Mason), Ohio's 2015 Stockholm Junior Water Prize Winner. The Stockholm Junior Prize is an international competition for water related research. Bluyé is a second time Ohio winner. We are proud that Bluyé is from the Southwest Section!

Roger Rardain, roger.rardain@ci.fairborn.oh.us





NWOWEA
Roberta Acosta, President

Hello fellow Northwest Section Members! I am honored and excited to serve as your Section President this year. I would first like to thank Joe Tillison, for his service to our section this past year as well as all the NW Executive Committee members for their support and guidance. I would like to welcome our incoming Secretary, Gary Bauer, who currently serves as the Industrial Waste and Pretreatment Chair for our Section. I would also like to acknowledge current officers-Jeff Thompson, 1st Vice-President and Publications Chair, Walter Ariss, 2nd Vice President and Membership Chair and Dave Sprague, Treasurer. I am looking forward to a great year with all of you!

I would also like to take this opportunity to congratulate our 2014-2015 Section award winners. Landry Sheets, who won the Max Phillips award and Paul Swartz, who won the Moe Swaisgood award. Paul was also awarded the Collection System award at the OWEA Technical Conference and Exhibition and Dave Sprague received the Arthur Sidney Bedell WEF Award. The Ohio City WWTP received the Engineering Excellence award, (Project Manager Dan Miller, Jones and Henry Engineers) for its recent upgrades. Congratulations to all!

My goal for the upcoming year is to work with the Executive Committee to continue to increase growth and volunteerism in our section, as well as continuing to provide excellent training, networking opportunities and resources to our members. The strength of this organization and its Sections lies in its volunteers. Please consider getting involved with the Executive Committee, delivering a presentation or hosting a Section Meeting. With that being said, I hope you were able to join us for our annual Spouses and Friends Day, which was held at Put in Bay. It included a technical session, business meeting, lunch and tour of the Put in Bay Wastewater Treatment Facility. Our next Section Meeting will be held in October at the Lucas County Water Resource Recovery Facility in Waterville. Further details will follow so make sure to check out the website at www.ohiowea.org/northwest_section.php for updates.

On a personal note, I have been working in the water industry for the past 16 years as a Technical Assistance Provider with the Ohio Rural Community Assistance Program. During that time, I have worked with dozens of small, rural water and wastewater systems and their operators in the areas of affordability, project development, capacity building, technical suitability and enterprise management. I currently co-chair the Ad-hoc Small Systems Committee at the State and have been a member of the NW Section Executive Committee since 2012. I was also a member of the 2011 and 2015 Conference Planning Committees.

I am looking forward to leading the Northwest Section this year and all the challenges that it brings. Please remember to check out our website for all the Section updates and meeting information as well as to update your email address.

Roberta Acosta, rjacosta@wsos.org



SEOWEABrandon Fox, President

Hello fellow members. My name is Brandon Fox. I am honored and excited to serve as the 2015-2016 President of the Southeast Section. I first want to thank Fred Smith for the leadership he provided to the Southeast Section this past year as President. I would also like to thank the SE Executive Committee for their continued exceptional service and outside-the-box ideas that make this organization great. I have had the opportunity to learn and grow alongside my colleagues and I hope I can continue the tradition of great leadership that has been provided to the Section.

I want to welcome the new Southeast Executive Committee. John Owen, First Vice President, Kris Ruggles, Second Vice President, Chris Tarr, Secretary, Brenda VanCleave, Treasurer, Melodi Clark, Third Year Director, Tiffany Maag, Second Year Director, Josh Holton, First Year Director, and Fred Smith, Delegate and Past President. Josh is our newest member, having been elected at our May Section meeting. Tyler Linton recently moved from Ohio to Wisconsin, thereby allowing Fred to accept Tyler's position as Delegate to the OWEA Executive Committee. Fred will serve out the remainder of Tyler's term. I look forward to continuing the hard work with each of you this year.

At our May Section Meeting, we acknowledged fellow colleagues for their contributions to the water environment with Section Awards. The recipients of our 2015 Southeast Section Awards are listed below with the award name followed by the recipient. Please offer them a word of congratulations. It was great that we were able to recognize these members.

F.D. "Dean" Stewart - Dave Markley

J.W. Ellms - Michael Nixon

F.H. Waring – Cliff Merritt

W.D. Sheets – Carnell Felton

L.T. "Tom" Hagerty – Jon VanDommelen

Engineering Excellence – Logan Wastewater Treatment Plant Improvements

Lifetime Engineering – Jeff Kerr

Public Service - Mayor J. Martin Irvine

Laboratory Analyst - Paul Zeier

Professional Wastewater Operations – William Franklin

Collections System Award – Jason Westfall

Facility Image Award – Newark Wastewater Treatment Plant

One of my goals as Section President this year is to continue the growth of our section meetings. We have seen growth from 35 attendees to over 50 at each meeting during the last three years. My goal is that in the next three years we see attendance grow to 75. The Executive Committee has made it one of our goals to continue to provide high quality, affordable contact hours that create a great learning environment for all. We are able to offer this at a great value with the help of our Section Sponsors. We really started to

continued on page 16



Committee Reports

LABORATORY ANALYSIS COMMITTEE

by Denise Seman and Melodi Clark, Co-Chairs

Hi Everyone!

I hope you had a chance to come out and join us at OWEA's 2015 Technical Conference and Exhibition this year. Topics were great and there were some wonderful networking opportunities

New for this year is the addition of Melodi Clark as Laboratory Analysis Committee Co-chair. I am delighted to have her on board as I slowly transition to a less active role, as I am looking towards retirement within the next few years. Melodi is a wonderful asset and I know everyone will make her feel welcome.

The annual Plant Operations/Lab Analysis workshop (POLA) will be held October 21-22, 2015. We look forward to seeing many of you there. If there are any suggestions for topics, please let us know – there are still a few spots left to fill.

SW LAC - Jim Davis and Karen Tenore

SW LAC is currently gathering information for the October 8 Fall Meeting. If you have topic suggestions, please contact Karen Tenore or Jim Davis.

To inquire about being added to our email list or to get information about attending, hosting, sponsoring, or presenting at a future LAC meeting, please contact:

Karen Tenore, City of Dayton WRF karen.tenore@daytonohio.gov, 937.333.1845

Jim Davis, Montgomery County Water Services davisji@mcohio.org, 937.496.7051

Committee Members:

Lynette Hodnicki, City of Fairfield Lori Kyle, Greene County Teresa Shinkle, Greene County Gregg Mitchell, City of Sidney Roger Rardain, City of Fairborn Dr. Robert Smith, YSI



Join Your Section LAC

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.

NE LAC – Bev Hoffman

The NE LAC is currently looking for information on an upcoming fall meeting to take place in October. If anyone has a topic they would like to have presented or knows someone who would like to present a topic, please email Bev Hoffman at *nesowealac@gmail. com.* Also contact Bev if you would like to be added to the NES LAC membership directory, receive automatic email updates for training events, and any other industry news items.

Beverly Hoffman, nesowealac@gmail.com

SE LAC - Melodi Clark

September and December will be here before you know it and the Southeast LAC is looking for hot topics for meetings. If any one has a topic they would like to have presented or knows someone who would like to present a topic, please let me know.

Melodi Clark, mlclark@columbus.gov

NW LAC - Briget Shiets

The NW LAC has a fall meeting planned for October. Please watch for further information regarding this event. We look forward to hearing from you and seeing you in the fall!

If you have any topic ideas or presentations you may want to present at future meetings please email wwtplab@cityofbellevue.com.

Lab Analysis Committee Contact Information

State Co-Chairs

Denise Seman, 330.742.8820, dseman@cityofyoungstownoh.com Melodi Clark, 614.645.1239, mlclark@columbus.gov

Northeast Chair

Beverly Hoffman, 440.446.4228, nesowealac@gmail.com

Southeast Chair

Melodi Clark, 614.645.1239, mlclark@columbus.gov

Northwest Chair

Bridget Shiets, 419.419.7514, wwtplab@cityofbellevue.com

Southwest Co-Chairs

Jim Davis, 937.496.7051, davisji@mcohio.org Karen Tenore, 937.333.1845, karen.tenore@daytonohio.gov

Southeast Section Report continued from page 15

recruit our sponsors last year, and we hope to see an increase this year. If you have not become a Southeast Section sponsor yet, please contact me for details.

Additionally, our section has the goal of recruiting operators within our organization. We have offered several opportunities for non-member operators and Small System Operators to attend section meetings and state events free of charge. This is going to continue to be a goal of mine as we move into 2016.

Our next event will be the Friends and Family night at a Columbus Crew game on August 22nd. The game is against the Sporting K.C. at MAPFRE Stadium. Final details will be available soon. Watch our Section website and the OWEA website for registration information.

On a personal note, I have been married to my high school sweetheart, Mandy, for 13 years. We have a son Ben (10) and two daughters, Dylan (8) and Drew (6). Outside of work I am very involved with my children's activities (baseball, singing, volleyball and anything outdoors). My wife and I love to garden and spend time with friends and family. One interesting thing many of you may not know about me is I am following in my father's footsteps. He has been in the wastewater field for almost 40 years and recently retired to Florida. I credit a lot of my hard work and drive to his direction and the guidance that he instilled in me. When people ask me how long I have been in this field, I can honestly say "I have been going into pump stations and wastewater plants since I was old enough to walk".

Brandon Fox, bdfox@columbus.gov



DO YOU KNOW THE SAFETY POLICIES AND PROCEDURES FOR YOUR FACILITY?

by Mike Welke, Safety Committee Chair

The Safety Committee is venturing into new territory. OWEA's Safety Committee Co-Chair and leader, James Graham, has stepped down. He has accepted a new position in another division for City of Bowling Green. We wish James all the best and we will try to keep the high standards that he has instilled in this committee. Thanks James.

While pondering what to write about for this issue, I tried to come up with something that we had not written about. James covered a lot of subjects across his tenure but one subject I have not seen covered was reviewing Safety Policy and Procedures. Every operator and plant staff should be aware of their own facility's Safety Policy and Procedures. With many facilities cutting back on staff, a lot of facilities run with only one to two operators per shift. A review of your facility's Safety Policy and Procedures may be needed to make provisions for the reduced staff.

Things to review:

♦ What is the policy for an operator who is alone on a shift? If they get injured while alone, what are they to do to get help? Some facilities have it set up for a supervisor to call the operator a few times a shift. Or for the operator to log into their computer terminal a set number of times per shift. If they don't log in, the SCADA system will alert someone that the operator may have a problem. Other facilities use 'man down' radios or phones, designed so that if the operator falls down, the radio or phone will tip and send an alert to emergency personnel or a supervisor.

- Check the policy for after hour deliveries and for septic haulers. What hours are they permitted to come in if after hours? How should the operator handle them? Most facilities do not allow any deliveries after hours and others stop letting any septic haulers in at sunset.
- **♦** Look at the procedure for securing the facility after hours. Most facilities are fenced in with gates at their main driveways. When are the gates to be locked and when are they to be open? Some facilities have intercom or key pads that only let personnel in if they have a code or if personnel buzzed the operator to let them in. Other facilities have security personnel, which can help the lone operator.

These are just a few things to look at when reviewing your facility's Safety Policy and Procedures. With the times being "do more with less", we still need to do it safely. So review your facility's Safety Policy and Procedures. Talk with your safety personnel about these policies and how they can be improved to assure your safety.

We also encourage your facility to apply for the OWEA Safety Awards and Safety Certificates at www.ohiowea.org.

If you would like to become involved with the OWEA Safety Committee, please contact me.

While not yet required by the State of Ohio, many employers require that their analysts achieve a specific level of certification

and OWEA certification is recognized by many other states through

reciprocity. Exams for Class I, Class II, Class III, and Class IV are

If you did not achieve your current level of certification in 2015, you will be required to renew in order to maintain your standing.

You will receive notification and instructions on how to renew

before the end of October. If you have moved or if you do not

receive instructions – please contact me so I can make certain we

Mike Welke, City of Warren Safety Committee Chair mwelke@warren.org

offered twice a year.

CERTIFICATION BOARD UPDATE

by Kathy Richards, Director

KUDOS!

A hearty pat on the back to those Laboratory Analysts and the Industrial Pretreatment Inspector who passed the Voluntary Certification Examination given this past April! These fine folk join the ranks of 500+ Ohio Wastewater Laboratory Analysts and 10 Industrial Pretreatment Inspectors who are reaping the many benefits associated with certification.

LABORATORY ANALYSTS

Class I Class II **Class III** Kevin Connor JosephBerling Kathleen Rish Tiffany Frazier Dawn Meyers Corey Yugulis **Bridget Shiets** Robby Glovinsky Meredith Hilderman

Jennifer Jenkins Don Knife

Brian Rammelsberg Angie Reischman Troy Rieder

Carolann Sterkenburg Jerome Wright

LAB CERTIFICATION EXAMS

have your correct contact information.

Fall exam date: Friday, October 23, 2015 Application Deadline: Friday, September 18, 2015 Applications at http://www.ohiowea.org/lab_analysts.php

Director, Certification Board, certification@ohiowea.org

Kathy Richards

Ohio Water Environment Association 1890 Northwest Blvd, Suite 210 Columbus, OH 43212

Advance Notice: 2015 Is a Renewal Year

INDUSTRIAL PRETREATMENT INSPECTOR

James Bookman

Committee Report

GOVERNMENT AFFAIRS COMMITTEE UPDATE

by Dale Kocarek, P.E., BCEE, Chair

Ohio EPA Nutrient TAG Update

The Ohio EPA Nutrient Technical Advisory Group (TAG) held its final meeting on June 25, 2015. Unfortunately, I was not able to attend due to personal illness but many others were able to attend. The notes below are paraphrased closely from an email sent by Dan Dudley on June 26, 2015.

During the June 25, 2015 TAG meeting the work product produced by the implementation subgroup gang of 4 (the GO4) was discussed. The GO4's intent was to produce a basic outline of rule content for the SNAP and key implementation issues relative to point sources, MS4 communities, and non-point sources. The hope is that the document reflects past TAG white paper recommendations and meeting discussions and is a good faith effort to put forth recommendations supported by the majority of TAG members. The purpose of the meeting was to ground truth that premise and to provide full TAG membership input. Next steps were discussed at the conclusion of the meeting and are listed below.

- 1. The GO4 will do minor clean up the documents reviewed at the meeting and distribute to TAG members, observers and Ohio EPA
- 2. TAG members, alternates and their advisors were asked to complete their review of the documents created by the GO4. This provides TAG members an opportunity to offer corrections, additions or different recommendations if those of the GO4 are not supported by the organization represented by the TAG member.
- 3. All comments on the content and recommendations contained in the GO4 documents were due at Ohio EPA with a copy to the TAG members by COB on July 24th.
- 4. Pending no major issues, the Agency will consider the final recommendations contained in the GO4 documents to reflect the views of the TAG majority.
- 5. Ohio EPA will consider all information submitted by July 24th in drafting rule language.
- The GO4 offered its assistance to Ohio EPA during the rule writing phase if the need arises to clarify terminology or the recommendations.
- 7. TAG members, alternates and their advisors will get the final draft rule package in advance of its release for Interested Party Review (IPR). This will provide a final opportunity for Ohio EPA to explain the rule content and for the TAG to ask questions.

It is important for our members to understand that the Ohio EPA went to great lengths to form the TAG in 2013 and allow it time through monthly meetings and other meetings to develop position statements on critical points pertaining to nitrogen and phosphorus discharges, and monitoring, sampling and control strategies in advance of the interested party review (IPR). OWEA will endeavor to keep you informed of developments as they occur.

Waters of the United States Surface Rule

The new surface water rule, which was developed by USEPA earlier this year, continues to raise controversy in states including Ohio. Ohio Attorney General Mike DeWine filed a lawsuit on June 29,

2015 challenging the US Army Corps of Engineers' and EPA's rule, which is believed to have the potential to broaden EPA jurisdiction over waters of the United States.

