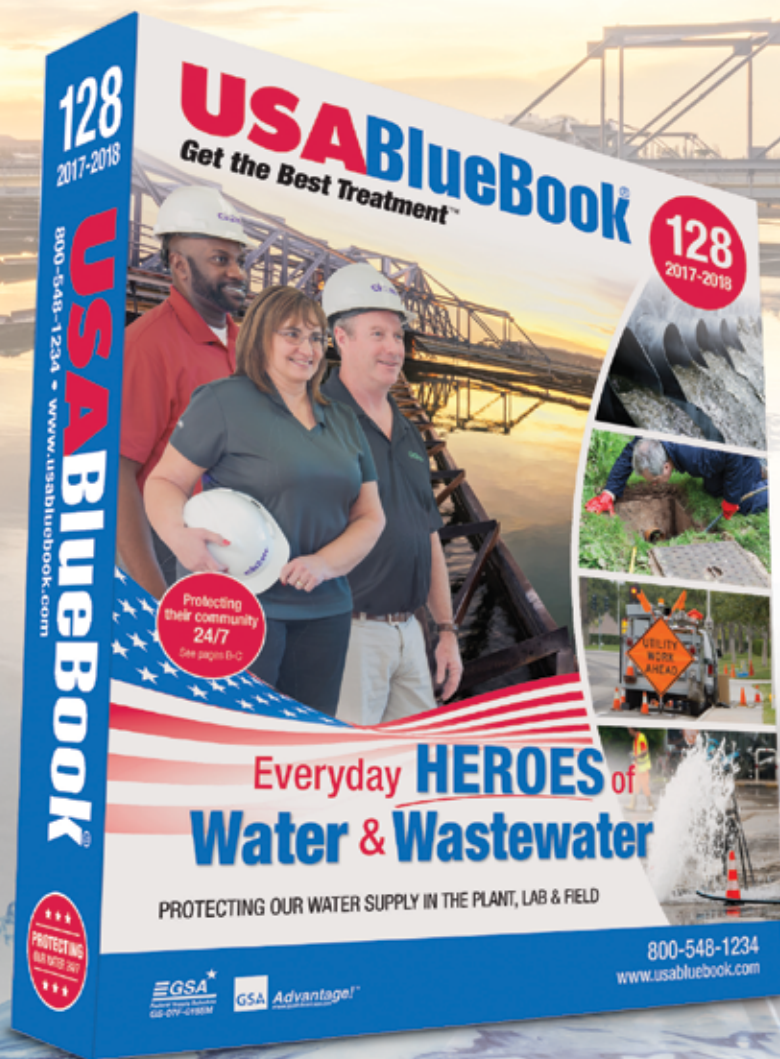


Buckeye Bulletin



City of Springfield
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Get Involved - Join a Committee Today

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

OWEA NEWS

OWEA will be providing a 2018 Calendar for the membership and we need your help! We will be featuring photos from Ohio Wastewater Treatment Plants! OWEA events throughout the year will be marked on the calendar. Go to page 39 for more information.

OWEA Calendar

September

15 OWEA Calendar Photo Contest Deadline

October

11-12 OWEA Plant Operations Workshop

November

16 OWEA Watershed Workshop

December

7 OWEA Biosolids Workshop

Welcome New Members

April 2017 - June 2017

Michael Allen
Eric Barnhouse
Bruce Bassett
Leonard R. Bauer
Zachary K. Bedard
Christine Bitner
William Blazer
David Bridenstine
Christopher Brown
Cheri Budzynski
Shane M. Carlson
Chris S. Chadwell
Mark Chapman
Patrick J. Closser
Thomas Crawford
Chad Csepeggi
Crystal D. Davis
Whitney N. Davis
Alex Earley
Brad Evans
Francis Evring

Jessica L. Feldman
John Gradek
John Grucella
Mike Gurr
John Hazlett
Shawn Hooker
Matthew D. Ice
Steven Jones
Nick A. Jones
Paul Joseph
Kevin Kappers
Chad Kidd
Alexis Killinger
Nathan Kinzy
Stephen Kopechek
Gerard Krechting
Kimberly Laquatra
James Lauver
Daniel Lindsay
Jim Logan
James Ludwig

Andrew J. Mackowiak
Thanuja Mallikarachchi
Erwin Mamacos
Mandheer Mandheer
Ian McCoy
Eamonn McGeady
Erik G. McPeck
Myra Michaels
Michelle Mix
Casey Morgan
Mike J. Mueller
Michael Nicholson
Stephen Nickels
Steven Nocera
Emmanuel E. Ojo
Nathan Perry
Michael Powell
Efrain Quinones
David L. Raffenberg
Jim Rinehart
Jared Roe

Sky Schelle
Anthony Sherrill
Ted Simmons
Chad Sims
Matthew S. Smith
Matthew W. Spidare
Elena Stachew
Dean Stump
Todd Sweitzer
Dawn Taylor
Kelly Thiel
Richard S. Tomidajewicz
Todd Trabert
Dylan Traikoff
Sarah C. Van Frank
James Weber
James Weinle
Bill Wooton
Eric Wyers
Marshall J. Yarnell

**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.ohioweat.org/memberships.php> for OWEA membership information

President's Message

I hope this Buckeye Bulletin finds everyone concluding a wonderful summer – This is my first Buckeye Bulletin as your President and please know how much I appreciate this opportunity – THANK YOU!

As we rapidly begin the next year, I did want to take a few moments to highlight some changes in the Executive Committee, and acknowledge and thank a few folks that have given so much to OWEA:

Tom Angelo – Past OWEA President and current Senior WEF Delegate – I don't know too many who don't know Tom – and that shows his significant contribution to and love for OWEA. Tom has been an OWEA member for over 28 years. Tom is stepping down from the WEF Delegate position officially in September. I consider Tom a great advocate for the water profession. Thank you, Tom, for over 10 years of contributions to the Executive Committee!

Elizabeth Wick – Elizabeth officially steps off the EC this year, having served as Past President last year (and of course president of OWEA 2015-2016). Elizabeth has spent her career at Ohio EPA, currently serving as Manager of the Division of Surface Water in the NW District Office. Elizabeth has been an active member of OWEA for over 29 years. Elizabeth will continue as Publications chair, having led development of Buckeye Bulletin content for many years. Thank you Elizabeth!

Ted Baker – Ted's involvement in the OWEA Executive Committee is not ending after his year as President – I'd



Jamie Gellner

OWEA President

venture to guess it's just beginning. Ted is now Past President and will be our new 3rd WEF Delegate after WEFTEC. Ted's passion for OWEA and the water profession is undeniable – and he and his father's story (now two generations long in OWEA) is the epitome of what makes the water profession so wonderful. Ted is also the chair of OWEA Sponsorship, which has been extremely successful and is now emulated by other MAs across the country. Thanks so much Ted for all you did behind the scenes last year and for all

you do for OWEA!

Welcome Jeff Lamson – Jeff is our new NW Section Delegate and starts his eight year commitment on the EC. Jeff has been an OWEA member for over 28 years. Thank you Jeff for making this commitment. I look forward to working with you over the next year.

.... and thank you to all the other volunteers throughout the state who donate time and talent to OWEA. In 2017, Independent Sector determined that the value of one hour of volunteer time is \$24.14 (for more information, see <https://www.independentsector.org/news-post/value-volunteer-time/>). Note that our annual budget is around \$500,000 (not counting section budgets), so it doesn't take long to see the potential value and impact on a financial level that volunteers across the state have on the organization... 1000s of hours by folks that love our profession... **THANKS TO ALL OF YOU WHO VOLUNTEER YOUR TIME AND TALENT TO OWEA!**

During my short address at the Annual Conference (I hope those that went to the Reds game still heard it... they piped it in over the GABP loudspeakers, right?), I outlined a few areas of focus this year (note to everyone

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

2017 - 2018 Executive Committee Meeting Dates

August 16, 2017	OWEA Office
October 17, 2017	OWEA Office
December 13, 2017	OWEA Office
February 14, 2018	OWEA Office
April 11, 2018	OWEA Office

— these are all things that have been started, and pushed forward by previous Presidents):

SERVICE – Through the guidance of our previous EC members and Presidents, we have successfully transitioned and grown our OWEA staff to three: Amy, Chelsea, and Megan. We are positioned to make great strides in our level of service to members, Sections, and to WEF. Look for improvements in the coming year...particularly with members and in the development of our operator training program.

SUSTAINABILITY – Continuing to invest in our membership, including encouragement of young professional involvement, is an important component of our future. Look for increased focus on membership and on developing the future vision of our state committees.

RELEVANCE – OWEA is an expert voice and resource in water quality for the state of Ohio. We must continue to reach out to other organizations and groups to not only provide that resource, but to also be an advocate for our member's issues and future needs. In previous years, we've made continuous improvement in our outreach activities, particularly with the WEF fly-in. Look for continued expanded outreach to other groups with ties to water

quality and an increase in focus on important issues for our members.

CULTURE – It's easy to overlook the significance and history of OWEA as well as the contribution each of you make in the protection of public health. I hope over the next year, we'll give you some reminders of why you should be proud to be a member of OWEA (and hopefully further reasons why folks who are not part of OWEA now would want to be in the future) and why you should be proud to be part of the water profession.

Check out: <http://news.wef.org/wefs-my-water-legacy-video-goes-platinum/>. This video is a compelling look at what we do. And if you are wondering about the significance of wastewater in the overall question of public health, check out *National Geographic's* article in their latest magazine, "A Place to Go". This article focuses on the first step in our service (creation, uh hmm, of what we treat), but it provides a compelling look at the benefits of sanitation to public health.