In short, the rule argues the need for more comprehensive controls on small headwater streams, which are important for Water Quality. Conversely, land owners fear that this rule has the potential for farm swales and other – largely intermittently flowing – systems to fall under the authority of the rule.

The rule was a topic of discussion during the April 2015 Fly In. During this time, the Ohio delegation heard USEPA Administrator Gina McCarthy discuss the rule and its intended purpose. She used the forum to debunk concerns that EPA would use the rule to over regulate small or intermittently flowing systems on private property. This is an interesting story to continue to watch. OWEA will keep you informed of any new developments as they occur.

Contact Your Congressman to Prevent Cuts to Infrastructure Funding (from WEF)

Recently, the House and Senate Appropriations Committees moved forward with the FY2016 appropriations bills that fund the Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) programs. The bills included steep cuts to both programs that will have severe negative impacts upon funding available for infrastructure investments next year. WEF calls upon members to urge their Members of Congress to fund the CWSRF and DWSRF at full funding levels of \$1.45 billion and \$1.186 billion, respectively.

Call or email your Member of Congress today by visiting <u>www.</u> <u>House.gov</u> and <u>www.Senate.gov</u> to look up their contact info with your Zip Code. It's fast, easy, and <u>critically important</u>.

WEF urges you to convey the following message when you contact your Member of Congress:

As a constituent and a water professional in your congressional district, I strongly urge you to oppose the cuts proposed to the Clean Water State Revolving Fund (SRF) and Drinking Water State Revolving Fund (SRF) in the FY16 Interior & Environment Appropriations bill. The Clean Water SRF should be funded at \$1.45 billion, equal to the appropriation level the program has received in each of the last three fiscal years. The Drinking Water SRF should be funded at \$1.186 billion, the amount requested in the President's FY16 budget request to Congress.

This funding is critical to allow communities to make the infrastructure investments they need to provide safe drinking water and wastewater treatment, a clean environment, and continued local and national economic growth. These proposed cuts will exacerbate the challenges drinking water and wastewater agencies face in your communities with increased regulatory and enforcement pressures, and the need to replace aging and obsolete infrastructure. Please fund both programs at full funding levels so that communities in your district will not be forced to eliminate vital and necessary investments in water infrastructure.

continued on page 19



PUBLIC EDUCATION UPDATE

by Kevin Stilwell, Chair

Kevin Stilwell is New Public Education Committee Chair

OWEA Public Education Committee is undergoing a transition. I would first like to send a thank you to Tyler Linton for his hard work and dedication to this committee. He worked to ensure that the public was being educated about this great industry across the State of Ohio.

Tyler recently relocated to Wisconsin, and President Elizabeth Wick appointed me as his successor for the Public Education chair. I have been the Southwest Public Education Chair for over two years now and I feel like we continue to grow every day.

I am currently a Project Engineer for RA Consultants in Cincinnati, and I have been here for almost 5 years now. I believe that educating the public is very important to what we do, as we look to the future engineers and operators in the wastewater industry.

If you are interested in joining the committee, please let me know I hope we can grow this committee to reach every corner of the state of Ohio.

Chair, Kevin Stilwell, P.E., kstilwell@raconsultantsllc.com

OWEA'S SJWP AND OHIO SCIENCE DAY AWARD WINNERS

2015 JUDGES

Tyler Linton, GLEC, Chair Mike Ellerbrock, Strand Assoc. Kent Halloran, OSU Judi Henrich, OWEA Elizabeth Kirby, OSU Paula Kulis, CDM Smith Ari Pandian, Burgess & Niple Drew Richards, CDM Smith Kevin Stilwell, RA Consultants



Ohio Stockholm Junior Water Prize Winner
Bluyé B DeMessie - Grade 12
William Mason High School, Mason, Ohio
Sustainable Water Cleaning System
for Point-of-Use Household Application
in Developing Countries to Remove
Contaminants from Drinking Water
Runner Up at National SJWP Competition



\$1000 Scholarship

Alyssa P. Armstrong - Grade 12

Canfield High School, Canfield, Ohio

Using Isotherms to Examine Competitive

Sorption of Heavy Metals by Soils, Biochar
and Biosolids

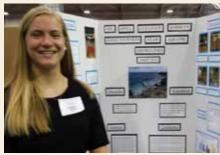


\$500 Award

Ashley T. Elston - Grade 12

Mentor High School, Mentor, Ohio

The Effects of Contaminant Concentration
and Environmental Factors on the Process of
Phytoremediation



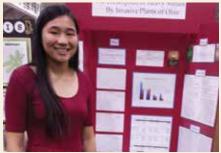
\$300 Award

Abigail L. Myers - Grade 10

Big Walnut High School, Sunbury, Ohio

Oil Spill Clean-up: Sorbent Effectiveness

Near Aquatic Shorelines



\$200 Award

Lauren Zipp - Grade 10

Beaumont High School, Cleveland Hts, Ohio
The Biosorption of Heavy Metals by Invasive
Plants of Ohio

continued from page 18

Additional Resources:

If you would like more information about the FY16 appropriations bills, please visit the following links:

House FY16 Bill:

http://appropriations.house.gov/news/documentsingle.aspx?DocumentID=394275

Senate FY16 Bill:

http://www.appropriations.senate.gov/news/senate-subcommittee-approves-fy2016-interior-environment-appropriations-bill http://www.appropriations.senate.gov/news/fy16-interior-environment-subcommittee-markup-bill-summary

Dale Kocarek, Chair dale.kocarek@stantec.com



PLANT OPERATIONS UPDATE

by Kim Riddell and Joe Tillison, Co-Chairs

The Plant Ops Committee is pleased to announce that the 2015 Operations Challenge Invitational that was held during the OWEA Annual Conference was a huge success! This was the 2nd Annual Invitational Competition that has been held in Ohio and there were four teams that competed this year – three from Ohio and one from South Carolina. We heard great things from all of the attendees and many teams are already making plans to come back again next year.

I wanted to also take a moment and thank all of our event coordinators because without them, we could not possible pull together such a great competition each and every year! So thank you to:

Laboratory – Denise Seman, Youngstown
Safety – Ed Nutter, Newark
Process – Jim Borton, CH2M Hill
Maintenance – Doug Sayre, Allied Technical Services
Collections – Kevin Givins, Wooster

Also a big thank you to all of the other volunteers and team members who assist with set-up, tear down, judging and everything in between! We truly couldn't do this without you!

The results of the 2015 competition were as listed below. See team photos on the next page.

Invitational Winners

1st Place – Volatile Solids, BG and OEPA, Bowling Green, OH 2nd Place – Dirty Deeds, NWWSD, Bowling Green, OH 3rd Place - Outfalls, City of Columbus, OH

Ohio Operations Challenge Winners

1st Place – Dirty Deeds, NWWSD, Bowling Green, OH 2nd Place – Volatile Solids, BG and OEPA, Bowling Green, OH 3rd Place – Outfalls, City of Columbus, OH

Laboratory Event

1st Place – Outfalls, City of Columbus, OH 2nd Place – Dirty Deeds, NWWSD, Bowling Green, OH 3rd Place – Volatile Solids, BG and OEPA, Bowling Green, OH

Safety Event

1st Place – Regulators, Greenwood Metro, South Carolina 2nd Place - Dirty Deeds, NWWSD, Bowling Green, OH 3rd Place - Volatile Solids, BG and OEPA, Bowling Green, OH

Process Control Event

1st Place - Volatile Solids, BG and OEPA, Bowling Green, OH 2nd Place - Regulators, Greenwood Metro, South Carolina 3rd Place - Outfalls, City of Columbus, OH

Maintenance Event

1st Place – Volatile Solids, BG and OEPA, Bowling Green, OH 2nd Place – Dirty Deeds, NWWSD, Bowling Green, OH 3rd Place – Outfalls, City of Columbus, OH

Collections Event

1st Place – Dirty Deeds, NWWSD, Bowling Green, OH 2nd Place – Volatile Solids, BG and OEPA, Bowling Green, OH 3rd Place - Outfalls, City of Columbus, OH

We would also like to thank the OWEA Executive Committee for voting to send all three Ohio WEA teams to WEFTEC this year in Chicago to represent Ohio in the national competition! OWEA covers the expenses for the winning teams' travel to WEFTEC each year and again this year has graciously agreed to send three teams! THANK YOU on behalf of the Plant Ops Committee and the Ohio WEA teams!

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 Kim or Joe.

Mark your calendars for 2016! The Operations Challenge competition will be held at the OWEA Annual Conference on June 27-30 at The Bertram in Aurora, Ohio. And the Plant Operations and Laboratory Workshop will be held in Columbus at Nationwide Conference Center on October 21-22, 2015. It's going to be a very nice workshop with lots of great speakers lined up!

Kim Riddell, *kim.riddell@alloway.com*, 419.234.4507 Joe Tillison, *JTillison@bgohio.org*, 419.354.6274



2015 Workshop Dates

One Water Utility Management Workshop - August 18, 2015, Nationwide Conference Center

Plant Operations/Lab Analysts Workshop - October 21-22, 2015, Nationwide Conference Center

Watershed Workshop - November 12, 2015, OSU's Ohio Union

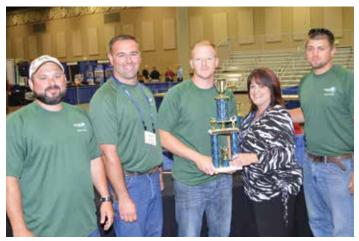
Biosolids Workshop - December 3, 2015, Nationwide Conference Center

2016 Workshop Dates

Government and Regulatory Affairs Workshop - March 17, 2016, DoubleTree Worthington
Collection Systems Workshop - May 5, 2016, DoubleTree Worthington
Plant Operations/Lab Analysts Workshop - October 26-27, 2016, DoubleTree Worthington
Watershed Workshop - TBA

Biosolids Workshop - December 1, 2016, Double Tree Worthington

Interested in presenting at an OWEA Workshop? Visit http://www.ohiowea.org/call_for_abstracts.php



Dirty Deeds - Northwest Water and Sewer District (l-r) Jarred Myers, Brian Martikan, Todd Saums, Kim Riddell, Tom McGrain



Outfalls - City of Columbus (l-r) Todd Logan, Shawn Nixon, William (Tucker) Randles, Kim Riddell, Jason Spencer, Robert (Bobby) Hood



Volatile Solids - Ohio EPA-NWDO & Bowling Green (l-r) Justin Williams, Walter Ariss, Joe Tillison, Kim Riddell, Ryan Gierhart, Andy Gall



TEST YOUR KNOWLEDGE - TAKE THE OPERATIONS QUIZ

- Taking samples at different locations along the length and width of an aeration tank as well as at different depths and analyzing them for total solids concentration will verify whether or not you have ______?
 - a. Adequate alkalinity
 - b. The right variation of microorganisms for nitrification
 - c. Enough tank volume to treat the influent CBOD5
 - d. Proper mixing in the aeration tank
- What does it indicate if there is a gradual increase in the bearing temperature of a centrifugal blower?
 - a. The packing is loosening
 - b. The motor temperature is adjusting to new inlet conditions
 - c. The blower is either being over or under lubricated
 - d. The outlet air is becoming less dense
- When organic wastes are discharged to your receiving waters, oxygen is depleted by ______?
 - a. Bacteria
 - b. Algae during the day
 - c. Igneous rock formations
 - d. Water flowing over the rocks at your discharge point

- 4. SVI compares which two parameters?
 - a. Phosphorus level to ammonia level
 - b. Semivolatiles to volatiles
 - Settled volume of MLSS to concentration of MLSS
 - d. RAS to WAS rates
- 5. Which of the following should be performed before entering a manhole?
 - a. Provide a safety harness for use by the entrant and have at least 2 persons remain above ground
 - b. Test for the presence of explosive gases
 - c. Test for the presence of root intrusion
 - d. Camera the inlet and outlet of the manhole

Answers noted below.

Questions, comments, or submit a suggested question? Email OWEA at info@ohiowea.org

Answers: 1-d; 2-c; 3-a; 4-c; 5-b



YOUNG PROFESSIONALS

by Alicia Adams, Chair

I wanted to introduce all of the amazing Section YP Chairs who are committed to advancing the OWEA YP and Student Committees into 2016 & 2017. The contribution of time and talents by these amazing volunteers is a great advantage to the YP Committee.

NEOWEA Chair Ashley Willston

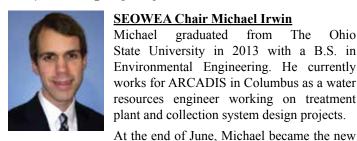
Ashley graduated from the University of Dayton with a B.S. in Civil and Environmental Engineering and a minor in Business Administration. She works at Burgess & Niple in their Northeast Ohio Utility Infrastructure

Ashley has been the YP chair for Northeast Ohio since 2012. Since 2012, she has established quarterly events for the NE Section YP group. These events typically start at 5:00 PM and include either a plant tour or a one hour technical session followed by a networking event. The NE YP events have always been free to encourage new and current members to attend.

Past YP events have included tours of the Cleveland Browns FirstEnergy Stadium Grind2Energy System, NEORSD Southerly Laboratory, Solon WRF, Bedford WWTP, and the Quasar Energy Group Facility at French Creek WWTP. We are currently working with NEORSD to coordinate our next event for August. The event will include touring two green infrastructure sites (one under construction and one where construction is complete).

In addition, the YP committee is actively involved in public outreach activities. The YP Committee has coordinated activities with the Water Resources Professionals Student Chapter at Cleveland State University. Our goal is for the NE YP group to educate the students about the functions of the Ohio Water Environment Association and potential job opportunities in the water industry. We provide mentoring and internship guidance in addition to networking with professionals in our field. The fall 2015 event will be a joint event with CSU and will be focused around water quality issues related to Lake Erie.

Sign up for the NE YP email list by emailing Ashley at ashley.williston@burgessniple.com.



SEOWEA Chair Michael Irwin

Michael graduated from The Ohio State University in 2013 with a B.S. in Environmental Engineering. He currently works for ARCADIS in Columbus as a water resources engineer working on treatment plant and collection system design projects.

YP chair for the Southeast Section. He has been involved with OWEA since becoming a student member at The Ohio State University in 2012. He plans to capitalize on this connection to the OSU student chapter of OWEA, the Society of Environmental Engineers (SEE), to increase student involvement at section

Over the next year, he plans to coordinate facility tours and social events in conjunction with Ohio State's SEE and AWWA's Ohio Section Southeast District YP committee, including the 4th annual

Wisdom vs. Enthusiasm cornhole competition, a tour of the City of Columbus Southerly WWTP, and other exciting events.

Sign up for the SE YP email list by emailing Michael at michael.irwin@arcadis-us.com

NWOWEA YP Chair Philip Teague

Philip is a design engineer with Jones & Henry Engineers in Toledo, Ohio. He holds a B.S. in Civil Engineering and a Masters in Environmental Engineering, both from the University of Massachusetts.

Philip has been a member of OWEA since moving to Ohio in 2012. He graciously agreed to serve as the Northwest Young Professionals Chair in early 2015. Since then, he has been focused on building relationships with regional universities, treatment plant staff, and consultants.

Philip plans to promote student interest in wastewater treatment by providing them with exposure to the talented and outgoing folks already working in the field, and by introducing them to the fascinating challenges faced by today's wastewater professionals. He also hopes to foster development among young professionals in the region by encouraging involvement in OWEA's networking and educational opportunities.

Watch for more details on the Clearas Water Recovery - Pilot Facility and Plant Tour planned for Fall 2015. The City of Perrysburg, Ohio is currently installing a pilot algae bioreactor facility for low concentration biological nutrient removal. A tour and presentation of the installation and the wastewater treatment plant is being planned for students and young professionals, to be followed by food and revelry at one of Perrysburg's fine dining establishments.

Sign up for the NW YP email list by emailing Philip at pteague@jheng.com



SWOWEA YP Chair Kelly Kuhbander

Kelly is a project manager at Strand Associates, Inc. in Cincinnati. She is a registered Professional Engineer in the state of Ohio and is a LEED Accredited Professional. She received her B.S. in Civil and Environmental Engineering from the University of Dayton, and her Masters in Business Administration

from Xavier University. She has spent the majority of her career working with Combined Sewer Overflow communities. Kelly is a volunteer for the Mill Creek Watershed Council of Communities stream water quality sampling initiative. She is also an adjunct professor at Cincinnati State Technical and Community College where she teaches a course titled Sustainable Stormwater Management Technologies.

Kelly has been active in SWOWEA since 2008, and began serving as the SW Section Young Professionals and Watershed Committees Chair in 2011. Kelly is happy to serve as part of SWOWEA. Her goal is to host interesting events that provide educational and networking opportunities, as well as encourage involvement in volunteer activities and giving back.

continued on page 23

activities.



OWEA 5S Update

Ohio 5S Meeting Minutes, June 25, 2015

Meeting called to order by Mark Livengood (our trusty, outgoing Grand Integrator) at 7:00 a.m., at the Kalahari Resorts in Sandusky, OH.

Mark picked up the slack due to all members who turned their backs on the extremely green and under-qualified NEW Grand Integrator, Laura Tegethoff. The motion to call Laura, "QUEEN of 55" was also ignored.

Members were asked to check their personal contact information on the roster sheets. Names of those attending appear at the end of these minutes. Laura thanked Jones & Henry for their generous support in sponsoring today's breakfast. Also thanks for attending our conference went to Jenny Hartfelder, hailing from Denver, CO, and representing WEF.

A motion and second to approve the minutes of the 2014 5S breakfast occurred. Motion carried.

A total of \$584 was collected from the new inductees (counted post-meeting and deposited in bank on 6/26/2015).

The 2015 inductees approached the front of the room. Welcome to the following 5S members: Mike Maringer (NW); Mike Benza (NE); Dan Martin (SW); Mike Heniken standing in for Tyler Linton (SE); and John Hoffman (At-Large). Plaques were presented to each. A pin was presented to Jenny at the Wednesday membership meeting.

The 2016 inductors were announced requiring them to step up and carry the heavy lifting next year. Mike Maringer (NW); Mike Benza (NE); Dan Martin (SW); and Mike Heniken again for Tyler Linton (SE). Tyler owes Mike a drink!

Ted Baker motioned and a second was placed to authorize OWEA 5S to donate \$500 to Water for People. Motion carried. Livengood will coordinate with OWEA for donation to be sent.



2015 5S Inductees: Mike Maringer-NW, Mike Benza-NE, Dan Martin-SW, John Hoffman-At Large, Grand Integrator Laura Tegethoff. (Not pictured: Tyler Linton-SE)

Attendees at the June 25, 2015 were: Tom Angelo, Ted Baker, Ron Bell, Michael Benza, Brad Borer, Doug Borkosky, Stuart Bruny, Frank D'Ambrosia, Tom Fishbaugh, David Frank, Mike Frommer, Terry Gellner, Jamie Gellner, Alice Godsey, Sheree Gossett-Johnson, Jim Greener, Patrick Gsellman, Steve Hallett, Jenny Hartfelder, Mike Heniken, Judi Henrich, Gary Hickman, Bill Hill, John Hoffman, Dail Hollopeter, Deborah Houdeshell, Gary Johnson, Dan Johnson, Jeff Lamson, Mark Livengood, Mike Maringer, Dan Martin, Paul Matrka, Marc Morgan, Ed Nutter, Kim Riddell, Billy Slaven, Leon Smith, Dave Sprague, Laura Tegethoff, Barb Wagner, Mike Welke, Elizabeth Wick, Jane Winkler.

Meeting adjourned at 7:45AM.

Laura Tegethoff, Grand Integrator and Effluent Recorder laurat@360water.com

Upcoming SW Section YP/Watershed Committee events.

- City of Hamilton Water Reclamation Facility Tour Date TBD (Fall) - Free tour of the City of Hamilton's Water Reclamation Facility. The facility has a biological treatment capacity of 32 MGD, and a hydraulic capacity of 62 MGD.
- ♦ River Clean Ups SWOWEA YP/Watershed committees encourage all members to participate in the local river clean ups. The Miami River Clean Up is scheduled for October 24, 2015. Go to www.greatmiamirivercleanup.org for more information.

Sign up for the SW YP email list by emailing Kelly at *kelly*. *kuhbander@strand.com*



State OWEA YP Chair Alicia Adams

I served as the SEOWEA YP Chair from 2011 to June 2015. I have a B.S. in Chemical Engineering with emphasis in Environmental Engineering from The Ohio State University. I have over 11 years of experience in the profession, and have been involved with nearly every aspect of various projects ranging

from community master planning to construction administration. I recently relocated to Northeast Ohio and started a company with Tom Angelo, Municipal Treatment Solutions, LLC.

I am committed to OWEA's YPs and Students in that I want to facilitate communication for WEF, the OWEA Executive Committee, and the Sections – if something is working in one section, I want to ensure that information is disseminated so it can be used statewide. Also, I hope to utilize my connections with WEF YPs to help foster the ability to use what has already worked and not require unnecessary re-creating of the wheel. I am honored to say that we have a very strong group of YPs this year, and I'm looking forward to leading them into more significant roles within the organization. It is their passions and vigor that can help our organization grow; especially within the younger community.

We are hoping to organize Statewide Professional Panels, "Career Opportunities in the Water/Wastewater Industry" throughout the year to engage not only engineers, but also operators, lab technicians, scientists, computer specialists, etc., to come out and learn about all the various career opportunities available in the water/wastewater field. If you are interested in being on these panels and helping to organize the events, please let me know!

Contact me with any YP/Student questions or suggestions you may have to make the committee stronger or more relevant.

Alicia Adams, Municipal Treatment Solutions, LLC aadams@munitreat.com, 740.627.0431





ROLL CALL



Wendell D. Smitley, P.E. has joined Sullivan Environmental Technologies as a sales associates covering the Ohio territory. Wendell has 18 years of experience as a Principal Engineer and Project Manager with Malcolm Pirnie/ARCADIS in Columbus.

Wendell's primary responsibilities included client relations, project management and staff supervision. His

education includes a BS in Civil Engineering from The Ohio State University with graduate coursework in Environmental Engineering at Old Dominion and OSU focusing on biological wastewater and physiochemical treatment, GIS and hydraulics.

Wendell will supplement our sales efforts in the Columbus area and help drive our aggressive business development and sales efforts in northern Ohio. Given his impeccable reputation and long standing regional client relationships coupled with his attention to detail, disciplined approach, organizational, and communication skills, and product knowledge we know that Wendell will be a welcome addition to our team! Wendell is based in the Columbus area.

OWEA members may complete the Roll Call form at http://www.ohiowea.org/memberships.php

Information regarding members who have passed away may be emailed to info@ohiowea.org

2015 Membership Rates

Rates include membership in the Ohio Water Environment Association and the Water Environment Federation.

♦ Professional & Academic	\$143
Operations	\$81
♦ Young Professional	\$61
♦ Student	\$25
♦ Executive	\$322
▲ Corporate	\$400

Membership information may be found at: http://www.ohiowea.org/memberships.php

Is Your Membership Profile Up to Date?

Are you receiving your copy of the Buckeye Bulletin and timely email updates from OWEA? Has your job or position changed? You can update your information online at http://www.ohiowea.org/memberships.php

Find OWEA on your favorite social network









presented by



The Ohio State University's **Society of Environmental Engineers**





2015 WATERSHED WORKSHOP

Thursday, November 12, 2015
The Ohio Union at The Ohio State University

6 Contact Hours 6 PDH's

Call for Abstracts closes August 31, 2015
Registration will open in mid-September

www.ohiowea.org
614.488.5800







New Members and Utility Partnership Program



WELCOME NEW MEMBERS

April 2015 to June 2015

Jennifer Roberts Christopher Adams Randy Christian Mark Hornyak Jennifer Albrethsen Chris Cira Liyan Jin Christie Ruffner Kwasi Amoah Michael Jones Phyllis Schaab Craig Clements Jim Balogh Shawn Dalrymple Donna Kniss Kelsie Senuta Mark Barga Mark Davis Paul Krehbiel Wilburt Shanklin Michael Barnhard Ruta Deshpande Jane Labombard Christopher Skehan Claud Barringer Eric Diaz Newt Long Caleb Smith Rob Berner William Fischer Ben McGraw Thomas Stalter Christine Staschiak Lon Bitner Sheri Foster Peter McKee Charles Menkhaus Devi Sundaravadivelu Ryan Boley Jasilyn Fuller

Evan Bollinger Anny Gao James Mills Paul Swartz **Brad Boyer** Daniel Gill Michael Navabi Mary Whitehead Chris Brothers Chris Gregory Matthew Oxsalida **Edward Wright** Denis Yurkovich Michael Brunner Troy Harris Jeff Pohlgeers

Christy Butera James Heilman Micah Reese Garret Chamberlain Warren High Mike Rex Dhawal Chheda Sidney Hoover Kurt Rhoads

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

OWEA's WEF Utility Partnership Program Member Utilities

Avon Lake Municipal Utilities City of Mansfield City of Twinsburg
City of Canton WRF City of Marietta City of Warren WWTP

City of Celina City of New Philadelphia Clermont County Sewer District

City of Cleveland City of Newark WTP Fairfield County
City of Columbus DPU City of Solon Miami County

City of Fairborn City of Steubenville Northeast Ohio Regional Sewer District
City of Harrison City of Toledo DWR Southwest Licking Community W&S Dist.

City of Lakewood City of Troy

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 onto 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.
- <u>ALL employees</u> 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 any-time throughout the registration period. <u>ALL employees</u> 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 UPP 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.



To learn about the benefits for your utility visit http://www.wef.org/UtilityPartnership/
Contact Amy Davis, amydavis@ohiowea.org, 614.488.5800 or Brittany Burch, bburch@wef.org, 703.684.2400 x 7213.



Committee Report

WATER FOR PEOPLE UPDATE

by Alicia Adams, Water For People Co-Chair

I would like to take this opportunity to update and thank OWEA members on the major achievements that Water For People has made that would not have been possible without your donations, contributions, and volunteerism throughout the year.

Global Everyone Forever (EF): Notable Progress

 Data from the annual monitoring exercises reveal phenomenal progress toward universal coverage (Everyone) and the sustainability of those gains (Forever) over the last two years:

Change 2012-2014		
Water Level of Service	个 17%	
Water Level of Sustainability	个 35%	
Public Institution Level of Service	↑ 47%	
Household Sanitation Level of Service	↑ 54%	

◆ The AkvoFLOW monitoring platform used by Water For People to track levels of service and system functionality has gone beyond Water For People's areas of operation and is being used by the national governments of Liberia, Ghana, and Sierra Leone.

Bolivia: Toward National EF

- On the national front, Water For People has contracted with Dr. Betty Soto, a highly esteemed expert and past-Country Director for Bolivia, to promote EF in the capital city of La Paz. National government has already dedicated three staff to work directly with Dr. Soto, an excellent indication of their receptiveness to our support for ending water poverty in Bolivia!
- ◆ Cuchumuela has already reached full water coverage. By the end of 2015, San Pedro will also reach full water coverage, impacting a population of 16,490. Within three years, every rural EF district in Bolivia will also achieve Everyone.

Honduras: Toward National EF

♦ The consortium of water organizations pursuing EF in Honduras has now grown to include two government agencies in addition to nine NGOs. WFP has been joined by CARE, World Vision, Save the Children, Catholic Relief Services and the Dutch IRC, among others, in pursuing EF in their areas of operation. In order to drive and harmonize their efforts, the consortium has hired a national coordinator.

Uganda: Job Creation

◆ Market-based water management is taking off in Uganda, this year providing 44 new jobs created by six entrepreneurs and serving more than 18,500 people with improved drinking water. The Ministry of Water and Environment is so impressed that they are documenting our metered hand-pump approach for nationwide distribution.

Malawi: Towards Sustainability and National EF

◆ The Water User Association (WUA) is a triumph of management that has solved the problem of unreliable water supply for thousands of Peri-urban households in Blantyre.

WUAs have largely replaced the corrupt system of private managers that has long stood between users and the utility, the Blantyre Water Board.

◆ Three organizations in Malawi have joined EF and have chosen districts for implementation: Plan International, Concern Universal, and WaterAid. Water For People will now be supporting them to identify gaps and preparation of investment plans.

India: Strides Towards Everyone

In January of 2015, the regional government partners of eight Gram Panchayets, the smallest level of government in India, declared their districts to have achieved *Everyone!* This represents nearly 175,000 people with full and permanent access to water and sanitation, a number we expect to verify later this year through our annual AkvoFLOW monitoring.

In 2014, Water For People invested \$16,743,517, supplemented by \$3,902,052 from governments, local partners, and communities for a total investment of \$20,645,569 toward ending water and sanitation poverty. The full 2014 annual report can be found at www.waterforpeople.org.

"It can be easy to lose sight of the big picture and get caught up in fundraising numbers, info-graphics, and charts. But at the end of the day, we're helping real people and solving some very real, and very serious problems. Always remember that you are making an impact—one life, one family, and one community at a time."

Water For People Board of Directors

Ohio Water For People 2015 Events

- ♦ July 31 Sport Shoot, Loveland
- September 18 Golf Outing Four Bridges Country Club, Middletown
- October 3 Race for Global Water 5K Run/Walk Hoover Dam Reservoir, Columbus
- November (date TBD) 6th Annual Fundraising Dinner Cincinnati

Other Possible Events

- Ohio Ride for a Purpose, The Water Buffalos Join fellow motorcycle riding enthusiasts and water and wastewater professionals on a ride to raise money and awareness for non-profit organizations that provide safe drinking water, sanitation services and environmental stewardship to developing countries. If you are interested in helping set up a ride, please go to www.ridewithpurpose.org to learn more.
- Fishing outing We are still looking for a good fishing hole and volunteers to help plan this event.

If you have an idea for a future event or have an event coming up, please let us know so we can help spread the word! We cannot say **Thank You** enough for your continued support.

Alicia Adams, Co-Chair, aadams@munitreat.com Afaf Musa. Co-Chair, musaab@cdmsmith.com

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Ohio EPA Update

BEING IN THE KNOW ABOUT NO EXPOSURE CERTIFICATIONS

by Lynette Hablitzel, P.E., Ohio EPA, Division of Surface Water, Storm Water Program

In 1990, U.S. EPA promulgated Phase I of the National Pollutant Discharge Elimination System (NPDES) storm water regulations. As a delegated authority for the NPDES permitting program, Ohio EPA adopted similar regulations. For those of you who need a sleep aid, Ohio's regulations can be found in Ohio Administrative Code 3745-38 and 3745-39. While the regulations are admittedly boring, their purpose is not. Over the almost two decades after the Clean Water Act (CWA) was passed, many industries and Publicly Owned Treatment Works had done a remarkable job reducing the discharge of pollutants and improving the country's waterways. However, it became evident that the goal of fishable and swimmable waters would not be met without addressing another source of pollutants - storm water runoff. Phase I required that certain municipal, industrial, and construction sites obtain NPDES permit coverage to reduce and eliminate the discharge of pollutants in their storm water runoff. In the rules, the types of industries regulated are listed under eleven categories. One category includes treatment works treating "domestic sewage or any other sewage sludge or wastewater treatment device or system" with a design flow of 1.0 million gallons per day or more and those required to have an approved pretreatment program. NPDES permit coverage is required for storm water discharges from:

- industrial plant yards;
- immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material or by-products used or created by the facility;
- material handling sites;
- refuse sites;
- sites used for the application or disposal of process waste waters:
- sites used for the storage and maintenance of material handling equipment;
- sites used for residual treatment, storage or disposal;
- shipping and receiving areas;
- manufacturing buildings;
- storage areas (including tank farms) for raw materials and intermediate and final products; and
- areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

It is important to know that if all of a WWTP's storm water routes to the head works of the plant, NPDES permit coverage for industrial storm water discharges is not required. Some facilities that still need an NPDES permit obtain coverage under the NPDES general permit for industrial storm water discharges, called the Multi Sector General Permit (MSGP). Other WWTPs have storm water language incorporated into the individual NPDES permit that covers the plant's effluent. The storm water language can be found in Parts IV, V, and VI of the individual permit. However, there is a third option for eligible WWTPs – the No Exposure Certification.