Thanks again for this opportunity – I'm really looking forward to the upcoming year. Don't hesitate to contact me if you have any thoughts / questions / comments at jgellner@hazenandsawyer.com.

Introducing...

Jeff Lamson

NW Section Delegate



Jeff Lamson is the newest member of the board and Northwest Section Delegate. He is currently the Superintendent of the City of Fremont Water Reclamation Center. Jeff holds an OEPA Class IV Wastewater Operator's License and an OWEA Class IV Wastewater Analyst License. He earned his Bachelor's degree in Biology from Bowling Green State University. Jeff has been in the wastewater field for over 27 years, all with the City of Fremont, holding positions of Compliance Control Chemist and Assistant Superintendent of Operations. He has been active in the Northwest Section where he has chaired the Pretreatment Committee and moved through the positions of the Executive Committee, serving as President in 2007-2008. He has also previously served as the chair for the OWEA Pretreatment Committee. He has been married for over 29 years to his wife Betsy and they have two sons, Craig and Scott. Jeff enjoys spending time with his family, hunting, fishing, bird watching and nature photography. Jeff states, "My membership and participation in OWEA has been a huge part of my professional life and I have met many wonderful people and made many friends. I am truly honored to be able to serve in this new capacity."

Marking the Passage of Time

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

The OWEA New Year

Our OWEA Annual Conference marks the passage of another year for our organization and is a marker of time. Unlike our actual New Year, which begins on January 1st in accordance with the Gregorian Calendar, the OWEA New Year is not one fixed date, but occurs on the Tuesday of the Annual Conference at the Annual Business Meeting and is commemorated at the Banquet with the “passing of the gavel” and the public appearance of the new President.

The Greatest Show on Earth!



I hope that my readers appreciate the use of hyperbole. I feel that our Annual Conference is the crown jewel of OWEA. It is well planned, well executed, and enjoyable. So, I feel that it is the *Greatest Show on Earth!* It has many tangible and intangible aspects that cannot be put into simple words. Kudos to all that made it happen this year from our Co-Chairs Sharon Vaughn and Marty Davidson to everyone else on the conference committee, to Operations Challenge, the Spouses Program, the Meet and Greet Planners, the Technical Program and to our OWEA Staff. There were challenges to overcome this year, but in the spirit of our organization, we persevered and overcame.

Harder than it Looks

One of the most humbling lessons of adulthood is learning that many things are harder than they look. Conference planning is one of those.

I was a Conference Co-Chair in 2006 and understand what goes into planning a conference. OWEA, like most other Member Associations (MAs) in WEF, is “too big to be small, and too small to be big.” We are middle sized, which places a limit on where we can go. OWEA cannot afford a larger venue such as many convention centers, so we are directed to smaller venues like the Aurora Bertram Inn in 2012 and 2016 or the Hyatt in Cincinnati this year.

Persistence of Memory

I am always reminded of the memory of past conferences. The Conference is a time when I see friends young and old as fellow colleagues in our common mission.

This impression is accurately depicted in the 1931 painting by Spanish artist Salvador Dali (1904-1989) in his painting *Persistence of Memory*. The painting located in the Museum of Modern Art in New York City depicts a surreal image of melting pocket watches. When I first saw this painting in a History of Art class at Ohio State University, I immediately understood what Dali had intended.

The distortion of time was underscored for me this year at the 5S Induction Ceremony when I saw Melodi Clark, the daughter of the former company President become a 5S member. This is a person that I met as an intern at R. D. Zande & Associates over 20 years ago, and here she was many years later being bestowed with this great honor.



Persistence of Memory, Salvador Dali, 1931



2017 5S induction at the 2017 Technical Conference & Expo in Cincinnati. Left to Right: Laura Tegethoff, Influent Integrator; Al Zamora, NW Inductee; Mary Ann Driscoll, NE Inductee; Fred Smith, SE Inductee; Barb Browne, SW Inductee; Melodi Clark, At Large Inductee; Elizabeth Wick; and Rick Warner, 2016-2017 WEF President.

Hit the Ground Running

*"Drink in your summer, gather your corn
The dreams of the night will vanish by dawn
Time waits for no one, and it will not wait for me."*

- Mick Jagger and Keith Richards, 1973 Apple Records, "Time Waits for No One."

When I became OWEA President on June 16, 2010, I was aware that my one year term would quickly pass. Several months prior, I was encouraged by Dianne Sumego, who was President two years before, to develop a plan of action to maximize my time. I took her advice and developed a Plan of Action using a protocol called "Executive Tasks," 1-10. All were addressed by the end of my year in June 2011. It is noteworthy that one task set the foundation for our Sponsor Program, another led to the hiring of additional OWEA staff, and a third led to the One Water Conference in 2014 and again in 2018.

Strategic Planning

I am a traditionalist by nature and like things to remain the same, but as I have grown older, I know that this is not the way things work. Things evolve over time. As President in 2010 my address laid out my plan of action for the year. It was a long address but I felt it my obligation to inform our members what I was thinking. Over the last few years, remarks by the new President tend to be informal and brief.

At the debriefing luncheon on June 29, 2017, I suggested to the 2017 Conference Planning Committee that the OWEA Executive Committee form an Ad Hoc Committee to evaluate our Annual Conference with the premise to give it a "face lift." We had over 600

in attendance this year, which means that we are doing some things right. Yet the banquet, which has historically been my favorite event, had low attendance. Some feel that the event is too long and consideration should be given to improve it to be more appealing to the younger generations.

In Closing


I challenge OWEA leadership to evaluate the Annual Conference as part of the Strategic Planning process and thoughtfully reflect how to improve it. In closing, there are some questions that we need to consider for future conference planning:

What does our Annual Conference do well?

What do our members really enjoy?

What do other Member Associations do that we should consider?

If you have feedback on any of these questions or your own unique observations, please do not hesitate to contact me or anyone else on the OWEA Board.



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2016-2017 OWEA President, Ted Baker, passes the gavel to incoming 2017-2018 OWEA President, Jamie Gellner at the 2017 Technical Conference & Expo in Cincinnati.

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Tom Angelo



Tom Fishbaugh



Dale Kocarek

The WEFMAX Meeting Season is now complete! A total of four meetings have been held in different parts of the United States and Canada. OWEA was fortunate to have hosted a WEF event in Cincinnati, which was a huge success. A total of 53 people attended. WEFMAX meetings give Member Associations such as OWEA opportunities to meet with WEF staff and leadership to learn about WEF's strengths, areas of improvement and Strategic Planning Process. The WEFMAX meetings are organized by Dianne Crilley of WEF and the WEFMAX Committee in the House of Delegates. Our WEFMAX meeting included both HOD Speaker Howard Carter, and HOD speaker Elect Aimee Killeen. Both Howard and Aimee are impressive in their passion, knowledge, approachability, and future vision for WEF. Being around professionals such as Howard and Aimee is energizing as they are forthright, seasoned, knowledgeable and approachable. Dale serves on the HOD Steering Committee with them.

WEF's Mission Statement

As a global water sector leader, our mission is to:

1. Connect water professionals;
2. Enrich the expertise of water professionals;
3. Increase the awareness of the impact and value of water;
4. Provide a platform for water sector innovation.

WEF's Critical Objectives and Strategic Goals

1. Develop an engaged membership that is representative of the multiple practice areas of the water environment industry.
2. Provide a broad range of professional content and programming that is relevant and widely valued by the water sector worldwide.
3. Generate an increased public awareness of the value of water leading to increased funding to protect water quality through appropriate levels of infrastructure, management approaches, and services.
4. Establish the conditions that promote accelerated development and implementation of innovative technologies and approaches in the water sector.
5. Operate a sustainable business that supports our mission, and enables WEF to seize new opportunities in the emerging water sector.

The WEF Delegate's Role

The primary role of the WEF Delegate is to serve as the primary conduit to communicate information between Member Associations and WEF and visa-versa. Unless one is a Delegate at Large, which represents no Member Association, WEF Delegates represent their MA to WEF and WEF's position to MAs. WEF HOD members are expected to be active in at least one workgroup and to the greatest extent possible serve on a committee. Also WEF HOD members are asked to serve on a WEF Standing Committee. For

example, Dale Kocarek serves on the WEF Government Affairs Committee.

A WEF Delegates term lasts for three years. There are no limitations on serving multiple times. Dale Kocarek is in his second three year term. What we have found is that it is difficult to fully capture the HOD experience in one three year term.

Newest OWEA WEF Delegate

Our newest WEF HOD member is Ted Baker, the OWEA President last year. Ted will be replacing Tom Angelo, who will be completing his term in September 2017. We welcome Ted to the WEF HOD family!

Elevator Speech

As a project under the auspice of the HOD Public Communications and Outreach Workgroup, members developed an "elevator speech" for anyone to use to explain what we really do to protect water.

Here it is:

◆ Our advocacy means something. Plentiful, predictable, and sustainable clean water has tremendous value!

◆ Safe and clean water is key to public health and environmental gains. Advances in W&WW treatment are responsible for some of the greatest improvements in public health over the past century, virtually eliminating typhoid fever and cholera and achieving a 74% reduction on infant mortality rate in the USA.

◆ Since the enactment and implementation of the 1972 Clean Water Act the number of fishable and swimmable waterways in the USA

has nearly doubled.

◆ The USA water infrastructure is failing with the American Society of Civil Engineers giving a “D” grade to our clean water infrastructure. The NY Times reports the failing water infrastructure as a “ticking time bomb that is ready to go off.”

◆ Investing in clean water grows the American economy and creates jobs. Every \$1 dollar invested in clean and safe water creates 3.68

jobs, increases long term GDP by \$6.35, and provides \$23 in public health-related benefits.