What is the No Exposure Certification?

The 1990 regulations excluded the "light industry" category from the requirement of obtaining NPDES permit coverage if

there was no exposure of activities or materials to storm water. However, in 1992, the U.S. Ninth Circuit Court ruled that U.S. EPA had not established a record to support its assumption that the light industry that was not exposed to storm water was not "associated with industrial activity," particularly when other types of industrial activity not exposed to storm water remained "associated with industrial activity." The court also found that "[t]o exempt these industries from the normal permitting process based on an unsubstantiated assumption about this group of facilities is arbitrary and capricious." The court remanded the rule to U.S. EPA for further rulemaking.

In 1999, U.S. EPA promulgated Phase II of the NPDES Storm Water rules. As part of Phase II, U.S. EPA did away with the unverified exemption for light industries and created the No Exposure Certification. The No Exposure Certification is a conditional exclusion from NPDES permitting, conditional upon:

- the facility having and maintaining a condition of no exposure of industrial activities or materials to storm water;
- 2. submitting the No Exposure Certification form to Ohio EPA and any Municipal Separate Storm Sewer System (MS4) operator that receives the discharge;
- 3. allowing Ohio EPA and the MS4 operator to inspect the facility for compliance; and
- 4. the facility resubmitting a completed No Exposure Certification form every five years.

A copy of the No Exposure Certification form and related guidance can be found at: http://epa.ohio.gov/dsw/storm/index/tabid/3905/LiveTabId/108450/Default.aspx#108452494-industrial-activities.

In Ohio EPA's No Exposure Certification form, the facility answers a series of yes/no questions about onsite activities and materials that may be exposed to precipitation. The facility self-reports their exposure of industrial activities and materials to storm water. Upon receipt of a completed No Exposure Certification form which indicates that a facility is eligible for the exclusion, Ohio EPA sends the facility an acknowledgment letter. Ohio EPA recommends that facilities who have submitted the No Exposure Certification form note the date of submittal in any compliance or routine maintenance tracking software that they use, since we do not notify WWTPs when it is time to resubmit the form.

Am I eligible for the No Exposure Certification?

In order to be eligible for the No Exposure Certification, a condition of no exposure must exist throughout the entire facility. What exactly is "no exposure"? According to the rule, it is when "All industrial materials and activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt and/or runoff." Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. Material handling activities include, but are not limited to: the storage, loading and unloading, transportation, disposal, or

continued on page 32





Uncovered roll-off dumpster



Signs of leakage



Uncovered roll-off dumpster



Chemical tank leakage



Chemical handling drain



Outdoor scrap yard



Pile of dewatered street sweepings



Septage receiving station signs of leakage



Ohio EPA Update

continued from page 30

conveyance of any raw material, intermediate product, final product or waste product. Past sources of storm water contamination that remain on-site can result in a condition of exposure.

A storm-resistant shelter includes completely roofed and walled buildings or structures, as well as structures with only a top cover but no side coverings, provided the material under the structure is not otherwise subject to any run-on and subsequent runoff of storm water. A storm-resistant shelter is not required for drums, barrels, tanks and similar containers that are tightly sealed, are not deteriorated, and do not leak. "Sealed" means banded or otherwise secured and without operational taps or valves. If you are transferring material to or from the container while it is outside, this is considered exposure. A storm-resistant shelter is also not required for adequately maintained vehicles used in materials handling.

Common Areas of Exposure at WWTP

When evaluating your site's eligibility for the No Exposure Certification, please check these common areas which may be exposed to precipitation:

- spills and leaks of process materials and chemicals;
- leaking compressors;
- outdoor sludge storage/handling/transfer areas, including track-out from sludge storage buildings;
- outdoor septage handling/transfer stations;
- drums and above ground storage tanks with taps and valves, including building ports for material transfer (e.g. ferric chloride);
- conveyors and roll-offs for screenings and grit;
- equipment and vehicle fueling areas (generators, too);
- equipment washing areas;
- areas used for the dewatering, handling and storage of street sweepings and catch basin cleanings;
- old equipment storage areas (a.k.a. "bone yards"); and
- composting sites.

If a material loading/unloading area is contained, but the storm water is evaluated and then released, this is still exposure and requires an NPDES permit. Catch basins and swales between unit processes such as aeration tanks and clarifiers are likewise considered "exposed". The outside storage of racks or pallets is considered exposure if the racks or pallets are not clean or are in poor condition. Roof stacks and vent emissions in compliance with other Ohio EPA programs and which do not cause storm water pollution are "not exposed". However, visible residue (e.g., particulate matter) near roof or side vents are considered "exposed". The discharge of pollutants from the corrosion of building materials may also make a facility ineligible to submit the No Exposure Certification form. General refuse and trash, not of an industrial nature, is not considered exposed as long as the container is completely covered and nothing can drain out holes in the bottom, or is lost in loading onto a garbage truck. If the site had a coal plant, which has since been removed but residue remains from a coal pile, this would be considered "exposure". Scrap or waste roll-offs left uncovered, or covered but with material transfer that occurs while outside, or with a hole in the bottom would be considered "exposed".

What If Something Changes?

Under the rules, the no exposure exclusion from NPDES permitting is conditional. If there is a change at the facility that results in the exposure of industrial activities or materials to storm water, the WWTP must immediately comply with all NPDES permitting requirements. Failure to maintain the condition of no exposure or to obtain appropriate NPDES permit coverage prior to exposure could result in the unauthorized discharge of pollutants to waters of the state, resulting in violations of the Ohio Revised Code, Ohio Administrative Code and the CWA. So, it is strongly recommended that all facilities which have submitted a No Exposure Certification form assess any structural and procedural changes at their site beforehand to ensure they maintain their eligibility. If the WWTP determines that exposure is likely to occur in the future due to a proposed alteration, the operator must obtain NPDES storm water permit coverage prior to the change to avoid penalties. We also recommend that operators at those facilities that have submitted a No Exposure Certification form routinely walk their site to check for situations that might inadvertently occur and result in exposure. If you have questions as to whether a facility or activity qualifies for the No Exposure Certification, please call any Ohio EPA Division of Surface Water staff for assistance.

Lynette M. Hablitzel, P.E., Storm Water Coordinator Division of Surface Water, Ohio EPA, Northwest District Office lynette.hablitzel@epa.ohio.gov

Photos provided by Ohio EPA staff members Dan Bogoevski, Lynette Hablitzel, and Pat Tebbe.





Drain near fueling area



Biosolids tracking

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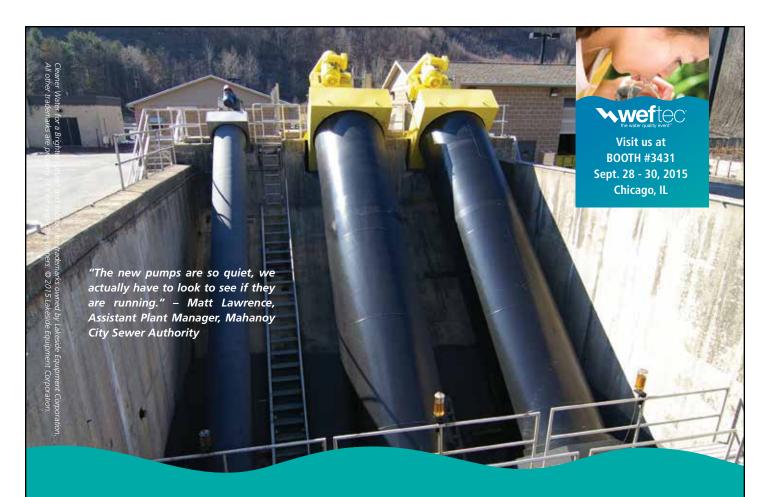
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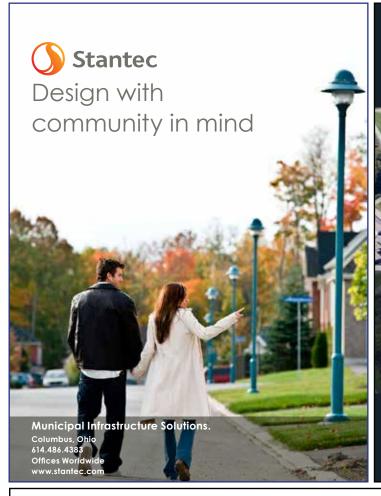
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- ♦ Annual Banquet



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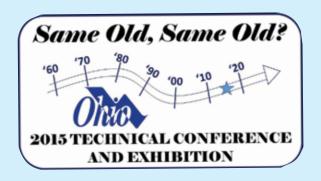
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2015 CONFERENCE WRAP-UP

Dear Colleagues,

Same Old, Same Old? Why this theme for this year's OWEA Annual Conference and Exhibition? Because although it sometimes seems that in our profession it's the same old topics, same old problems, and same old wastewater, new ideas and new technologies bring new opportunities for improvement and change. The same goes for the conference. It's almost the same every year, but it's never the same as previous years, with each conference striving for improvement and change.



NWOWEA Utility Workshop – One example of change was the pre-conference workshop on Monday, sponsored by the Northwest Section. This one-day technical workshop was open to both conference attendees and one-day visitors. Costs were offset by the Northwest Section as a member service, and operators or superintendents who attended could register their managers or government officials for free. Ninety people attended this first-ever preconference workshop for the cost of a typical section meeting.

Golf – Thirty-six teams teed off at the traditional conference opening event, followed by a steak cookout. The weather, food, fun, and camaraderie were enjoyed by all.

Welcome Social – An OWEA welcome event held Monday evening provided an extra opportunity to say hi to new and old friends, and for networking with our peers, perhaps the most valuable benefit to attending the conference.

Awards Brunch – A record-setting number of people attended our annual recognition of some very deserving professionals for their performance, service, and dedication to the association and to preserving and enhancing Ohio's water environment. Of course, the award winners are only a small sampling of the professionals at work every day in our industry.

Ops Challenge – Four teams competed in the Exhibit Hall Monday and Tuesday for the right to brag about their expertise in process control, laboratory, safety, collections, and maintenance events, and for the right to represent Ohio at WEFTEC in September. Congratulations to the winning teams.

Tours – The City of Sandusky opened their Water Pollution Control Plant on Sandusky Bay for a mid-day tour. Kalahari also offered tours of their below-ground facilities that house all support systems at the park. Thank you Sandusky and Kalahari!

Exhibition – Eighty-nine exhibitors joined OWEA at the conference to showcase products and services they offer. Eight of them provided technical sessions. Thanks to all exhibitors for your service and dedication to OWEA. The exhibition ended with a reception that allowed networking to continue until the Meet & Greet.

Rocking Through the Decades – A highlight at every conference, the Meet & Greet provides quality time to spend with colleagues, friends, and clients. This year's event was simple but fun, and six stations provided a variety of great food. Whatever your taste in music, it had to be covered by the music from six decades of the Same Old, Same Old favorites.

Technical Sessions – Wednesday's lineup included four concurrent tracks covering just about every topic in the industry, while Thursday's lineup included two tracks. The technical program received high marks from attendees. Thanks go out to all the presenters for their willingness to share their experience with the rest of us.

Annual Banquet – Wednesday's Annual Banquet included a speech by WEF Trustee Jenny Hartfelder and the presentation of WEF Awards to OWEA's deserving recipients. Following a delicious dinner, outgoing OWEA President Mike Frommer gave a brief summary of the year, followed by an equally brief welcome to the coming year by the new President, Elizabeth Wick. Who will ever forget Doug Borkosky and Jane Winkler as they led us through, shall we say, "interesting" renditions of favorite songs from four decades of music to highlight the Annual Banquet? Same Old, Same Old? Not in this case!

Same Old, Same Old? We hope that all of you enjoyed yourselves and took the time to reflect on our profession, how and why it started, where it is today, and our opportunities going forward. A record-setting number of people traveled to Kalahari to attend the OWEA 2015 Technical Conference and Exhibition. Thank you all. We also thank the members of the Northwest Section Conference Committee for volunteering your time to make the conference a special one.

Sincerely,

2015 Conference Committee Co-Chairs Dave Sprague, *spragoo@bright.net* Doug Borkosky, *doug@hlbaker.com*

Minutes of the 2015 OWEA Annual Business Meeting

The 90th Annual Meeting - Kalahari Convention Center, Sandusky, Ohio.

June 23, 2015

President Mike Frommer called the meeting to order at 5:05 p.m. Livengood made a motion to accept the agenda. The motion was seconded by Doug Clark. Motion carried. A quorum was established.

President Frommer welcomed the group and made some brief comments.

Items for approval were the 2014 annual business meeting minutes. Jane Winkler, Secretary-Treasurer, reported that the minutes were published in the Fall 2014 issue of the Buckeye Bulletin. Copies of the minutes and Treasurer's report were posted on the overhead. Welke made a motion to approve the minutes, with a second by Acosta. Motion carried. Jane Winkler gave the Treasurer's report. A motion to approve the report was made by Welke and seconded by Angelo. The motion passed.

Section reports were given. Denise Seman gave the Northeast Section report; Roberta Acosta, acting for Joe Tillison reported for the Northwest Section; Fred Smith represented the Southeast Section, and Tom Brankamp presented the Southwest Section report. Each outgoing Section President was presented a certificate of appreciation for their service by President Frommer.

Standing/Ad hoc committee reports - Committee chairs were permitted to give brief updates on their committee's activities. Written reports were submitted for the minutes.

The WEF delegate report was given by Delegate Doug Clark.

Dianne Crilley, the WEF Member Association (MA) representative, offered greetings from the Water Environment Federation. Ms. Crilley commented on WEF's continuing work with MAs, budgeting to send WEF staff to MA meetings, and establishing routine calls with MA staff.

Items for Voting

Nominations and elections - Doug Clark presented the 2015-2016 slate of nominations: President - Elizabeth Wick, President Elect - Ted Baker, Vice President - Jamie Gellner, and Secretary/Treasurer - Jane Winkler. The motion was made by Angelo to accept the slate as presented. Motion carried. Mike Frommer will serve as Past President.

There were no other announcements from those present. A moment of silence was held for deceased members.

A drawing was held for attendance prizes. Nelson Bear won the 49" smart TV, Mike Irwin the Fitbit HR, and Melodi Clark the Roku unit.

President Frommer adjourned the meeting at 5:50 pm.

Submitted by Jane Winkler, Secretary-Treasurer



Joe Tillison (accepted by Roberta Acosta) 2014-2015 NW Section President



Tom Brankamp 2014-2015 SW Section President



Denise Seman 2014-2015 NE Section President

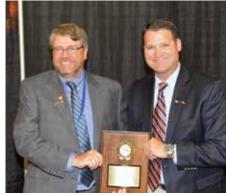


Fred Smith 2014-2015 SE Section President

41



Gary Hickman F. D. Dean Stewart Award



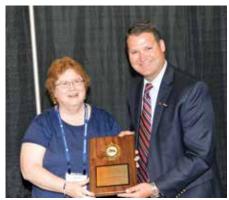
Patrick D. Gsellman, P.E. J. W. Ellms Award



Bill Cleary F. H. Waring Award



Phillip R. Bennington, P.E. W. D. Sheets Award



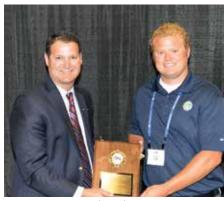
Donna Kniss
L. T. "Tom" Hagerty Award



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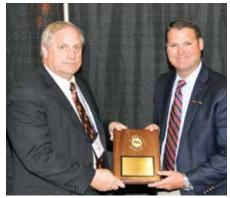
Melodi Clark Laboratory Analyst Award



Josh Holton P.W.O. Award



John A. Eastman, P.E. Lifetime Engineering Achievement



Terry M. Gellner, P.E. Lifetime Engineering Achievement



Mayor Michael B. Coleman Public Service Award



Paul Swartz Collection System Award



City of Bellevue Facility Image Award



City of Pickerington Facility Image Award



Mark Livengood Larry Moon Award



John Hoffman, Mike Maringer, Michael Benza, Dan Martin, and Jenny Hartfelder 2015 5S Inductees



Melodi Clark, Brian McFarland, John Hoffman, Jane Winkler, Leslie Vankuren, Terry Flood, and Lori Kyle 2015 Crystal Crucible Inductees holding plaques



Thomas F. Smith, III, P.E. WEF William D. Hatfield Award



David Sprague WEF Arthur Sidney Bedell Award



Southerly WWTP - Columbus WEF Burke Award



Tanna Rhoads WEF Laboratory Analyst Award



Mark Livengood
Outgoing WEF Delegate



Lon (Mickey) Shank, David Bauer, and Doug Handley WEF Quarter Century Awards

CONFERENCE PHOTOS



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Children's Water Festival

DISCOVERING THE WONDERFUL WORLD OF WATER AT THE 8TH ANNUAL CENTRAL OHIO CHILDREN'S WATER FESTIVAL!

by Alicia Adams

On Tuesday, May 19, 2015 nearly 500 fifth grade students attended the Central Ohio Children's Water Festival at the Franklin Park Indoor Adventure Center in Columbus, Ohio. Attending from 11 different schools, the children viewed interactive displays and participated in hands-on activities with the goal of obtaining a greater environmental awareness of our valuable water resources.

The event began with half of the students being educated by City of Columbus Department of Public Utility (DPU) personnel on the City's extensive water supply, water treatment, wastewater treatment, water distribution and collection systems:

- Tim Huffman, Phil Schmidt, and Jen Martens, "Water Distribution System"
- Kevin Wood, Tim Naim, Jim Seidle, Mike Yurkovic, and Dustin Stoops "Inspecting the Inside of Sewers"
- ♦ Michelle Gilkerson, Sapna Isaacs, and Ben Ellsesser, "Water Treatment"
- Bernard Conrad, Bob Lamb, Mike Merz, Ben Harriff, Matt Repasky, and Jeff Vesco, "Name that Pollution"
- Summer Hawkins "Water Quality Monitoring"
- ♦ Gary Hickman, Susan Brickman, and Tanna Rhoads, "Wastewater Treatment"
- ♦ Chris Dundon, "Cold Water Safety"
- ♦ Brian Smith, Jim Ellsesser, Ken Caution, and Jeff Keener, "Backflow"
- Mark Eppich, Stacia Eckenwiler, Jen Martens, Gary Pittman, Phil Schmidt, and CR Weaver, "Storm Hole"
- ♦ Mark Timbrook, Tim Fallara, Colin Harding, Alison Gale, Hussein Mohammed, Quentin Thomas, and Jake Schroeder "Storm Hole"

The other half of the students interacted with presenters from various organizations at hands-on workshops – learning about the irreplaceable resource of water and how it impacts our lives:

- ♦ Kelli Dodd and Jeff Lyons, Columbus Public Health, "Water Protection Program"
- ♦ Jeff Montavon, Ohio EPA, "The Long Haul"
- ♦ Linda Slattery and Chris Kenah, Ohio EPA, "Groundwater Flow Model"
- Brett Farver and Beth Ehret, Brown & Caldwell, "Water Contamination and Filtration"
- Afaf Musa, CDMSmith, "Water For People Water Scarcity"
- ♦ Dale Kocarek , Stantec, "Public Sanitation Movement"
- Kim Shaffer, USGS Education Outreach, "Stream Flow, Groundwater, and Beaches"
- Allison Shaw, Metro Parks, "Amazing Amphibians"
- ♦ Nicole Jackson, Franklin County Soil and Water, "Sliding Soil"
- Monica Simpson and Margaret and Marc Hawkins, 360water, "EnviroScape Watershed Model"
- ♠ Dona Rhea, Delaware SWCD, "Perc Through the Pores"
- ♦ Zuzana Bohrerova and Linda Weavers, OSU ,"Sink or Float Buoyancy"
- Chris Rehs-Dupin, Girl Scouts of Ohio's Heartland, "What's Up with the Dead Sea"
- ♦ Linda Pettit, Franklin Soil and Water Conservation District, "Sliding Soil"
- Kristin Hilson, Franklin Soil and Water Conservation District, "EnviroScape Watershed Model"

Before lunch the students gathered around the amphitheater and were welcomed to the festival by Mayor Michael Coleman, Columbus City Councilmembers Zach Klein and Eileen Paley, and Division of Water Administrator Dr. Rick Westerfield.

This year the students were able again to participate in a Bumper Sticker Contest. The bumper sticker was to illustrate ways to honor our local water resources, reduce water usage, or promote local tap water. The winner, Serafina Rees from Wickliffe Progressive Elementary, was announced and her photo was taken with Councilmember Paley and Dr. Westerfield.

Before dispersing for lunch the Columbus pipe-tapping team demonstrated their talents for the students. Serafina, our Bumper Sticker Contest winner, assisted as the time keeper. Coach Pat Crumley and Jill Taptich of DOW motivated the rest of the fifth-grade students to cheer on the team's Setter - Chris Briggs, Cranker - Dan McClain and Copper - Ricco Ratliff as they raced against the clock to install a successful tap. Special thanks go to the pipe-tapping set up crew of Mike Spriggs, Dan Mathers and Nick Marsh.

This year the students were entertained before the event, during lunch, and while they waited to depart with music provided by DJ Tom Angelo. DJTA proved to be an exciting addition to the festivities.

Several individuals served as key coordinators for the 2015 Central Ohio Children's Water Festival:

- Lorraine Winters of Columbus DPU and Tim Wolfe of MWH served as the event coordinators. Lorraine also coordinated City of Columbus staff participation and presentations;
- Michelle Eckels of Resource International served as the school coordinator and, with assistance from Alicia Adams of Municipal Treatment Solutions, worked extensively with the schools and teachers to arrange for the 500 students to attend this wonderful event;
- Cindy Jacobsen of T&M Associates coordinated more than 60 volunteers from among a number of organizations to make sure the students' visit to the festival was both enjoyable and safe;
- Lorraine Winters of Columbus DPU coordinated City of Columbus staff participation and presentations;

Children's Water Festival



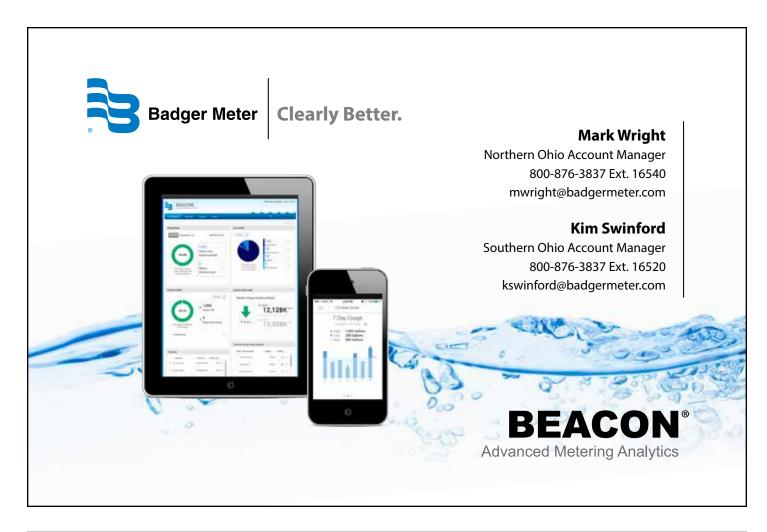
- Jeff Montavon of Ohio EPA lined up and coordinated presenters of the hands-on workshops;
- Jamie Decker of CH2M served as site coordinator and assisted in the planning and site preparation to ensure the festival ran smoothly;
- Liz Veljanoski of the Franklin Soil and Water Conservation District administered the Water Festival's funding;
- Amy Eberhardt of Arcadis, Alicia Adams of Municipal Treatment Solutions, Tim Wolfe of MWH, and Vui Chung of B&N helped secure funding for this year's event. In total, the group secured roughly \$15,000;
- Ruthanne Flottman and Anne Speakman of Ohio EPA worked with Ohio EPA staff to obtain volunteers for the event and coordinated with Penelope Purewater to secure her attendance for festival entertainment;
- Kristen Atha of Brown & Caldwell coordinated the bumper sticker contest.

Thanks to everyone who contributed in some fashion to yet another successful Central Ohio Children's Water Festival. A special thanks goes to Columbus DPU Director Greg Davies and DOW Administrator Rick Westerfield whose unwavering support has led to the long-term success of this effective educational event for Franklin County school children.

This year's event would not have been possible without financial contributions from the following organizations: AECOM, ARCADIS, Brown & Caldwell, Burgess & Niple, CDM Smith, CH2M, Chester Engineers, City of Columbus DPU, CT Consultants, DLZ, Dynotech, EMH&T, Hazen & Sawyer, HDR, Kokosing, MS Consultants, MWH, OWEA, Pelton Environmental, Ranney Collector Wells, Resource International, Ribway, Smith Environmental, Stantec, T&M Associates, Woolpert and 360 Water.

If your community or municipality is interested in starting a similar Children's Water Festival in your area, feel free to contact Alicia Adams, <u>aadams@munitreat.com</u>, 740.627.0431.

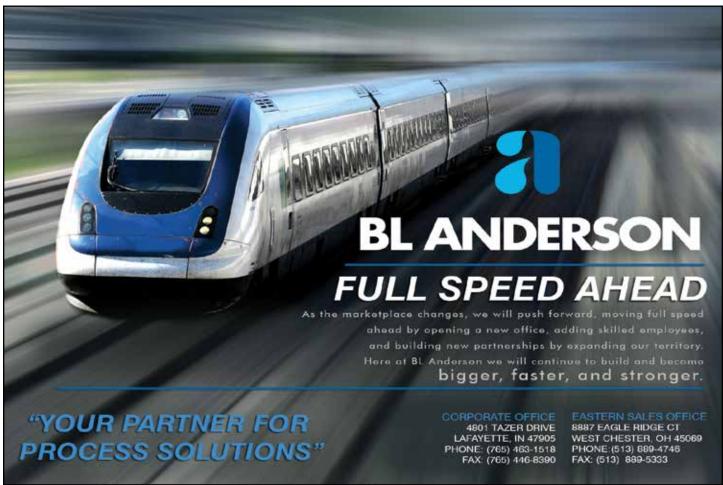














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POLK RUN WATER RECLAMATION FACILITY

by Rachel Oscherwitz, Plant Operator, Polk Run Water Reclamation Facility

The Polk Run Water Reclamation Facility is a quaint treatment plant located in Loveland Ohio, but owned and operated by the Metropolitan Sewer District of Greater Cincinnati.

Preliminary Treatment

We start our wastewater treatment journey with a stone pit. The stone pit removes large debris from the influent flow, such as bricks, branches, and, you guessed it . . . stones! This is cleaned out once a year by our collection crew with a clamshell and then hauled to a landfill. The wastewater then passes through grinders before being lifted with our Fairbanks Morse submersible pumps. We have three pumps with a rated capacity of 12 MGD, and one smaller pump rated for 6 MGD. They are variable speed, centrifugal submersible pumps, controlled by well level (floats). These are more than adequate for our 8 MGD design flow, our 5 MGD average flow, and our 30 MGD maximum wet weather flow.

Moving right along, we now come to the fine screening process. Polk Run utilizes three Rotomats, with ½ inch openings. The screens run one of three ways. First, the programing will start the screens when the level sensor reaches a high level of 13 feet. The programing for the screens will also automatically run the screens every 30 minutes, regardless of the level in the channel. The third option to run these screens is by hand. The operator needs to hold a toggled switch in the hand position to manually run these screens.

After the wastewater travels through the fine screens it enters the grit removal system. The plant uses a Schreiber aerated grit removal system. The grit tank is a long, rectangular tank with a steeply sloped floor equipped with air diffusers along one side. A traveling bridge (Schreiber's specialty), has a pump attached that reaches the bottom of the grit tank and can be raised or lowered to accommodate the amount of grit collected in the tank. The tank slopes from the sidewalls to a center collection trough where the grit collects before being pumped to the grit classifier. At the end of the grit tank, the flow of raw wastewater can go one of two ways. During normal flows of less than 18 MGD, the flow exits the grit tank through an effluent gate and enters the primary settling tank's influent channel. In cases where the influent flow exceeds 18 MGD, the excess flow will spill over the two weirs at the end of the grit tank and flow to the Storm Water Retention Basin to be brought back into the plant after the flow subsides.



Service Area Map



Primary Treatment

Now that we have all the debris out of the wastewater, we are now at Primary Treatment. Polk Run is equipped with six Primary settling tanks. On average we use three tanks during normal flows. Additional tanks are put online as the flow increases during rain events until all six tanks are online with 18 MGD being treated through primary. In extremely dry weather, it is beneficial to only use two primary tanks to keep the water fresh and prevent it from turning septic. The primary settling process uses flight boards to move the solids in the tank. The flight boards are spaced 10 ft. apart and are used to move the settled solids (primary sludge) to one end of the tank and into a collection sump area for removal to the primary sludge thickener. The floating grease and solids (primary skimmings) are pushed to the far end of the tank for manual removal with a scum trough and scum drum. Each primary tank has a designated Seepex positive displacement progressive cavity pump, capable of pumping 70 gpm. The skimmings are removed by being pumped to a dewatering drum screen. The drum screen is a Hycor Rotostrainer.

Secondary Treatment

Our wastewater is now at the heart of the plant - aeration. Polk Run uses an activated sludge process to treat the sewage. The plant has four aeration tanks with two passes and eight zones each. Each zone has a grid of air diffusers attached to the bottom of the tank to supply air to the microorganisms in the tank. The effluent from the



Roto mat fine screens



primary tanks is then fed to the aeration tanks using a splitter box. A splitter box is a rectangular concrete structure with an upward opening gate assigned to each aeration tank. Using the splitter box helps evenly distribute the flow to the aeration tanks. During normal operations, the settled sewage enters the aeration tank in zone one, where the RAS (Return Activated Sludge) is introduced. During extended periods of high flows, we can divert the influent to the end of zone four through the step feed valves. Zone one is the closest to the influent end of the aeration tank and has three 4 inch air headers with 10 coarse bubble diffusers attached to each header for mixing. It is in this zone, under normal operating conditions, that the settled sewage and the RAS (Return Activated Sludge) mix to become what is now called mixed liquor.

To keep our microorganisms happy we aerate the tanks using five Lamson Corporation centrifugal blowers. Each blower can provide up to 2700 SCFM of air at an operating discharge pressure of 8.0 psi. The air flow to each header is controlled by a butterfly valve on the air feed line for each zone. These valves are adjusted by the operator to control the DO (Dissolved Oxygen) in each zone. The residual DO is measured by HACH meters mounted on the handrails, one meter per pass of the aeration tank located at a midpoint of each pass.