We urge our elected officials to refocus the nation’s policy discussion on what’s at stake for our clean water systems and provide significantly more investment to ensure access to safe and clean water to all Americans. According to the USEPA, \$300 billion is needed in infrastructure investment. For a full version of the elevator speech, see page 65.

OWEA Conference & WEFTEC

WEF President, Rick Warner, was at our annual conference in June and if you didn't stop and talk to him, you missed it. Rick is a very common and approachable person. He really enjoyed Ohio's hospitality and meeting our members.

Our WEF Delegates' meeting at WEFTEC starts on Saturday morning, September 30th at 7:30. This will kick off the week. Those going to Chicago, we hope to see you at the Ohio Mixer.



Southwest OWEA

Steven Reese, President

Southwest is Best!

It is truly an honor to serve as President of the Southwest Section for the 2017-2018 term. I hope to add my direction and momentum to that of the many talented and devoted individuals who’ve formed our organization over the years. We continue to provide quality, credited education with our group dedicated to the preservation and enhancement of our most precious natural resource...water.

I am very fortunate to have been involved with OWEA since 2005 and have been part of the Southwest Section Executive Committee since 2012. My involvement with OWEA has provided me hundreds of hours of relevant training, fine-tuned my presenting skills and further developed my leadership capabilities. Hazen and Sawyer has always supported my involvement in the organization while my volunteering has given me the opportunity to meet and work with so many great individuals; hard workers, motivated and highly supportive of our cause. The group has also provided many great relationships that I cherish.

Thanks to Roger Rardain from the City of Fairborn for his service as he officially leaves the executive committee from the past president position. Roger will remain active on the laboratory analyst committee and continue attending executive meetings as he has since 2006!

We send our “Thanks” to Jason Tincu of Brown and Caldwell for his leadership and guidance in the 2016-2017 year. While he remains on the executive committee as past president, he’ll be busy helping to keep me from going off the rails while Jason continues to serve us on



Jason Tincu, left, accepting his gavel for service to the organization from Steven Reese, right.

the government affairs committee and at the State Level as our Southwest Delegate (heavy duty!).

Our executive committee is proud to have Brandon Leeth of Henry P. Thompson join our ranks as the new third year director. Welcome On Board!

We held a very successful May Section Meeting in Milford focused on streams and nutrients. Our Thanks to USEPA, Clermont County, Ohio EPA, Greene Acres and several others that hosted and presented.

We congratulate the conference co-chairs Marty Davidson and Sharon Vaughn and all of the supporting committee members for their hard work and coordination for the OWEA Annual Conference, held at the Hyatt Regency in downtown Cincinnati in late June. The well-planned events, exhibits, and sessions were outstanding with over 600 in attendance!

Please plan to join us for the upcoming September Section Meeting to be held on September 20, 2017 at the Muddy Creek WWTP and Indian Creek WWTP thanks to hosts from the Metropolitan Sewer District of Greater Cincinnati.

Best Regards,

Steven Reese, sreese@hazenandsawyer.com



Northwest OWEA

Walter Ariss, President

Greetings from the Northwest Section! As we enter another year on the OWEA calendar, I am honored to serve as your Section President. I am hopeful I can fulfill my duties with as much enthusiasm and dedication as the people before me. I would especially like to thank Jeff Thompson our outgoing president. He has done a great job of steering the ship for the past year and provided some great opportunities for continued education and networking. I am looking forward to working with our section Executive Committee; Gary Bauer – 1st Vice President, Mark Lehnert – 2nd Vice President, and our newest EC member Todd Saums who will be serving as Secretary for this year. I would like to extend a special appreciation for Dave Sprague who will be continuing as Treasurer. Dave is retired from the City of St. Mary's WWTP for the past several years and continues to serve the section in one of our more important roles. It is this type of dedication that makes our section such a great

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group of people to work with.

We have some exciting activities planned for this coming year! We will continue to build on the well-attended lagoon workshop that was offered in Defiance County last year, and this year we will be offering a two-day workshop which will include a hands on evaluation of lagoon performance. Stay tuned for more information on this great training opportunity. We will be hosting our fall section meeting in the City of Fremont. The meeting will include a tour of the City's new WRC which is truly a site to behold. I look forward to seeing everyone there. On the laboratory side of things, keep your eyes out for workshops from our extremely active LAC. My hats off to Tony Hintze and Terri Brenner who have done an excellent job in taking over the reins for this committee.

A little about myself. After graduating from The Ohio State University with a B.S. in Chemical Engineering, I eventually landed a job with the Ohio EPA NWDO. I have been with the Agency for 14 years now, all in the Division of Surface Water. My first interaction with OWEA came at the suggestion of my manager at the time, Al Rupp, to attend a section meeting. It was really a great experience and led me to where I am today. I am extremely thankful to all of my supervisors and managers who have allowed me to continue to participate with OWEA. I have served as the YP committee chair for the NW Section, worked on the last two NW Section Annual Conference planning committees, and also serve as a co-chair for the Plant Ops committee at the state level.

I am excited to continue working with all of the awesome and dedicated volunteers of our section and throughout the state.

Walter Ariss, walter.ariss@epa.ohio.gov

YP Abstract Award Winners!

NE

Doug Dietzel of **NEORS** for

Overflow Control Using Chemically Enhanced High Rate Treatment

SW

Joe Crea of **Raftelis Financial Consultants** for
Master Planning Ohio's Fastest Growing County

SE

Jamie Mills of **Strand Associates, Inc.** for
A Look Forward - How to Handle Low Level Phosphorus Limits with Creative Solutions



Southeast OWEA

Kris Ruggles, President

Hello fellow Southeast Section members! My name is Kris Ruggles and I am very proud to address you as the Southeast Section president for the first time. I will be serving as the Section president for the 2017-18 OWEA year. I grew up in Wheelersburg, Scioto County, Ohio where I attended high school at Wheelersburg High. I attended Ohio University in Athens, Ohio where I studied Civil Engineering, did co-ops in the field of construction, and graduated in 2005 with a Civil Engineering Bachelor of Science degree. After college I immediately started with Strand Associates, Inc. where I earned my Professional Engineer license and am still employed today as a part owner. My first assignment at Strand was two years on the construction services of a \$50 million WWTP expansion for the Parkersburg (WV) Utility Board. That is where I gained my passion for the wastewater industry. Since then, I am married, have one young son, and live in Bexley, Ohio. My passions beyond my career field include many outdoor pursuits including backpacking, fly fishing, and elk and waterfowl hunting. My cross-section of personal interests drives my desire to be a good steward of the environment and clean water, which is a key to all of them and partly why this organization is so important to me.

I have had the pleasure of working through the ranks of the Section Executive Committee (EC) for the past seven years with some wonderful professionals, from all corners of our industry. I want to give a special thanks to John Owen, Brandon Fox, Fred Smith, and Matt Boone; our past four presidents that have shown our section a great deal of leadership, helped increase membership, and have been mentors to me. Our section is fortunate to have had these gentlemen lead the section, and especially that all of them continue to be active section members. The continuity of section leadership I have seen through my tenure on the Section EC has been integral to the continued growth and success of our group. I'd like to

also give a special thank you to all of our current Section EC folks that give a great deal of their time and much effort to making our section meetings a continued success. Brenda VanCleave, Chris Tarr, Melodi Clark, Tiffany Maag, Josh Holton, and Kyle Stull. I'd also like to welcome Nathan Coey as our newest EC member.

Our May meeting was hosted by the City of Pickerington and Fairfield County Utilities, touring a WWTP operated by each utility. Following the tours, we met for our Annual Awards and Past President's luncheon at the Fairfield County Board of Developmental Disabilities Pickerington Regional Office. We recognized professionals for great service to the industry. I would like to congratulate all of the winners of our Section Awards.

I'd also like to give a special congratulations to the Southeast Section Members and Utilities recognized as OWEA State Award winners at this year's State Conference in Cincinnati.

- ◆ Brad Stanton, City of Delaware, J.W. Ellms Award
- ◆ Upper Hocking Water Pollution Control Facility, City of Lancaster, Engineering Excellence Award
- ◆ Athens Wastewater Treatment Plant, Facility Image Award
- ◆ Richard Carpenter, Mayor, Village of Lore City, Public Service Award

This year's section meeting calendar will include October – Watershed; February – Industrial/Pretreatment; March Biosolids/Regulatory; and May Awards/Past President Meeting. We plan to have date-certain events posted to the OWEA website by the end of August.

I'd also like to recognize Melodi Clark for organizing a number of spectacular no-cost Lab Analyst training sessions around the section the past two years. There will be more to come.

I am very much looking forward to serving as your Section President this coming year, and meeting more members. Keeping with the past several Section President's mantra's, really jumpstarted by Fred Smith, it is my goal to continue growth of the membership, attendance at meetings, and providing low-cost, high value training and education to our members.

I sincerely appreciate any feedback or suggestions our members may have on past or future events and training topics. Please feel free to contact me at any time.

Kris.Ruggles@Strand.com

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October 12, 2017



Northeast OWEA

Kathy Richards, President

My name is Kathy Richards and I am the incoming President for 2017-2018 in the Northeast Section. It has been a remarkable experience advancing through the chairs, learning from those who preceded me and welcoming new faces into the Executive Committee. Our newest member is First Year Chair, Jennie Celik. She is joining a very strong and dedicated team. I especially want to acknowledge our newest Past President, Paul Solanics, and express my deepest gratitude for his mentorship. He has set the bar quite high and I hope I don't disappoint.

While I believe a lot of you already know me, I'd like to take a moment to tell you a little bit about myself. I have worked for the City of Akron for 13 years; currently I am the Environmental Compliance Team Leader. This position is responsible for the Laboratory, Industrial Pretreatment and any Compliance Reporting. Prior to this I worked in private sector labs running environmental samples by GC/MS. I have a BS in Microbiology from the University of Akron with a minor in Chemistry. I am married with three children and four grandchildren. My 'down time' is spent in my garden or doing cross-stitch pieces.

We had a fantastic business meeting on May 19th in Rocky River. CarrieAnne Rosemark and her team were splendid hosts and everyone appreciated learning about the community cooperation required for successful expansion and operations at their facility. Our 11th annual BioMass-ters golf outing was scheduled for July 21st, and if I didn't see you there you missed a great time!

The Northeast Section has a busy schedule for the

upcoming year. We are in the process of scheduling our fall section meeting - tentatively in late September, our yearly member clambake is confirmed for September 23rd and registration should open very soon. Our annual Supervisors Seminar is planned for October 26th - look online for details in the coming weeks, as well as Biosolids, Laboratory Analysts, Industrial Pretreatment and Collections workshops before the end of the year. In addition we have our January Operations Seminar and February Industrial Wastes/Pretreatment Seminar which are always sold out events and many other committee specific meetings. You can always find the latest updates at our website www.NESOWEA.org.

In closing I want to send sincere appreciation to my employer, the City of Akron, specifically Brian Gresser, for encouraging me to participate at this level. I also appreciate those entities that have so generously allowed their employees to be engaged in this most deserving organization: The city of Solon, ARCADIS, ms Consulting, the city of Canton, ADS Pipe, Ohio EPA, and HDR Inc.



A session at the May 19th section meeting in Rocky River.

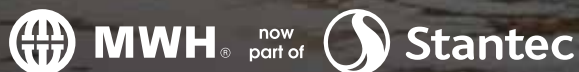


Paul Solanics, Outgoing NE President, passing the gavel to Kathy Richards, Incoming NE President.



Tour of the Rocky River Wastewater Treatment Plant on May 19th.

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Government & Regulatory Affairs Committee Update

by Dale Kocarek, P.E., GARA Chair

At the start of a new year, comes New Year's Resolutions and a new plan. In the tradition of a New Year, here is my list:

- ◆ I wish to continue working with OAWWA to hold another One Water Government Affairs Workshop on March 8, 2018. Working with OAWWA brings all our water professionals together. We will be opening our Call for Papers soon.
- ◆ I have been speaking with fellow OWEA Board member Jason Tincu, who went on our Washington DC Fly in for the second year. Jason has some ideas about continuing with the momentum with our elected officials during follow up meetings and events. This is something that as Chair, I really want to see move forward in 2018.
- ◆ There are opportunities to continue to engage in rules review with the Ohio EPA, which we need to do on a more consistent basis. I believe that continuing to offer intelligent feedback based on the insights and our experience of our members is not only essential to our industry but appreciated by those drafting rules.
- ◆ Given the popularity of our March workshop, there may be opportunities to do a smaller hot topics workshop with Ohio EPA in the fall of the year.
- ◆ The Southwest Section has established its own Section Government and Regulatory Affairs Committee, which joins the Northeast Section. Section committees are a great way to engage our members.

In any event, those are our ideas (e.g. New Year's Resolutions) for now. If you have others please do not hesitate to contact me.

Pretreatment Committee Update

by Sharon Vaughn, Industrial Pretreatment Chair

The Industrial Pretreatment Program is a very important aspect of any Water Reclamation Facility. If the community has an industrial customer base within their jurisdiction; then the Industrial Pretreatment Program is extremely important in the protection of the plant processes. After many years in this field, I still feel that Industrial Pretreatment staff are the forgotten soldiers. Without effective and efficient Industrial Pretreatment Programs, Operations and Maintenance staff may not have a plant to operate.... it will not survive without the protective nature of the federal Categorical Limitations and Local Limits.

The future development of the next generation of Industrial Pretreatment Coordinators is dependent upon the efforts that are made by this generation of workers. Also, OWEA can play a role in this critical development. OWEA held the WEF Pretreatment course in concert with WEF in 2013; and the effort was very successful. Attendees came from as far away as State of Washington to attend the four day course at the City of Dayton WRF. I continue to receive requests about the course from folks all across the country. Due to this continued interest in providing this rewarding training opportunity, OWEA is currently reviewing options related to offering this course in the near future.

Stay Tuned!

The OWEA Annual Conference held each summer provides a vast offering of training and educational opportunities. I have received requests from pretreatment staff from around the state that they would like to see a Pretreatment track during the conference. So, OWEA needs your help! We need to select our best and brightest pretreatment staff to consider presenting at the State Conference. This allows us to share our knowledge and experience with our fellow colleagues and build relationships across the state.

As the OWEA Pretreatment Chairperson, I am a resource for our state's industrial pretreatment personnel. I have seen a lot of industrial facilities, prepared many industrial discharge permits, conducted too many inspections to even count, issued +1000 violations, managed high profile enforcement cases, prepared technical justifications for local limitations, and etc. If you are struggling with an issue; then feel free to contact me. As OWEA members, please utilize my experience as a valuable resource for your organization. This is what OWEA represents.

Sharon Vaughn

sharon.vaughn@daytonohio.gov

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Since its formation in 1928, the Water Environment Federation (WEF) has been holding annual meetings to provide a forum for knowledge and technology exchange within the water and wastewater fields.

Today, WEFTEC – WEF's Annual Technical Exhibition and Conference – offers the best water quality education and training available and is a leading source for water quality developments, research, regulations, solutions, knowledge development, and cutting-edge technologies.

WEFTEC Attendees

- Learn from sector leaders and their peers about the latest practices, technologies, solutions and regulations in the water quality field
- Create your own WEFTEC experience with the most comprehensive 5-day technical and educational program available in the world.
- Earn up to 1.2 Continuing Education Units (CEUs) and 16.5 Professional Development Hours (PDHs) or a maximum of 36 Contact Hours
- Network with thousands of the world's leading water and wastewater professionals
- View the latest, cutting-edge technologies from more than 900 leading companies at the largest annual water quality exhibition in the world

Who Comes to WEFTEC?

WEFTEC draws thousands of water and wastewater professionals from around the world each year, including:

- Collection Systems Managers
- Consultants
- Environmental Engineers/Chemists/Scientists
- Equipment Manufacturers and Representatives
- Executive Managers
- Industrial Water and Wastewater Treatment Professionals
- Local, State, and Federal Regulators
- Private Industry and Academia Researchers
- Public Officials
- Students
- Water, Wastewater, and Stormwater Utility Managers
- Water and Wastewater Operators

and many more.

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An increasing number of abstract submittals from experts in the water quality field results in a world-class technical program of technical sessions and workshops that addresses a diverse and comprehensive list of contemporary water and wastewater issues and solutions including:

- **Collection Systems**
Management, operations and maintenance, infrastructure, overflow reduction, wet weather planning, watershed approaches, and regulations
- **Energy Conservation and Management**
Resource recovery, combined heat and power, biogas optimization
- **Nutrient Removal and Recovery**
Watershed and facility level issues, facility design, process control, operations, research, shortcut nitrogen removal, carbon management, ultra-low phosphorus removal, nutrient recovery and reuse, modeling
- **Plant Design, Operations, and Treatment**
Innovations, technologies, processes design, and proven solutions in water and wastewater treatment; including nutrient removal and odor control
- **Regulations**
CMOM/SSO Rules, TMDL/Watershed Rules, Nutrient Trading, and NPDES Phase II
- **Research**
Leading edge process applications in water and wastewater treatment and recent developments
- **Residuals & Biosolids**
Energy production, disposal, reuse through land application, research, regulations, politics, and public perception
- **Stormwater**
Treatment, green infrastructure, wet weather management, modeling, policies and regulations, research, and operations and maintenance
- **Utility Management**
Asset Management and financial planning for infrastructure, technology, regulatory compliance, workforce issues, and security; including environmental management systems (EMS)
- **Water Reuse/Recycling**
Research, regulations, emerging technologies, proven processes
- **Water Quality & Watershed Management**
Stormwater, wet weather, surface water, groundwater, and watershed issues including integrated management

The Water Quality Event

Throughout the years, WEFTEC has not only grown in the size of exhibits and technical sessions, but has become the leading water quality exhibition and conference.

In 1941, the then-known Annual Conference featured 5 sessions, 13 technical papers and an attendance of 556. By the 1970s, attendance had grown to almost 9,000 and featured 37 sessions with 146 technical papers. Growing steadily over the past four decades, WEFTEC continues to set new records each year.

Renamed WEFTEC in 1994 to increase both domestic and international recognition, WEF's annual conference is ranked in the top 1% of all trade shows in North America and is the largest annual water quality exhibition in the world.

15-Year Snapshot

Year	Location	Net Square Footage	Number of Companies
2001	Atlanta	204,860	776
2002	Chicago	201,540	793
2003	Los Angeles	192,390	801
2004	New Orleans	201,665	833
2005	Washington, DC	213,950	869
2006	Dallas	245,155	965
2007	San Diego	268,405	1,017
2008	Chicago	290,000	1,111
2009	Orlando	264,400	995
2010	New Orleans	295,295	984
2011	Los Angeles	284,150	923
2012	New Orleans	296,625	923
2013	Chicago	297,400	971
2014	New Orleans	303,075	1,027
2015	Chicago	311,600	1,033
2016	New Orleans	301,900	1,006

For more information, contact:

Lori Harrison | Director, Communications
Water Environment Federation
601 Wythe Street, Alexandria, VA 22314
LHarrison@wef.org
+703-216-8565 (direct)
+703-684-2480 (voicemail)

Minutes of the 2017 OWEA Annual Business Meeting

The 91st Annual Meeting

Hyatt Regency Hotel, Cincinnati, Ohio.