The new combination of mixed liquor leaves the aeration tanks and is distributed into secondary settling tanks. Here again we use a splitter box to ensure even distribution of the mixed liquor to the settling tanks. With an average daily flow of 5.0 MGD the plant normally operates three secondary settling tanks at a time. The settling tanks have 2 purposes; first to slow the velocity of the incoming mixed liquor and second to encourage further flocculation of the mixed liquor for final settling. The settled sludge is pulled off the bottom of the tanks with RAS pumps. We use 6 inch horizontal non-clog Fairbanks Morse pumps. They have a rated capacity of from 0 - 1,100 gpm. The pumps are controlled by a VFD and are adjustable by the operator for control of the RAS rate. The now clarified water flows over the v-notched weirs and over for disinfection.

Disinfection

Between May 1st and October 31st, disinfection at Polk Run is accomplished using UV (Ultraviolet) light. The flow travels through the UV channel where it flows through and around one of two banks of UV lamps. Each bank of lamps consists of six modules with 12 lamps in each module. Each individual lamp is housed in a quartz



Grit tank with Schreiber unit in rest position

sleeve to protect it from the elements of the UV channel. Every sleeve is equipped with an air actuated wiper mechanism. This wiper mechanism slides along the length of the sleeve removing any built up algae or dirt and allows the lamp to run at a lower power setting for the same light transmittance. Finally, the liquid raw sewage has been treated and disinfected and is discharged to the receiving stream, which in this case is an unnamed tributary to the Little Miami River.

Thickening and Solids Handling

The Polk Run plant has two gravity thickeners, one dedicated to thickening the primary sludge and the second dedicated to the thickening of the WAS. Each thickener tank has a thickened sludge pump assigned to it for transferring the thickened sludge to the sludge holding tanks prior to removal and final disposal at either the Little Miami or Mill Creek treatment facility. The settled sludge enters the thickener through a 12 inch feed line between the distribution well and a feed well attached to the center column

continued on page 54



Overflow to storm water retention basin



Storm water retention basin

continued from page 53

of the thickener. As the sludge settles the clear water rises to the top of the thickeners and overflows back into the raw sewage wet well. The thickened sludge is transferred towards the center of the thickener by blades and adjustable squeegees attached to the center column of the thickener and rotated by a collector drive unit. The thickened sludge collects in the center of the bottom of the tank before it is drawn off by the thickened sludge pump. The thickened sludge pump discharges to a common 4 inch pipe that flows to the sludge holding tanks. The holding tanks have sludge pumps that can be used for transfer or for recycling in the holding tank by a set of valves that allows the flow to recycle into the sludge holding tank for mixing or to the truck loading tree. Our sludge is transported to the Little Miami treatment facility for further thickening and final disposal by incineration.

That concludes our tour of The Polk Run Water Reclamation Facility. I hope you enjoyed it and will come visit next time you are in the area!

Polk Run's Most Frequently Asked Questions:

Design Data Service Population: 30,000

Number of employees: 6

Design Flow: 8.0 MGD Average daily flow: 5.0 MGD

Peak flow: 18.0 MGD through primary

30.0 MGD max pumping capacity

Plant Personnel:

Tim McGrath - Plant Maintenance Worker

Dave Bargerstock - Plant Maintenance Worker

Steve King – Electrician Maintence Worker 2

Jarod Yost – Engineering Technician 3; OEPA class 3 wastewater license/ ISA CCST Level 1

Chris Bingham – Engineering Technician 3; OEPA class 1 wastewater license/ ISA CCST Level 1

Rachel Oscherwitz – Plant Operator; OEPA class 3 wastewater license/ OEPA class 2 water license

Keith Heffner – Treatment Supervisor; OEPA class 4 wastewater license

Jeff Burgess; Laboratory Technician 3

The plant's discharge limits are determined by the Ohio Environmental Protection Agency in accordance with the Federal Water Pollution Control Acts. Limitations on flow, pH, dissolved oxygen, ammonia, solids loadings and other parameters are set by the plant's National Pollutant Discharge Elimination System Permit and monitored closely by laboratory personnel. The effluent limitations are summarized below:

Rachel Oscherwitz, Plant Operator Polk Run Water Reclamation Facility rachel.oscherwitz@cincinnati-oh.gov

Polk Run Plant Effluent Limitations				
Summer TSS	18 mg/L weekly, 12 mg/L monthly. 546 kg/day weekly, 364 kg/day monthly			
Winter TSS	45 mg/L weekly, 30 mg/L monthly. 1370 kg/day weekly, 909 kg/day monthly			
Summer Nitrogen, Ammonia	2.3 mg/L weekly, 1.5 mg/L monthly. 69.6 kg/day weekly, 45.4 kg/day monthly			
Winter Nitrogen, Ammonia	23 mg/L weekly, 15 mg/L monthly. 696 kg/day weekly, 454 kg/day monthly			
Summer E. coli 3/100 ml	284 weekly, 126 monthly			
Summer CBOD 5-day	12 mg/L weekly, 8.0 mg/L monthly. 364 kg/day weekly, 243 kg/day monthly			
Winter CBOD 5-day	40 mg/L weekly, 25 mg/L monthly. 1220 kg/day weekly, 757 kg/day monthly			
pH min	6.5, pH max: 9.0			
Dissolved Oxygen minimum	5.0 mg/L			
Oil and Grease maximum	10 mg/L grab sample once a month			



Offline primary tank



UV disinfection









Mixed liquor splitter box



Secondary clarifier



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SW Thursday, October 15, 2015 Cincinnati MSDGC, 225 W. Galbraith Road, Cincinnati, OH 45215

SE Thursday, October 29, 2015 Columbus SMOC, 1250 Fairwood Ave, Columbus, OH 43206

NW Thursday, November 5, 2015 NW Water and Sewer District, 12560 Middleton Pike, Bowling Green, OH 43402

TOPICS:

Manhole Rehabilitation - Robin Wolfe, Cretex

Lateral Cleaning and Inspection – Ed Fitzgerald, Jack Doheny Company

Air Release Valve Maintenance - RA Consultants and Mike Killian, Municipal Associates

Grease Removal - Bob Hunn, Duke's Root Control

Recycling Cleaning Water - Paul Harrison, C&K Industries

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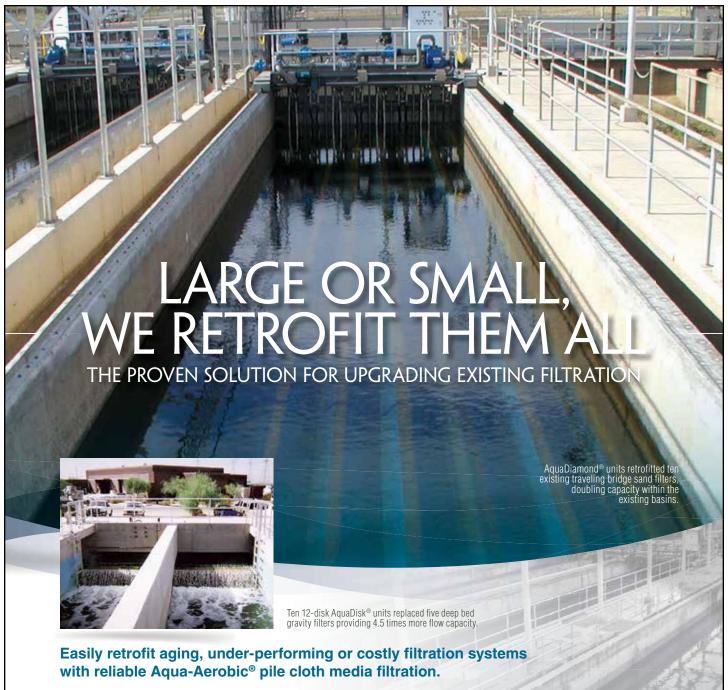
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EMERGING ISSUES IN THE WATERSHED

by Kelly Jutte, Technical Operations Coordinator, City of St. Marys

When the Clean Water Act was established in 1972, it formally established a national commitment to the restoration of the chemical, physical, and biological integrity of the nation's waters. These amendments have been vital for the health and improvement of watersheds throughout the United States. Through this act, there was an establishment of regulatory requirements to address water quality problems. Dramatic improvement in the nation's waters has been seen over the years. However, over time, inherent sources of pollution have snuck into the forefront of the watershed. Chemical pollutants such as pharmaceuticals are being found in detectable concentrations in streams and rivers across the nation. These measurable amounts are having a big impact on the chemical and biological integrity of waters. They have become a concern because of their capability of leaching to a majority of the watersheds through run-off and wastewater effluents.

Pharmaceuticals are synthetic or natural chemicals that can be found in prescription medicines, over-the-counter medicines, therapeutic drugs, and veterinary drugs. They are specifically designed to provide positive physiological effects and be a significant benefit to society (WHO, 2012). Yet, sources of pharmaceuticals are being recycled into the water system via excretion, disposal, manufacturing, land application, and concentrated animal feeding operations. A greater part of this contaminated water flows into municipal sewers and is directed to wastewater treatment plants. Although the primary purpose of wastewater treatment facilities is to provide adequate treatment necessary to prevent contamination of receiving waters, some pharmaceuticals are capable of passing through the treatment processes.

Pharmaceuticals encompass a broad range of compounds, and wastewater treatment plants are not designed to handle the complexity of a number of these substances. While plants are designed to remove the bulk of chemicals, foreign material, and microorganisms, up to 80 percent of concentrated active drug compounds leave the treatment plant. A study completed by United States Geological Survey (USGS) found traces of common medications such as acetaminophen, hormones, and blood pressure medication in waterways throughout the United States (Koplin, et. al., 2002).

Removal of pharmaceuticals from contaminated waters is no different than the removal of any other organic chemical. Treatment and removal of pharmaceuticals are dependent on technology and operational configuration of the wastewater treatment plant. Factors such as sludge age, activated sludge tank temperature, and hydraulic retention time can have an effect on the removal of pharmaceutical compounds. Removal rates of these compounds are also influenced by secondary treatment processes. Chlorine treatments have the capability to remove 50% of pharmaceuticals, and even more advanced treatments such as ozonation, advanced oxidation, activated carbon, nanofiltration, and reverse osmosis have the capability to remove much higher percentages of compounds. For example, reverse osmosis can remove more than 99 percent of large pharmaceutical molecules (WHO,2012).

The technology is available, yet pharmaceuticals are still found in trace amounts in waterways across the nation. A majority of wastewater treatment facilities in the United States do not have upgraded systems to remove complex inorganic compounds. Unfortunately, most wastewater treatment plants do not have the room or the funding to install advanced equipment. Limited resources, especially in municipalities, have to be carefully allocated with consideration of the costs and benefits of new equipment. Since pharmaceuticals are not regulated by the United States Environmental Protection Agency (U.S. EPA), facilities are delegating resources towards maintaining optimal operations and removal of compounds that are regulated by the EPA.

Pharmaceuticals have been in circulation since the 1800's, so why are there so many concerns over them now? Until recently, technology has not had the precision to measure minuscule amounts of pharmaceuticals within water bodies. Since advanced equipment has been able to detect these compounds, new potential threats to the watershed are being considered by the scientific community. Current research has shown that foreign pharmaceutical substances can affect the endocrine systems of aquatic vertebrates such as fish. Studies completed by Sumpter and Johnson, 2008, sampled roach fish throughout various waterways including below wastewater outfalls. Their studies indicated that male fish found below the outfalls were undergoing feminization or endocrine disruption due to pharmaceutical contamination. Contamination of waterways has also stemmed concerns and research on antibiotic resistant bacteria and accumulation of pharmaceutical substances in the tissue of aquatic vertebrates.

Since pharmaceuticals have been found within the watershed, they have been hypothesized to have negatively impacted aquatic life. The negative impacts on these organisms are likely attributed to their continuous exposure to any compound discharged into receiving waters. This, however, is in contrast to humans who only experience limited exposure (i.e. oral). Threats to human health due to exposure are assumed to be considerably smaller because of minute concentrations of pharmaceuticals within water and limited human exposure. Since concentrations of pharmaceutical compounds are being measured at nanograms per liter, one individual would have to consume millions of gallons of water in order to consume a therapeutic dose.

The role and effect of pharmaceuticals upon the watershed and its inhabitants only appear to be a minuscule problem especially on humans since reports show limited health detriments due to pharmaceutical compounds (WHO,2012). Trace quantities of these pharmaceuticals have been recycled into the watershed since the beginning of their use with no apparent effect on humans. However, does that make pharmaceuticals any less of a threat on the watershed? In recent years, the increased use and diversity of pharmaceuticals have changed dramatically (Snyder, et al., 2008), and there has been a significant increase in the production of new pharmaceuticals. It seems that the progress of medicine has superseded regulations because currently there are no federal regulations limiting the levels of pharmaceuticals in water and wastewater. However, the United States Environmental Protection Agency has added some pharmaceuticals to the contaminant candidate list. These four contaminants are exclusively used as human pharmaceuticals and include three birth control substances and one antibiotic (U.S. EPA, 2009a).



Pharmaceuticals are within the watershed and more studies are being performed to determine if concentrations exceed minuscule screening levels. Nothing reported at this time has exceeded levels that could harm the public. However, more exposure data is needed to provide important information to determine if federal regulations are needed, especially to protect the watershed's ecosystem. More data is also needed to evaluate the numerous percentages of pharmaceuticals that are not currently monitored or evaluated because of potential harmful effects on the environment and humans.

The issue of pharmaceuticals within the watershed is small compared to other contaminants polluting the nation's waterways. In spite of this, these compounds should also not be ignored. Pharmaceuticals have the potential to alter ecosystems in the watershed and contaminate future water resources. With the aim of maintaining water as a sustainable resource, it is imperative to protect and preserve it through proactive actions. It is crucial for operators and administrators maintaining, treating, and preserving the watershed to be educated in this emerging concern in order to take actions in prevention and preservation.

Kelly Jutte, Technical Operations Coordinator, City of St. Marys *kjutte@cityofstmarys.net*

Works Cited

Bienkowski, B. (2013, November 30). Only Half of Drugs Removed by Sewage Treatment . Scientific American .

Department of Ecology: State of Washington . (n.d.). Retrieved June 1, 2015, from Pharmaceutical Waste : http://www.ecy.wa.gov/programs/hwtr/pharmaceuticals/pages/pie.html

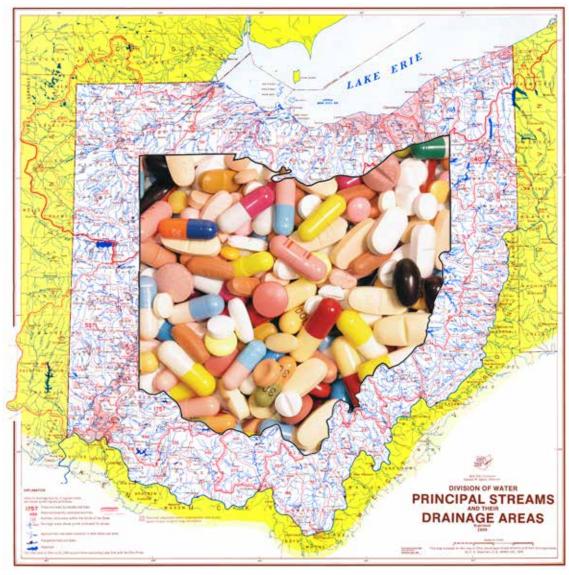
Koplin, D. W., Furlong, E. T., Meyer, M. T., Thurman, E. M., Zaugg, S. D., Barber, L. B., et al. (2002). Pharmaceuticals hormones and other organic wastewater contaminents in U.S. streams, 1999-2000-A national reconnaissance . Environmental Science and Technology, 1202-1211.