June 26, 2017

by Jane Winkler, Secretary-Treasurer

President Ted Baker called the meeting to order at 10:35 am. A quorum was established.

President Baker welcomed the group and made some brief comments.

Items for approval were the 2016 Annual Business Meeting minutes. Jane Winkler, Secretary-Treasurer, reported that the minutes were published in the Fall 2016 issue of the Buckeye Bulletin. The minutes and Treasurer's report were displayed on the overhead. Mike Welke made a motion to approve the minutes, with a second by Elizabeth Wick. Motion passed. Jane Winkler gave the Treasurer's report. A motion to approve the report was made by Mike Welke and seconded by Leon Smith. The motion passed.

The WEF delegate report was given by delegate Tom Fishbaugh. Ted Baker will be the new WEF delegate beginning in October.

Rick Warner, WEF President, offered greetings from WEF.

Section reports were given. Kathy Richards, reporting for Paul Solanics, gave the Northeast section report; Jeff Thompson reported for the Northwest section; Brandon

Fox represented the Southeast section and Jason Tincu presented the Southwest section report. Each outgoing section President was presented a certificate of appreciation for their service by President Baker.

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

Items for Voting:

Nominations and elections- Dan Sullivan presented the 2017-2018 slate of nominations as President-Jamie Gellner. President Elect - Fred Smith, Vice President - Kim Riddell and Secretary-Treasurer - Jane Winkler. The motion was made by Mike Welke to accept the slate as presented. Second by Elizabeth Wick. Motion passed. Ted Baker will serve as Past President. Jeff Lamson will serve as NW delegate.

There were no other announcements from those present. A moment of silence was held for deceased members. A motion to adjourn was made by Mike Welke, second by Dan Sullivan. Motion carried.

President Baker adjourned the meeting at 11:29 am.

Submitted by Jane Winkler, Secretary-Treasurer

Career Opportunities

No charge for job seekers.

No charge to post a position if you or a fellow employee are an OWEA/WEF member.

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\$167 for a Professional Membership

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Plant Operations Update

by Kim Riddell and Joe Tillison, Co-Chairs

The Plant Ops Committee is pleased to announce that the 2017 Operations Challenge Invitational that was held during the OWEA Annual Conference was a huge success! Four teams from Ohio competed in this year's event along with the new Indiana team and the South Carolina Blackwater Bruisers. Congratulations to the NWWSD Dirty Deeds for taking 1st Place in Division I and to Cincinnati Grit for taking 1st Place in Division II. In addition to the NWWSD Dirty Deeds and Cincinnati Grit, the Columbus Outfalls will also be headed to Chicago in October to represent OWEA in the national competition.

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

Laboratory – Melodi Clark, City of Columbus and Laura St. Pierre, YSI

Safety – Ed Nutter, City of Newark

Process – Jim Borton, CH2M

Maintenance – Doug Sayre, Allied Technical Services

Collections – Kevin Givins, City of Wooster

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

The results of the 2017 competition were as follows:

OWEA Invitational Winners

1st Place – South Carolina Blackwater Bruisers

2nd Place – NWWSD Dirty Deeds

3rd Place – Columbus Outfalls

Laboratory Event

1st Place – Outfalls, City of Columbus

2nd Place – Dirty Deeds, NWWSD

3rd Place – Blackwater Bruisers, South Carolina

Test Your Knowledge – Take the Operations Quiz

1. How often should inactive valves be exercised?
 - a. Daily
 - b. Weekly
 - c. Monthly
 - d. Quarterly
2. Motor starters and breakers are usually located _____.
 - a. In the Control Office
 - b. At each individual piece of equipment
 - c. In the Motor Control Center (MCC)
 - d. At your power plant
3. A centrifugal pump operating under _____ is capable of priming itself without any external priming device.
 - a. A dynamic head
 - b. A static head
 - c. Positive suction pressure
 - d. Negative suction pressure
4. The purpose of smoke testing is to:
 - a. Eliminate nuisance organisms from the sewer
 - b. Locate inflow sources
 - c. Measure the volume of air in a sewer line from manhole to manhole
 - d. Determine which way the water will flow
5. The mixed liquor settleability test shows settling characteristics under controlled conditions. Why is a Mallory settleometer preferred over a 1000 mL graduated cylinder for this test?
 - a. Sidewall effects of a narrow cylinder interfere with settling
 - b. Microorganisms settle better when they think they are in a clarifier
 - c. There is more room for the organisms to spread out in a wide beaker
 - d. The Mallory settleometer is easier for the operator to handle

Answers noted below.

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

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

Safety Event

- 1st Place – Dirty Deeds, NWWSD
- 2nd Place – Blackwater Bruisers, South Carolina
- 3rd Place – Outfalls, City of Columbus

Process Control Event

- 1st Place – Blackwater Bruisers, South Carolina
- 2nd Place – Outfalls, City of Columbus
- 3rd Place – Minimal Headloss, NEORSD

Maintenance Event

- 1st Place – Dirty Deeds, NWWSD
- 2nd Place – Outfalls, City of Columbus
- 3rd Place – Blackwater Bruisers, South Carolina

Collections Event

- 1st Place – Dirty Deeds, NWWSD, Bowling Green, OH
- 2nd Place – Outfalls, City of Columbus
- 3rd Place – Blackwater Bruisers, South Carolina

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, with the help of our sponsors (quasar, Smith Environmental, AllMax and TNT Engineering) covers the expenses for the winning teams' travel to WEFTEC each year! THANK YOU on behalf of the Plant Ops Committee and the OWEA 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 contact Kim Riddell at 419-234-4507 or Joe Tillison at 419-354-6274.

Don't forget to attend the Plant Operations and Laboratory Workshop which will be held in Columbus at the Nationwide Conference Center on October 11-12, 2017. It's going to be a very nice workshop with lots of great speakers lined up! Eric Wahlberg will be returning on Day 1 and will also be joined by a few of our Ohio home grown experts along with Rob Villee who will be here to speak on the new flushable wipes standards. Day 2 has lots of interesting topics in store as well, so please be sure to plan to attend!

Kim Riddell, kim.riddell@alloway.com

Joe Tillison, jtillison@bgohio.org

Certification Committee

by Kathy Richards, Certification Chair

By the time you read this we should be well into the dog days of summer. The sultry part of the year, supposed to occur during the period that Sirius, the Dog Star, rises at the same time as the sun: now often reckoned from July 3 to August 11. This period of time is often marked by lethargy, inactivity, or indolence. Except, of course, for those of us who are responsible for assuring ongoing access to clean safe water!

I want to take this opportunity to congratulate all the individuals that successfully passed the Laboratory Analyst and Industrial Pretreatment Inspector examinations. Well done and huzzah to you all! We welcome you to the ranks of certified Laboratory Analysts/ Pretreatment Inspectors and trust you will uphold the high standards of our profession.

Class I

Wendy Dria
Kimberly Isaac
Michael Jankowski
Amy Nutter
Brian Swain
Stacy White

Class II

John Chmielewski
Craig Clements
Lisa DuBose
Nicole Erkkila
Thomas McGrain
Jeremy Neill
Matt Zemantauski

Class III

Christopher Lannan
Paul Skerl

Industrial Pretreatment Inspector

Craig Marshall

Next examination date is October 20th; applications must be postmarked by September 22nd and can be found at this link.

http://www.ohiowea.org/laboratory_certification.php

Also, another reminder that this is a renewal year. If you are not absolutely certain we have good contact information, especially email addresses, please provide those ASAP. The renewals will be available online in late October or early November and notifications will be sent out then.

One last thing, another call for proctors. If you hold a current WW Lab Analyst IV certificate please consider volunteering for this very important position. If I don't hear from some of you soon, you all risk being voluntold of your new responsibility!

Until next time – may your QC be within limits and your DMRQA all acceptable.

Kathy Richards

Director of Board of Certification

certification@ohiowea.org

Safety Committee Update

by Nathan Coey, City of Pataskala, Safety Committee Co-Chair

Greetings and well wishes from your OWEA Safety Committee. I was fortunate to attend the OWEA Annual Conference in Cincinnati in June. It was a great program and well-orchestrated by the OWEA staff and volunteers. I am always amazed at the great folks we have in the organization and our field. The conference was an excellent opportunity for education and networking and I hope you took full advantage of the event. I was privileged to serve as a judge in the Operations Challenge Safety Event. Congratulations to all that participated. I saw excellent team work, attention to detail, and confidence. The communities you serve are fortunate to have folks of your caliber and attitude.

I had the privilege to meet and introduce two presenters that were also active on their Operation Challenge team. First shout out is to a 'Young Professional Abstract Award Winner', Doug Dietzel. Doug serves at NEORSD and presented research findings on chemically enhanced high rate treatment. This young professional was a great presenter and it was great to see his confidence and involvement. It was a privilege to introduce Christen Wood with NEORSD and captain of 'Minimal Headloss' Ops Challenge team. Her presentation titled, "My journey to create the work culture I always wanted" was encouraging and engaging.

Christen's presentation centered on 'soft skills' or means and methods to effectively engage our greatest resource at work, people. Motivation to seek and secure stable employment is compensation. A means to earn currency to provide for our needs and wants in our life is the purpose of a job. While most of us would not turn down higher levels of compensation for the same duties, compensation is not always the most reliable means to motivate the workforce. Genuine heartfelt concern for our fellow co-workers is a free exchangeable commodity.

So what does this have to do with safety? Christen pinpointed the positive environment at her place of work was directly related to initiatives like forming an Operations Challenge team. The residual benefits of comradery extends past the ops team and causes a positive "ripple effect" through the plant. If your "team" practices safety, not only does it build a sense of unity, it sends a clear message you care about the person next to you.

If we (co-workers and leaders) expect team work, attention to detail, and confidence in our staff as it relates to safety (much like the teams in the ops challenge

events) I propose the following.

- ◆ Form a Safety Committee. This provides an opportunity for staff to get involved in the process of building a safe work environment.
- ◆ Conduct Safety Training Events. This is an opportunity to practice how to be safe. It provides familiarity to the safety hazards.
- ◆ Establish Safety Communication Protocol. This serves as a means for staff to submit in writing any safety concerns related to daily duties. Instead of folks walking by potential issues, like "loose grating", it provides a means for ownership to assist in rectifying a deficiency.

The above recommendations will build team work, attention to detail, and confidence in our mission of Every Day Safety with our prized resource.

Does this seem daunting? Not sure where to start? Schedule a kick off meeting, bring food. (Sweet and tasty is always a good move.) Come to think of it I have never seen a person being grumpy eating something sweet. Jump in and do it. We are all human. We all desire connection and comradery in and out of the workplace. If you exemplify compassion and humility in leadership, your actions will not return void. If you value those around you, your actions will shine through in all situations. Seize the day, make it count. Change the world one gallon at a time.

In comradery and safety, Godspeed,

Nathan W. Coey
Utility Director

Safety Committee Contact Info

Safety Committee Co-Chair

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City of Warren
mwelke@warren.org

Safety Committee Co-Chair

Nathan Coey
City of Pataskala
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What's that smell? Why do my lungs hurt? Is that cotton candy?

by Travis Cooper, City of Hamilton, SW Section Safety Chair

This article is designed to educate you on the various chemical and naturally occurring odors that can be found within water production and water reclamation facilities.

The air we breathe is made up of about 21% oxygen, 78% nitrogen and 1% of various gases such as methane, carbon dioxide and helium to name a few. Along with all of these gases there are dust, microbes, plant spores and water. All of these are in every breath we take. Every. Single. Breath. That alone is pretty interesting information to take in.

However, for those of us that are lucky enough to work at or visit a water or wastewater facility, we encounter a variety of dangerous chemicals daily. These chemicals can create gases, and when concentrated enough, can lead to serious health issues when breathed in. Hydrogen sulfide, methane, sodium hypochlorite, sodium bisulfite, calcium hypochlorite and various other gases are just a few that can be deadly in higher amounts.

Hydrogen sulfide (H_2S): Rotten egg odor, extremely corrosive to metals. Small concentrated amounts can lead to headaches and nausea. High concentration can cause respiratory system paralysis which can result in

fainting and possibly death.

Methane (CH_4): Highly flammable and an asphyxiant. It may also act as an oxygen displacement in enclosed areas.

Sodium hypochlorite ($NaClO$): Highly unstable and extremely corrosive. Exposure can result in damage to the skin, eyes, and lungs.

Sodium bisulfite ($NaHSO_3$): Highly corrosive and is an irritant to eyes, skin and lungs.

Calcium hypochlorite $Ca(ClO)_2$: Very corrosive and potentially destructive to the lungs.

Oxygen (O): Or rather, the lack of oxygen. Not enough oxygen leads to fainting and potentially death.

In the end, the most important part of remaining safe when around dangerous chemicals is to use the proper personal protective equipment, knowledge of the specific safety data sheet, and have a calibrated gas meter.

To finish with a quote, "Am I really going to put cotton candy in the title and not mention it at all?"

5S Update

by Laura Tegethoff



Inductees Fred Smith and Melodi Clark protecting their buckets at the Meet and Greet.

The nominees for 5S were announced on Tuesday June, 27th at the OWEA annual Conference Awards Breakfast in Cincinnati. The 2017 Class of 5S were as follows in the Morrison Z- Al Zamora from the NW, Mary Ann Driscoll from the NE, Barb Browne from the SW, Fred Smith from the SE and Melodi Clark as our At-Large

initiation ceremony and introductions (roasts). The Integrators for the 2017 5S Class did a great job: Dan Wickard from the NW, Deb Houdeshell from NE, Jason Tincu from the SW, and Paul Matrkka from the SE. Mike Heniken gave Melodi Clark's (his bosses) roast, BRAVE MAN. Deb Houdeshell doing double duty did Rick Warner's introduction based upon many joint committees in the past. Elizabeth Wick and Kim Riddell are always there to make the ceremony run smoothly. Our integrator helpers are needed more than ever.

The 5S annual breakfast and business meeting took place Thursday morning after the banquet. Even at that early hour after a long conference we had quite a turn out. The following were in attendance: Mary Ann Driscoll, Marc Morgan, Darin Wise, Fred Smith, Dave Frank, Jane Winkler, Mike Heniken, Doug Borkosky, Ted Baker, Elizabeth Wick, Barb Wagner, Kim Riddell, Mike Welke, Paul Matrkka, Brad Borer, Doug Clark, Alice Godsey, Tom Fishbaugh, Dan Johnson, Guy Jamesson, Dale Kocarek, Mark Livengood, Debbie Schafer, Barb Browne, Deb Houdeshell, Jeff Lamson, Al Zamora, Dan Wickard, Melodi Clark, Leon Smith, and Billy Slaven.

The breakfast is sponsored by Jones and Henry, as always a huge thank-you! We would like to tell you what we talked about but if we did, we would have to kill you.

The shovels, pins, buckets and jackets are all packed away just waiting for next year's 5S candidates!

Until Next Year, Your Grand Integrator, Laura Tegethoff

Candidate.

As always because we are the best MA, we were thrilled to have WEF president Rick Warner in attendance. Because we are also nice we included him in the ceremony festivities.

In true 5S style the selected class carried cute red buckets and shook down their friends and colleagues to raise a staggering figure of close to \$1,699.18. The monies are donated to Water for People, and various other industry donations.

Before the banquet, the 5S members go through their

Lab Analysis Committee Update

by Denise Seman and Melodi Clark, Committee Co-Chairs

Happy Summer!

State conference has come and gone, how did you like this year's event? Several of our section chairs were able to attend. Please check out their observations of this year's conference.

We're preparing for the fall workshop, if there are any topics you would like to see addressed, please let us know.

SW LAC – Karen Tenore and Jim Davis

SW LAC Meeting News!!

The SWOWEA LAC had a meeting July 13, 2017. This was our annual YSI-hosted meeting to be held at the YSI facilities in Yellow Springs, Ohio. Topics included sampling and measurement of pH, dissolved oxygen and ammonia, along with process monitoring. The presentations were given by Chris Cushman and Rob Smith of YSI, with 5 contact hours approved. As usual for the SWOWEA LAC, there was no charge for this meeting.

The remaining schedule for meetings is:

Sidney WWTP November 2, 2017

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

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

Jim Davis and Karen Tenore, LAC Co-Chairs

Committee Members:

Lynette Hodnicki, City of Fairfield

Lori Kyle, Greene County

Gregg Mitchell, City of Sidney

Roger Rardain, City of Fairborn

Teresa Shinkle, Greene County

Rob Smith, YSI

NE LAC –Beverly Hoffman and Tom Zocolo

We are planning to squeeze in two more meetings before the end of the year. We would like to cover the topics, "Downstream impacts of micropollutants" and "Laboratory QA/QC control charts". If anyone knows of a speaker for these topics, or has a topic in mind that they would like to see presented, please contact us. Watch your email for more information as we get the meetings planned.

I received an email that Lisa Feigle has officially retired

from the Geauga County Department of Water Resources. We are all happy for you Lisa, but will miss you.

If you would like to be added to the NES LAC membership directory and receive automatic emails for training events, please email nesowealac@gmail.com.

Committee Members:

Marie Simon, North Coast Environmental Laboratories, Inc

Amy Starkey, Stark Co. Sanitary Engineers

SE LAC – Melodi Clark

I just got back from our State Conference and once again OWEA knows how to do a conference! I want to send out a special thanks to seven judges that helped with the Lab Event for the Ops Challenge on Monday of the conference. Laura St. Pierre, Chris Cushman, Ben Sutter, Mike Heniken, Terri Brenner, Tony Hintze, and Karen Tenore; the lab event would not have been possible without all of your help. As for the SE Lab Committee I am looking at holding two more meetings before the end of the year. Hopefully we will have one in September and one in November or December. I am looking for a location for at least one of these meetings so if anyone has any suggestions please contact me. Again these will be free and I will push to have at least three to four contact hours at each meeting.

NW LAC- Tony Hintze and Terry Brenner

Hope everyone is enjoying their summer. I'm not sure how it happened but I must have blinked and missed some of it.

As I'm writing this, Terri and I have just returned from the OWEA Conference in Cincinnati. While there, we had the opportunity to judge some awesome teams at this year's Operations Challenge. Congratulations to all the teams. You did a great job!

Thank you to everyone that made our meeting on April 11th a success. We had 44 people attend the meeting which was hosted by the NW District Ohio EPA. Attendees heard presentations on the Importance of Preventive Maintenance & Use of Lab Instruments by Dale Rudkin, DR Lab Services; PCR-What and Why? by Tom Poffenbarger, NW OEPA; Ohio EPA: Tell Me More by Jeremy Scoles, NW OEPA; Total Phosphorus & Dissolved Orthophosphate Study by Melodi Clark, City of Columbus. Not only did the attendees take advantage of three no cost contact hours but they also enjoyed a lunch compliments of the Northwest OWEA.

Our LAC email list has grown a lot in the past year and we have found that many people that thought they

were on the list are not. So if you haven't received an email directly from the NW LAC lately, be sure to send your info to myself or Terri (tjhintze@gmail.com or tbrenner@ci.perrysburg.oh.us)

We are currently working on our next meeting so watch your email and keep an eye out for notices on the OWEA website. If anyone has a topic they would like to see presented or if you know of someone who would like to present a topic at one of our meetings, please let us know!