World Health Organization. (2012). Pharmaceuticals in Drinking Water . Water Sanitation and Health .

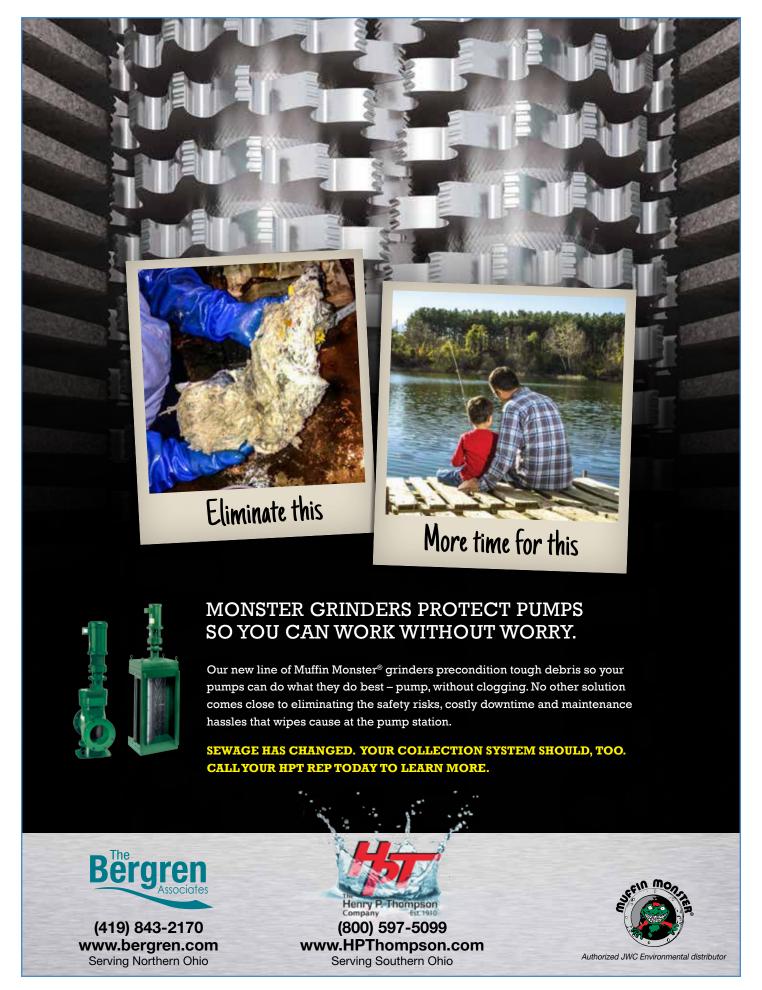
Snyder, S., Lue-Hing, C., Cotruvo, J., Drewes, J., Eaton, A., Pleus, R., et al. (2008, April 15). Pharmaceuticals in the Water Environment. Retrieved June 5, 2015, from https://www.dcwater.com/waterquality/PharmaceuticalsNACWA.pdf

Sumpter, J. P., & Johnson, A. C. (2008). 10th Anniversary Perspective: Reflections on endocrine disruption in the aquatic environment: from known knowns to unknown unknowns (and many things in between). J. Environment Monitoring, 1476-1485.

U.S. Environmental Protection Agency. (2009, October 8). Drinking Water Contaminant Candidate List3--Final. Federal Register, 51850-51862.



Map Source Ohio Department of Natural Resouces. Pharmaceutical overlay by OWEA.



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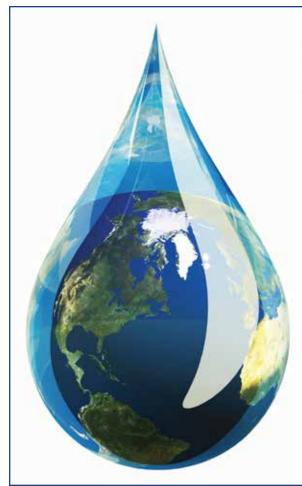


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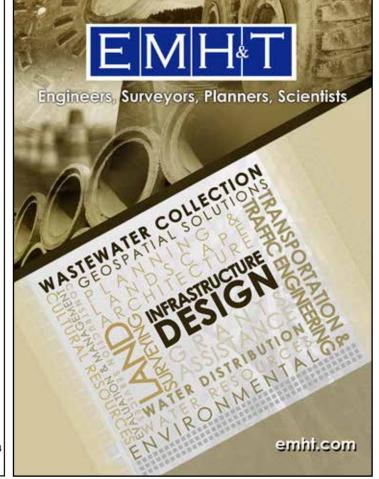








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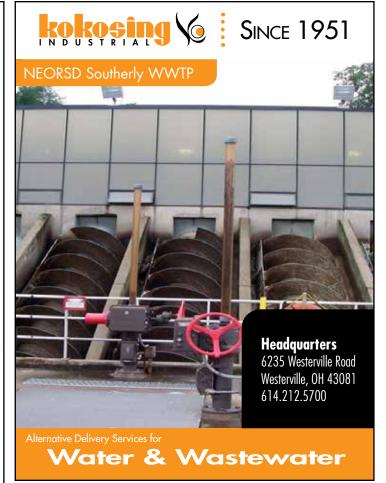
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HOW ALKALINITY AFFECTS NITRIFICATION

by Mary Evans and Gary Sober

The Water Environment Federation's new Operations Challenge laboratory event will determine alkalinity needs to facilitate nitrification. Operators will evaluate alkalinity and ammonia by analyzing a series of samples similar to those observed in water resource recovery facilities.

This event will give operators an understanding of how alkalinity works in the wastewater treatment process to facilitate nitrification, as well as the analytical expertise to perform the tests onsite. This provides the real-time data needed to perform calculations, since these analyses typically are performed in a laboratory that can present a delay in the data delivery.

What is alkalinity?

The alkalinity of water is a measure of its capacity to neutralize acids. It also refers to the buffering capacity, or the capacity to resist a change in pH. For wastewater operations, alkalinity is measured and reported in terms of equivalent calcium carbonate (CaCO₃). Alkalinity is commonly measured to a certain pH. For wastewater, the measurement is total alkalinity, which is measured to a pH of 4.5 su. Even though pH and alkalinity are related, there are distinct differences between these two parameters and how they can affect your facility operations.

Alkalinity and pH

Alkalinity is often used as an indicator of biological activity. In wastewater operations, there are three forms of oxygen available to bacteria: dissolved oxygen (O₂), nitrate ions (NO₃⁻), and sulfate ions (SO₄²⁻). Aerobic metabolisms use dissolved oxygen to convert food to energy. Certain classes of aerobic bacteria, called nitrifiers, use ammonia (NH₃) for food instead of carbon-based organic compounds. This type of aerobic metabolism, which uses dissolved oxygen to convert ammonia to nitrate, is referred to as "nitrification." Nitrifiers are the dominant bacteria when organic food supplies have been consumed.

Further processes include denitrification, or anoxic metabolism,

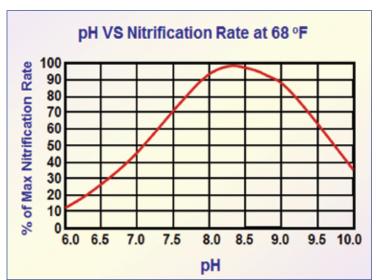


Figure 1. pH versus nitrification rates at 68ºF (maximum nitrification rate occurs at 8.0–8.5 pH), Source: EPA-625/4-73-004a, Revised Nitrification and Denitrification Facilities Wastewater Treatment,

U.S. Environmental Protection Agency Technology Transfer Seminar

which occurs when bacteria utilize nitrate as the source of oxygen. In an anoxic environment, the nitrate ion is converted to nitrogen gas while the bacteria converts the food to energy. Finally, anaerobic conditions will occur when dissolved oxygen and nitrate are no longer present and the bacteria will obtain oxygen from sulfate. The sulfate is converted to hydrogen sulfide and other sulfur-related compounds.

Alkalinity is lost in an activated sludge process during nitrification. During nitrification, 7.14 mg of alkalinity as CaCO₃ is destroyed for every milligram of ammonium ions oxidized. Lack of carbonate alkalinity will stop nitrification. In addition, nitrification is pHsensitive and rates of nitrification will decline significantly at pH values below 6.8. Therefore, it is important to maintain an adequate alkalinity in the aeration tank to provide pH stability and also to provide inorganic carbon for nitrifiers. At pH values near 5.8 to 6.0, the rates may be 10% to 20% of the rate at pH 7.0. A pH of 7.0 to 7.2 is normally used to maintain reasonable nitrification rates. At locations with low-alkalinity waters, alkalinity is added at the water resource recovery facility to maintain acceptable pH values. The amount of alkalinity added depends on the initial alkalinity concentration and amount of NH₄-N to be oxidized. After complete nitrification, a residual alkalinity of 70 to 80 mg/L as CaCO₂ in the aeration tank is desirable. If this alkalinity is not present, then alkalinity should be added to the aeration tank.

Why is alkalinity or buffering important?

Aerobic wastewater operations are net-acid producing. Processes influencing acid formation include, but are not limited to:

- biological nitrification in aeration tanks, trickling filters and rotating biological contactors;
- the acid formation stage in anaerobic digestion;
- biological nitrification in aerobic digesters;
- gas chlorination for effluent disinfection; and
- chemical addition of aluminum or iron salts.

In wastewater treatment, it is critical to maintain pH in a range that is favorable for biological activity. These optimum conditions include a near-neutral pH value between 7.0 and 7.4. Effective and efficient operation of a biological process depends on steady-state

Nitrification Activities at pH 7.2 and below				
рН	Activity			
7.2	1.00			
7.0	0.83			
6.8	0.67			
6.6	0.50			
6.4	0.34			
6.2	0.17			

Figure 2. Measurement of nitrification activity at a pH of 7.2 and lower, Source: EPA-625/4-73-004a Revised Nitrification and Denitrification Facilities Wastewater Treatment, U.S. Environmental Protection Agency Technology Transfer Seminar



conditions. The best operations require conditions without sudden changes in any of the operating variables. If kept in a steady state, good flocculating types of microorganisms will be more numerous. Alkalinity is the key to steady-state operations. The more stable the environment for the microorganisms, the more effectively they will be able to work. In other words, a sufficient amount of alkalinity can provide for *improved performance and expanded treatment capacity*.

How much alkalinity is needed?

To nitrify, alkalinity levels should be at least eight times the concentration of ammonia in wastewater. This value may be higher for untreated wastewater with higher-than-usual influent ammonia concentrations. The theoretical reaction shows that approximately 7.14 mg of alkalinity (as CaCO₃) is consumed for every milligram of ammonia oxidized. A rule of thumb is an 8-to-1 ratio of alkalinity to ammonia. Inadequate alkalinity could result in incomplete nitrification and depressed pH values in the facility. Plants with the ability to denitrify can add back valuable alkalinity to the process, and those values should be taken into consideration when doing mass balancing. (For Operations Challenge event, the decision has been made to not incorporate the denitrification step in process profiling.) To determine alkalinity requirements for plant operations, it is critical to know the following parameters:

- influent ammonia, in mg/L,
- influent total alkalinity, in mg/L, and
- effluent total alkalinity, in mg/L.

For every mg/L of converted ammonia, alkalinity decreases by 7.14 mg/L. Therefore, to calculate theoretical ammonia removal, multiply the influent (raw) ammonia by 7.14 to determine the minimum amount of alkalinity needed for ammonia removal through nitrification.

For example:

Influent ammonia = 36 mg/L

36 mg/L ammonia \times 7.14 mg/L alkalinity to nitrify = 257 mg/L alkalinity requirements

257 mg/L is the minimum amount of alkalinity needed to nitrify 36 mg/L of influent ammonia.

Once you have calculated the minimum amount of alkalinity needed to nitrify ammonia in wastewater, compare this value against your measured available influent alkalinity to determine if enough is present for complete ammonia removal, and how much (if any) additional alkalinity is needed to complete nitrification.

For example:

Influent ammonia alkalinity needs for nitrification = 257 mg/L Actual measured influent alkalinity = 124 mg/L 257 - 124 = 133 mg/L deficiency

In this example, alkalinity is insufficient to completely nitrify influent ammonia, and supplementation through denitrification or chemical addition is required. Remember that this is a minimum—you still need some for acid buffering in downstream processes, such as disinfection.

Bioavailable alkalinity

Most experts recommend an alkalinity residual (effluent residual) of 75 to 150 mg/L. As previously identified, total alkalinity is measured to a pH endpoint of 4.5. For typical wastewater treatment applications, operational pH never dips that low. When measuring total alkalinity, the endpoint reflects how much alkalinity would be available at a pH of 4.5. At higher pH values of 7.0 to 7.4 SU, where wastewater operations are typically conducted, not all alkalinity measured to a pH of 4.5 is available for use. This is a critical distinction for the bioavailability of alkalinity. Therefore, in addition to the alkalinity required for nitrification, additional alkalinity must be available to maintain the 7.0 to 7.4 pH. Typically, the amount of residual alkalinity required to maintain pH near neutral is between 70 and 80 mg/L as CaCO₃.

Proper alkalinity levels for treatment

Alkalinity is a major chemical requirement for nitrification and can be a useful and beneficial tool for use in process control. Several things to keep in mind:

- Alkalinity provides an optimal environment for microscopic organisms whose primary function is to reduce waste.
- ◆ In activated sludge, the desirable microorganisms are those that have the capability, under the right conditions, to clump and form a gelatinous floc that is heavy enough to settle. The formed floc or sludge can be then be characterized as having a sludge volume index.
- ♦ The optimum pH range is between 7.0 and 7.4. Although growth can occur at pH values of 6 to 9, it does so at much reduced rates (see Figures 1 and 2). It is also quite likely that undesirable forms of organisms will form at these ranges and cause bulking problems. The optimal pH for nitrification is 8.0, with nitrification limited below pH 6.0.
- Oxygen uptake is optimal at a 7.0 to 7.4 pH. Biochemical oxygen demand removal efficiency also decreases as pH moves outside this optimum range.

Mary Evans is a regional account manager for Premier Magnesia (Flint, Texas). She is a past president of the Water Environment Association of Texas and is the laboratory event coordinator of the WEF Operations Challenge Committee. Gary Sober is the vice president of technology for Byo-Gon Inc. (Chandler, Texas).

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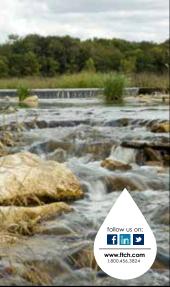
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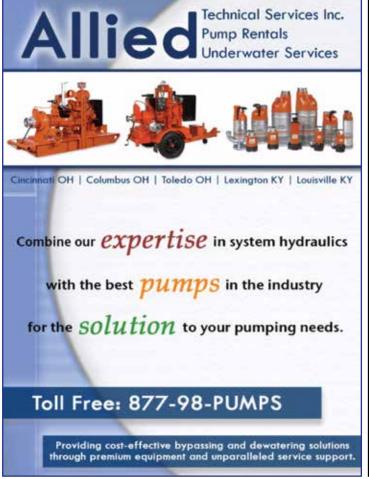


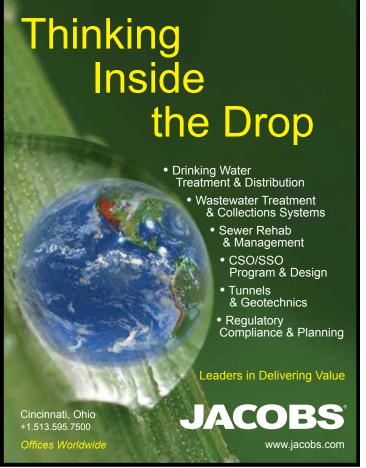
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BETTER PRODUCT GUIDELINES AND MARKETING STANDARDS FOR PIPE-CLOGGING "FLUSHABLES" ARE ON THE WAY

by Brianne Nakamura, Program Manager, WEF Water Science and Engineering Center

Flushable Wipes: To Flush or Not to Flush?