We look forward to seeing you at the next meeting. And of course always remember, working in the lab is just like cooking in your kitchen, just don't lick the spoon!

Committee mission statement:

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

Join Your Section's Lab Analysis Committee

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

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NE Co-Chair

Bev Hoffman

wwwlab@genevaohio.gov

NE Co-Chair

Tom Zocolo

tzocolo@akronohio.gov

'droppin dimes' in the Workplace: What Kind of Coworker are You?

by Jason Tincu, Brown and Caldwell

The most important skill (and yes, it is a skill) that a person/professional can have (or may need to yet develop) is self-awareness. Self-awareness is defined as the “conscious knowledge of one's own character, feelings, motives, and desires” or knowing who you are, how you tick, and what gaps and opportunities remain untapped. Sometimes

self-awareness comes naturally with time, age and wisdom. Sometimes it comes from a firm punch to the lip (a bad evaluation, situation or experience). Sometimes it comes from peer reviews, mentors or other strategic growth initiatives. And still yet, some people never develop it for a number of reasons. **Are you self-aware?**

Once you are aware of these personal gaps and opportunities, then your charge should be to offset them with attitudes and actions that make a better you...whether that's a better human, parent, partner, professional, teammate, coworker—well, you get the idea! In addition to identifying gaps and opportunities through the process of self-awareness, one can also



hone in on strengths and weaknesses. Many people tend to focus on what they can't do and who they are not, instead of how amazing they already are and how many things they've already mastered. Please double down on your strengths, as they make you an expert in what you do! But if we never evaluate ourselves in the first place (and I can promise that you're NOT perfect), we never get better or

grow or realize what we can and can't do at a mastery level.

So, when evaluating oneself for today's purposes, I'd like for you to ask...**what kind of coworker are you?**

Do you make your organization and coworkers / colleagues better by assisting when duty calls (or are you just existing in a compensated space)? Are you responsive on emails, texts and other communications for the good of the organization and fellow employees (or are you nonresponsive and/or selective)? Do you go the extra mile to make sure that things get done and deadlines are met (or do get to the first road block and quit)? Are you

The People Place

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

Jason Tincu, SW OWEA Delegate, jtincu@brwnncald.com



timely, present and active at meetings (or could you care less)? Do you take the time to notice when and consult with a coworker that may be stressed or off just a tad (or do you turn a blind eye)? Do you hoard information, ideas and fixes in an effort to watch things fall apart under the watch of someone else? Do you regularly volunteer to handle individual tasks as part of a group effort (or do you sit on your hands hoping not to get called out)?

In my 20 plus years in the workforce, I have seen all of these played out across organizations of all types, sizes, and make-ups! There is a saying that “we are only as strong as our weakest link”, and when we have chinks in our armor (i.e. communication breakdowns, ego hurdles, personal relationship issues, lack of individual leadership), it costs, not only our organizations, but also each individual directly and indirectly connected to this decision, act or action. **I challenge each and every one of you that reads this blog to check the pulse of your assisting, as the success of your organization is at stake!**

John Stockton was the ultimate assist man and point guard, making everyone on his team better across a

long, storied basketball career. Stockton averaged a career double-double and leads the NBA in career assists (15,806) and steals (3,265). If one assumes 2 points, on average, for each of his assists, that puts him at 31,612 points or 5th on the all-time scoring list, just below Michael Jordan (before you even add his actual points scored: 19,711). Needless to say, the value that John Stockton added to his teams across his career is unmatched! John knew that if he made those around him better and more productive that the organization would ultimately become more successful.

'Droppin Dimes' is a basketball phrase that signifies making an assist. Although you directly may not get the acclaim for a particular task, project, or accomplishment at work, it takes a ton of folks 'droppin dimes' to make it all happen. In the event that you happen to be the lead that gets the acclaim, make sure to give shout outs to all the John Stockton's that helped along the way!

Do your part - drop those dimes-and enjoy success!

Cheers—JT



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Stop by and say hi at the...

Ohio Mixer

Sunday, October 1, 2017
6:30 - 8:00 pm

Boulevard Room, 2nd Floor
Hilton Chicago
720 S. Michigan Ave.
Chicago, IL 60605



Visit www.ohiowea.org or call 614.488.5800 for details.

WEF Utility Partnership Program Member Utilities

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

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

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

- ◆ All members, who were already WEF members, retain original membership number, credit for all years of membership, and remain a full-voting WEF member. ALL employees at the UPP utility will be eligible for membership registration rates at WEFTEC, as well as the early-bird rate for Premium and Standard WEFTEC registration at any-time throughout the registration period.

ALL employees at the UPP utility will also be eligible for member rates for the OWEA Technical Conference and Exposition, OWEA Workshops, and events.

All employees at the utility will be eligible to register for a WEFTEC Exhibition-only pass at NO-Charge.

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

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

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

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

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



OWEA currently has 21 municipalities signed up for the Utility Partnership Program.

To learn about the benefits for your utility visit <http://www.wef.org/UtilityPartnership/>

Or contact Amy Davis, amydavis@ohiowea.org, 614.488.5800

Avon Lake Municipal Utilities

City of Canton WRF

City of Celina

City of Columbus DPU

City of Fairborn

City of Harrison

City of Mansfield

City of Marietta WWTP

City of Newark Wastewater Treatment Plant

City of Oberlin

City of Solon

City of Toledo Water Reclamation

City of Troy Ohio

City of Twinsburg

City of Warren WWTP

Clermont County Sewer District

Fairfield County

Lake County

MSD of Greater Cincinnati

Northeast Ohio Regional Sewer District

Sanitation District No 1

City of Springfield

Wastewater Treatment Facilities

by Tim Weaver, City of Springfield

The City of Springfield is located in west central Ohio in Clark County. Along our western border is Mad River, one of only a few designated coldwater streams in the state and one of only three streams ODNR stocks annually with trout. Mad River is the plant discharge receiving stream. During the days of Conestoga wagons, National Road, otherwise known as U.S. 40, ended for a while at Mad River. Consequently, we became known as the “Town at the end of the pike”. With abundant water and natural resources, a streaming supply of laborers, and the resourcefulness of entrepreneurs, Springfield became an industrial powerhouse.

Like many wastewater treatment facilities in Ohio, the state health department “encouraged” Springfield and many of the larger communities to construct treatment plants in the late 1920’s. Following design and construction, the Wastewater Treatment Plant for the City of Springfield was completed in 1935. The plant was initially built as a primary treatment facility with a design flow of 25 million gallons per day (MGD). It consisted of two primary clarifiers and two anaerobic digesters. Increasing water quality standards and changes in community demographics resulted in several plant improvements and upgrades over the years.

- ◆ **1961** – Addition of two 200 foot diameter trickling filters, two final clarifiers, a third primary clarifier, a third primary digester, and a secondary digester
- ◆ **1972** – Addition of chlorination and grit removal
- ◆ **1987** – Addition of dissolved air floatation (decommissioned)
- ◆ **1988** – Addition of four complete mixed activated sludge basins and two post aeration/dechlorination basins
- ◆ **1995** – Addition of two belt filter presses and a sludge storage building, abandoning the original sludge lagoons
- ◆ **2000** – Installation of Supervisory Control and Data Acquisition (SCADA) control for plant equipment
- ◆ **2009** – Addition of effluent pumping station
- ◆ **2015** – Addition of a third final clarifier, a fourth primary digester, a new chemical storage and feed building, a new 1.5 MW diesel generator, a new headworks structure with wet weather screens, a new RAS/WAS building, a new 7500 sq. ft. maintenance building and a 100 MGD compressed media filter.

Plant Profile

The plant is classified as an Advanced Secondary Treatment Plant with the following parameters:

- ◆ Design Average Flow – 25 MGD (21 MGD domestic and 4 MGD Industrial)
- ◆ Design Influent – 125 mg/L BOD and 215 mg/L Suspended Solids
- ◆ Design Detention Time – 12.8 hours (summer) and 14.8 hours (winter)
- ◆ Peak Sustained Flow (wet weather) – 40 MGD
- ◆ Average Flow (2016) – 15.5 MGD
- ◆ Wet Weather Compressed Media Filter – 100 MGD
- ◆ Population – 80,000 people (105,000 design)

The Wet Weather and Capacity Improvements Project, completed in 2015, is considered the single largest project in Springfield’s history at a bid price of \$50,150,000. After some “unforeseen conditions” and the inclusion of a few City desired add-ons, the final project cost was \$52,255,576, a total of 4.3% in change orders. However, no price can be put on the work that resulted in an approved Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) projects list, efforts to select a “new” wet weather treatment technology, approval by EPA for



HRT Media Installation

said technology, an intense collaborative design effort of a new technology, and the cooperation of vendors, owners, contractors, and engineers to create and construct a first time system.

EPA Approval

The City of Springfield submitted our initial CSO LTCP in April 2004. The original plan included a 125 MGD wet weather high rate treatment system. Prior to submitting a plan addendum and before issuance of a new NPDES Permit, the city negotiated a list of projects and permit language with Ohio Environmental Protection Agency (OEPA). Supported by more accurate information, and model updates, and historical records of the largest plant by-passes, OEPA agreed to lessen the scale of the high rate treatment system to a mere 100 MGD and keep an open mind about a new high rate treatment opportunity. A LTCP addendum was submitted in March 2012 and subsequently approved by OEPA.