While the average consumer might wash their hands of the matter without a thought, for those in the wastewater industry, the nightmares of clogged pumps and sanitary sewer overflows (SSOs) come to mind. Recently, the topic of "flushable" wipes has become front and center within the wastewater industry, as more consumers are turning to a wet wipe rather than the common dispersible toilet paper.

While flushable wipes have been on the market for years, the question of their degradability has been garnering more attention in the media and prompted state-level responses, such as the recently proposed bill in Maine requiring that products labeled "flushable" live up to their claim.

Advertising Versus Reality

According to the current Association of Nonwoven Fabrics Industry (INDA; Cary, N.C.) guidelines (GD3, June 2013), a "flushable" is "any product that is marketed as 'flushable' [that] can be flushed into the wastewater system without adversely impacting plumbing or wastewater infrastructure and operations." Under voluntary INDA guidelines, a product must pass seven assessment tests or be clearly labeled with the "Do Not Flush" logo.

These tests include a toilet and drain-line clearance test, disintegration "slosh box" test, household pump test, settling column test, aerobic test, anaerobic test, and municipal pump test. According to INDA guidelines, if a product passes all seven tests, it should not "under normal circumstances" block toilets, drainage pipes, water conveyance, and treatment systems or become an aesthetic nuisance in surface waters. But testing and real life can have different outcomes, especially under "normal circumstances." The U.S. Federal Trade Commission (FTC) recently announced its tentative agreement with wipe manufacturer Nice-Pak Products Inc. (Orangeburg, N.Y.), that might further define some of these issues.

Problems Can't Be Wiped Away

For wastewater utilities, these "nondispersibles," or anything other than human waste and toilet paper flushed down the toilet, are problematic throughout the treatment process. They cause ragging in pipes and lift stations and get caught in screens, pumps, and settling basins.

Nondispersibles wreak havoc in rainy and dry climates alike. They clog collection systems during storms and cause SSOs or, in a drought-ridden area (we're looking at you, California), the lack of water velocity in collection systems prevents wipes from breaking down. In extreme and highly publicized cases, the accumulation of wipes and other nondispersibles can cause the formation of "fatbergs," such as those weighing as much as 15 tons in London sewers

Industry Response to the Flushables Flood

Although recent media attention has increased awareness of the consequences of convenient-yet-clog-causing wipes (and other nonflushable materials), wastewater utilities throughout the country have responded with their own public education campaigns, such

as "What2Flush" in California and "Don't Flush Baby Wipes" in Maine. These initiatives, as well as the wastewater industry's "Three P's" (Pee, Poop, and "*Toilet*" Paper) standard, have been informing homeowners and renters about what's OK to flush and to not use toilets as trash cans.

The Water Environment Federation (WEF; Alexandria, Va.) has also been involved in the initiative to improve flushability requirements and educate the public. In 2010, the WEF Collection Systems Committee formed a Flushables Task Force in response to the growing concern about wipes-related problems. The WEF House of Delegates (HOD) followed suit in 2012 to involve Member Associations with the formation of the HOD Non-Dispersible Work Group.

To create a singular message, the WEF Flushable Task Group, formed in 2014 and currently chaired by Scott Trotter, has worked on several initiatives including a 2013 billing stuffer campaign with the tagline, "It's a Toilet, Not a Trashcan!" The group also advocated for collaborative studies conducted by the Water Environment Research Foundation (Alexandria, Va.).



The WEF Flushable Task Group, formed in 2014 and currently chaired by Scott Trotter, has worked on several initiatives for better public awareness about nondispersibles, including this 2013 billing stuffer campaign.



More recently, the Task Group, as a representative of WEF, is collaborating with four other associations representing the water sector and the nonwoven fabrics industry: INDA, the National Association of Clean Water Agencies (Washington, D.C.), the American Public Works Association (Kansas City, Mo.), and the Canadian Water & Wastewater Association (Ottawa, Ontario). The goal is to develop a new, fourth edition of guidelines (GD4) that will influence product design and support the marketing of nonwoven products as "flushable." The guidelines are scheduled to be released in July 2016.

In addition, the collaborative effort is behind the Product Stewardship Initiative to increase public and consumer awareness about the proper disposal of wipes. The initiative seeks to improve the labelling of both flushable and nonflushable products, as well as increase the industry's responsibility over the downstream impacts of flushable products.

WEF has been heavily involved in both GD4 and the Product Stewardship Initiative. As the awareness of the problems of flushable wipes continue to increase, both in the media and within the wastewater industry, WEF continues to support the initiatives of the Flushables Task Force. While we can't stop consumers from flushing things down their toilets, we can stem the tide with better education and incentives for corporate responsibility.



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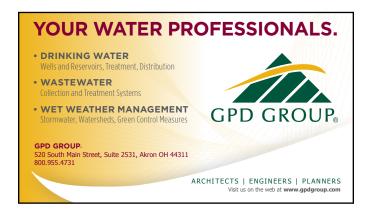
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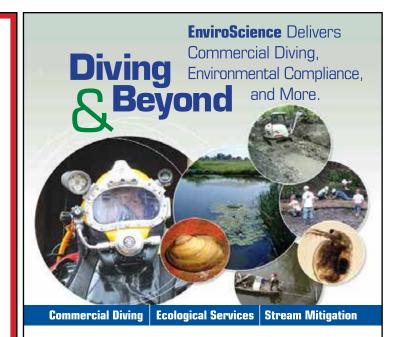


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AECOM	
Akron Electric, Inc	
Allied Underwater Services	
Alloway	
Aqua-Aerobic Systems, Inc5	7
ARCADIS	
Badger Meter	
Baker & Associates 8 BissNuss, Inc. 8	
Black & Veatch	
B. L. Anderson Co., Inc5	
BNR	
Brown and Caldwell	
Buckeye Pumps 6 Burgess & Niple, Inc. 7	
CDM Smith	
CH2M HILL6	
Chesley Associates, Inc	
Commerce Controls Inc	
CTI Engineers, Inc	
Delaney & Associates	
DLZ	5
DN Tanks	
E and I Corporation	
Engineering Associates, Inc	
Enviroscience, Inc	
E-Pump6	
Evoqua	
Excel Fluid Group	
Flygt, a Xylem Brand	
GDP Group8	
Gorman-Rupp6	
Hatch Mott MacDonald	
Hazen and Sawyer	
•	
HNTB	5
HNTB 3 H.R. Gray Back Cove HydraTech Engineered Products LLC 7	5 er '4
HNTB 3. H.R. Gray Back Cove HydraTech Engineered Products LLC 7. Indigo Water 5.	5 er '4
HNTB 3. H.R. Gray Back Cove HydraTech Engineered Products LLC 7. Indigo Water 5. Inovair/Pelton Environmental 7.	5 er '4 5 '9
HNTB 3. H.R. Gray Back Cove HydraTech Engineered Products LLC 7. Indigo Water 5.	35 er '4 i5 '9
HNTB 3 H.R. Gray. Back Cove Hydra Tech Engineered Products LLC 7 Indigo Water 5 Inovair/Pelton Environmental 7 Integrity Aquatic 2 Jacobs Engineering Group 7 J. Dwight Thompson Co 7	35 '4 '55 '9 '8 '3
HNTB 33 H.R. Gray Back Cove HydraTech Engineered Products LLC 7 Indigo Water 55 Inovair/Pelton Environmental 77 Integrity Aquatic 22 Jacobs Engineering Group 7 J. Dwight Thompson Co 7 J.G.M. Valve Corporation 7	5 er '4 i5 '9 !8 '3 '5 '5
HNTB 33 H.R. Gray Back Cove HydraTech Engineered Products LLC 7- Indigo Water 55 Inovair/Pelton Environmental 7- Integrity Aquatic 22 Jacobs Engineering Group 7- J. Dwight Thompson Co 7- J.G.M. Valve Corporation 7- Johnson, Mirmiran & Thompson, Inc 6-	5 er '4 i5 '9 8 '3 '5 '5 '7
HNTB 33 H.R. Gray Back Cove HydraTech Engineered Products LLC 7- Indigo Water 55 Inovair/Pelton Environmental 7- Integrity Aquatic 22 Jacobs Engineering Group 7- J. Dwight Thompson Co 7- J.G.M. Valve Corporation 7- Johnson, Mirmiran & Thompson, Inc. 66 Jones and Henry Engineers 7-	5 er 4 5 9 8 3 5 7 2
HNTB 33 H.R. Gray Back Cove HydraTech Engineered Products LLC 7- Indigo Water 55 Inovair/Pelton Environmental 7- Integrity Aquatic 22 Jacobs Engineering Group 7- J. Dwight Thompson Co 7- J.G.M. Valve Corporation 7- Johnson, Mirmiran & Thompson, Inc 6-	15 er 4 15 9 18 3 15 17 12 18
HNTB 33 H.R. Gray. Back Cove Hydra Tech Engineered Products LLC 7 Indigo Water 55 Inovair/Pelton Environmental 7 Integrity Aquatic 22 Jacobs Engineering Group 7 J. Dwight Thompson Co 7 J.G.M. Valve Corporation 7 Johnson, Mirmiran & Thompson, Inc. 6 Jones and Henry Engineers 7 Jones and Henry Laboratories, Inc. 7 JWC Environmental 6 Kokosing Industrial 6	15 er 4 i5 9 8 3 5 5 7 2 8 2 8
HNTB	5 F 4 5 9 8 3 5 5 7 2 8 2 8 4
HNTB 33 H.R. Gray. Back Cove Hydra Tech Engineered Products LLC 7 Indigo Water 55 Inovair/Pelton Environmental 7 Integrity Aquatic 22 Jacobs Engineering Group 7 J. Dwight Thompson Co 7 J.G.M. Valve Corporation 7 Johnson, Mirmiran & Thompson, Inc. 6 Jones and Henry Engineers 7 Jones and Henry Laboratories, Inc. 7 JWC Environmental 6 Kokosing Industrial 6	5 er 4 5 9 8 3 5 5 7 2 8 2 8 4 1
HNTB 33 H.R. Gray Back Cove HydraTech Engineered Products LLC 7- Indigo Water 55 Inovair/Pelton Environmental 7- Integrity Aquatic 22 Jacobs Engineering Group 7- J. Dwight Thompson Co 7- J.G.M. Valve Corporation 7- Johnson, Mirmiran & Thompson, Inc 66 Jones and Henry Engineers 7- Jones and Henry Laboratories, Inc 7- JWC Environmental 66 Kokosing Industrial 66 Lakeside Equipment Corporation 3- MAR Systems 5- MASI Environmental Laboratories 8- McMillen Jacobs Associates 3-	5 = 4 5 9 8 3 5 5 7 2 8 2 8 4 1 0 5
HNTB 33 H.R. Gray Back Cove HydraTech Engineered Products LLC 7- Indigo Water 55 Inovair/Pelton Environmental 7- Integrity Aquatic 22 Jacobs Engineering Group 7- J. Dwight Thompson Co 7- J.G.M. Valve Corporation 7- Johnson, Mirmiran & Thompson, Inc. 66 Jones and Henry Engineers 7- Jones and Henry Laboratories, Inc. 7- JWC Environmental 66 Kokosing Industrial 66 Lakeside Equipment Corporation 35 MAR Systems 5 MASI Environmental Laboratories 88 McMillen Jacobs Associates 33 Mid Atlantic Storage Systems, Inc. 7-	5 - 4 5 9 8 3 5 5 7 2 8 2 8 4 1 0 5 5
HNTB 33 H.R. Gray Back Cove HydraTech Engineered Products LLC 7- Indigo Water 55 Inovair/Pelton Environmental 7- Integrity Aquatic 22 Jacobs Engineering Group 7- J. Dwight Thompson Co 7- J.G.M. Valve Corporation 7- Johnson, Mirmiran & Thompson, Inc. 66 Jones and Henry Engineers 7- Jones and Henry Laboratories, Inc. 7- JWC Environmental 66 Kokosing Industrial 66 Lakeside Equipment Corporation 35 MASI Environmental Laboratories 8 McMillen Jacobs Associates 33 Mid Atlantic Storage Systems, Inc. Inside Back Cove	5 er 4 5 9 8 3 5 5 7 2 8 2 8 4 1 10 5 5 er
HNTB	5 = 4 5 9 8 3 5 5 7 2 8 2 8 4 1 0 5 5 = 5
HNTB 33 H.R. Gray Back Cove HydraTech Engineered Products LLC 7- Indigo Water 55 Inovair/Pelton Environmental 7- Integrity Aquatic 22 Jacobs Engineering Group 7- J. Dwight Thompson Co 7- J.G.M. Valve Corporation 7- Johnson, Mirmiran & Thompson, Inc. 66 Jones and Henry Engineers 7- Jones and Henry Laboratories, Inc. 7- JWC Environmental 66 Kokosing Industrial 66 Lakeside Equipment Corporation 35 MASI Environmental Laboratories 8 McMillen Jacobs Associates 33 Mid Atlantic Storage Systems, Inc. Inside Back Cove	5 = 4 5 9 8 3 5 5 7 2 8 2 8 4 1 0 5 5 = 5 2
HNTB	35 er 4 4 5 9 8 8 3 7 5 7 2 8 8 2 8 8 4 4 1 1 0 0 5 5 5 er 5 2 2 8
HNTB	35 er 4 :5 '9 :8 '3 '5 '5 '7 '2 '8 :2 :8 :4 :1 :0 :5 '5 'er :5 '2 '8 :4 '9
HNTB	35 er 4 5 9 8 3 5 5 7 2 8 2 8 4 4 1 0 5 5 er 5 2 8 4 9 8
HNTB	35 er 4 5 9 8 3 5 5 7 2 8 62 8 4 4 1 0 5 5 er 5 2 8 4 9 8 1
HNTB	35 er 4 55 9 8 73 5 57 7 2 8 2 8 4 4 1 0 0 5 5 er 5 2 8 4 4 9 8 1 8
HNTB	35 er 4 5 9 8 3 5 5 7 2 8 62 8 44 1 1 0 1 5 5 er 5 2 8 44 9 8 1 1 8 9 4
HNTB	35 er 4 5 9 8 3 7 5 7 2 8 2 8 4 4 1 0 5 5 er 5 2 8 4 9 8 1 8 9 4 5
HNTB	35 er 4 5 9 8 3 5 5 7 2 8 2 8 4 1 1 0 5 5 er 5 2 8 4 9 8 1 8 9 4 5 0
HNTB	35 er 4 5 9 8 3 5 5 7 2 8 2 8 4 4 1 0 5 5 er 5 2 8 4 4 9 8 1 1 8 9 4 5 0 2
HNTB	35 er 4 5 9 8 3 5 5 7 2 8 62 8 44 1 0 5 5 er 5 2 8 44 9 8 1 1 8 9 4 5 0 2 0
HNTB	5 er 4 5 9 8 3 5 5 7 2 8 2 8 4 1 1 0 5 5 er 5 2 8 4 9 8 1 8 9 4 5 0 2 0 9 1
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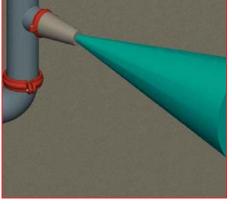
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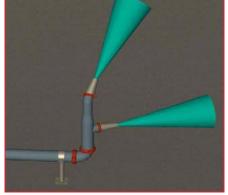


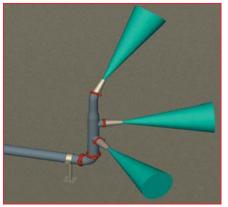


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