The addendum included a “first round” list of projects followed by three different, possible parallel sets of projects. Selection of the projects after the first round would be determined by assessing outcomes of the first round projects, changes to system performance, amended or new information/data, changes to community affordability and demographics, and the other parameters that now guide the development of CSO LTCPs. Our 2012 permit language allowed for a five-year programmatic review of the LTCP projects, and as such, Springfield was one of Ohio’s first communities to have an integrated plan approach in its NPDES Permit.

Selection of High Rate Treatment

Once we came to accept a new treatment process was in our future, the next step was to make it hurt as little as possible. Our critical concerns included not having to add staff, use as few chemicals as possible (to

hold down disposal costs and all the added associated maintenance expenses), the project footprint, energy costs, initial construction cost, ease of operation, ease of maintenance, reliability, system complexity, start-up and shutdown procedures, and historical and operating perspectives from other owners. Since one of the possible future projects was a satellite treatment system, a reliable unmanned system was particularly important. Also, in a category of its very own, what additional effort would be needed to champion a new system to gain acceptance by the regulators. At the time the plan and permit were being negotiated, two types of high rate treatment systems dominated the wet weather world—vortex type separators and the old faithful gravity tank clarifier systems.

In May 2010, with the help of Black & Veatch, the City solicited proposals from three pre-selected vendors of high rate systems. Two of the vendors had working systems in the state and were familiar by both Ohio and US EPA. The third product, the WWETCO Compressible Media Filter, had never been constructed as a complete and full-scale project for a CSO application, although it did have a few small stormwater installations. Comparing the systems apples to apples, the construction costs of all three were within 7% of each other. At this planning level, without bid prices, we considered them largely equal in price. However, the non-monetary considerations were a different matter. The WWETCO system didn’t seem to require added staff. The system would be able to start, operate, shut down, and self clean through programming. Other than disinfection, no chemicals were needed. No storage or equalization tanks were needed. Significant pumping was only needed for backwash and final effluent (due to site-specific hydraulics, not the treatment technology itself). The only critical operating condition was avoiding water depths (head) that would create breakthrough of the waste stream through the media. Another consideration of the WWETCO system

SPRINGFIELD’S WET WEATHER MANAGEMENT PROGRAM

The City of Springfield, Ohio, is tackling the problem of combined sewer overflows (CSOs). Heavy rains or snowmelt can exceed the capacity of a treatment plant, resulting in excess wastewater being discharged directly into nearby rivers. This discharge contains pollutants including human waste, toxins, and debris that can have an adverse effect on health and the environment.

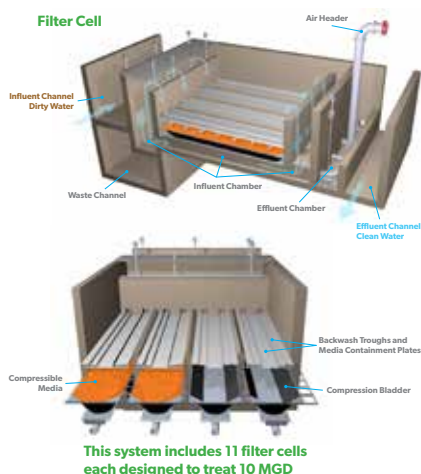
The City of Springfield facility was designed to treat 100 million gallons per day (MGD) of wastewater, which would otherwise be discharged into the Mad River untreated.



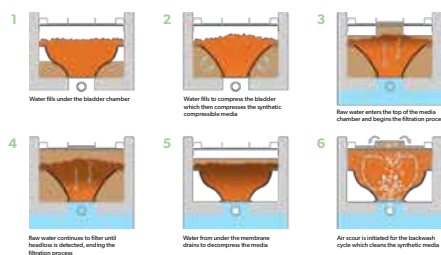
Treatment Capabilities

- Provides 100 MGD CSO treatment capacity
- Removes up to 90% of total suspended solids
- Does not require chemicals for solids removal
- Capable of tertiary filtration
- Approved by Ohio EPA and USEPA

WWETCO flexFilter™



Operation Cycle



Wet Weather Treatment helps the environment

There are many forms of aquatic life, waterfowl, rare plants, and insects in the area that depend on clean waterways. The spotted turtle, one of Ohio’s endangered reptiles, requires a healthy aquatic habitat to complete its life cycle. Treating wet weather events protects aquatic biology, wildlife and maintains a clean environment for everyone.

What can you do to help keep waterways clean?

- Dispose or recycle waste items
- Dispose hazardous waste correctly
- Volunteer to help clean up litter



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Springfield
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WWETCO
Simplified Wet Weather and Tertiary Treatment



BOTH: HRT

was operational flexibility. We could and did shut down the main plant influent and route the flows thru the WWETCO system for primary treatment. It allowed us to rebuild the primary clarifier basin walls without any loss of treatment, one of the aforementioned change orders. Also, we installed the piping to polish secondary effluent, if we choose to add pumps in the future. It's a physical process so everything, regardless of feed rate, that passes through the "fuzzy balls" gets filtered. The City's choice seemed clear. "Seemed" being the operative word.

Compressed Media Filtration

A simple explanation of the WWETCO system would be a tank containing troughs with 2" diameter fibrous balls (fuzzy balls) 30" to 36" deep acting as a deep filter bed. The side walls of the troughs are lined with a bladder material. Water enters the tank by passing between a wall and the bladder material. The water pushes the bottom of the bladder out, which compresses the bottom half of the trough full of fuzzy balls. This creates a porosity gradient in the trough whereby larger material is captured at the top and fine particles are captured in the bottom of the filter bed.

With no existing full-scale CSO facilities, we needed to

do a pilot study to put some of our fears to rest and to arm ourselves in preparation for getting buy-in by EPA. While EPA had seen presentations on the system, they had never approved one. At the same time, it seemed they were intrigued by the simple science of the system; but as we all know, EPA doesn't make quick commitments. We wanted to know if the system would achieve our treatment goals, how hard it was to make the system fail, whether cold weather would affect it's operation (would the fuzzy balls freeze into a solid mass in Ohio winters), how easily the controls would tie into our system, and how easy it was to operate. We tried to freeze the system



ALL: HRT Construction

and couldn't. We had septic haulers unexpectedly dump high strength waste. We hit the media with straight hypochlorite. Everything went well. Effluent TSS was consistently registering between the mid teens and low twenties, even during the septic hauler dumps with influent TSS exceeding 500 mg/l.

Hats off to Mark Boner, the designer of the system and a Georgia resident, who camped out during some of the coldest Ohio nights that year to run the tests. With much thicker blood, Doug Borkosky, of Baker and Associates, worked closely with Mark during the piloting. We were very impressed that Mark was so willing to commit so deeply to the effort. It wasn't until we informed Mark that his system was our choice and we needed his insurance and financial documents that we learned he was basically a one-man operation, a company of one and no financials. I've developed and managed projects throughout my career but had never encountered this. No way could we proceed without proper financial assurances that Mark could hold up his end. In the meantime Mark had been soliciting corporate partners, and at the 11th hour, so to speak, Mark partnered with WesTech. It turned out to be an outstanding partnership for Springfield.

More EPA Approval

The next step was to get EPA's approval. Like many of my peers and our generally conservative industry, EPA was concerned about trying something new at the cost of tens of millions of dollars. Completely understandable. More than once I had anxious moments when I felt like I was hanging onto a strand of spiders web off the proverbial thin branch. Thankfully, WesTech, Black & Veatch, Mark, and the plant staff were also convinced the system would work and were staunch supporters. Testing showed the system exceeded our expectations; the system had the lowest O&M projections and the simplicity left you asking what we had missed. In the end, EPA asked one simple question. "What's your contingency plan if it doesn't work?" My first response was, "a new career." Seriously, how do you answer such a question? How many multi million dollar projects have contingency plans? Worst case, we would have had over 2 MG storage, in the tanks and channels, and 80% of the plant wet weather by-passes were less than 5 MG.

Project Design and Construction

When EPA acceptance was achieved, we started designs. In many respects we were starting from scratch on a project at a scale magnitudes larger than the prototypes. Some of the challenges included finding materials, finding ways to manufacture components, developing control systems, establishing the boundaries between the responsibilities of WesTech and Black & Veatch, and trying to keep the system simple and maintainable. The filter media is contained by a compressible bladder. WesTech discovered the ideal material to be the same engineered fabric used for hovercraft skirting. Up until now, Mark had made every fuzzy ball by hand at home. This wasn't very practical since in the end it took nine semi-trailers of media to fill the cells. WesTech searched the manufacturing world and found a piece of

equipment that could automate the manufacturing of the media. WesTech and Black & Veatch were completely committed to this project, found their boundaries, and maintained a symbiotic relationship. Designs didn't stop at plan submittal. Kokosing Industrial was awarded the construction contract, became equally interested in the success of the system, and was integral in refining



Aerial view Pre-Construction



Aerial view Mid-Construction



Aerial view Post-Construction

Plant Profile

designs and constructability.

To date, the largest event treated has been 68 MGD, there have been no untreated wet weather by-passes from the WWTP since completion of the project, TSS averages are in the mid teens and the design hypochlorite feed rate and contact time is 6 mg/l for 10 minutes at 100 MGD.

Besides the WWETCO system, another quasi innovation on the project was a hybrid primary digester. We had Black & Veatch design the digester in a manner that it could be used as a secondary digester with a methane capture system. Now we have a backup secondary digester and gas collection system.

I've been questioned about a few other decisions. Why did we choose diesel as the fuel source for our emergency backup generator? Natural gas is an inexpensive fuel and it doesn't degrade like diesel. On the other hand, in a catastrophic natural disaster, will gas service be available? Plants with power become islands where emergency services can set up command operations. Emergency Management Agencies can commandeer a tanker full of diesel, but that's more complicated with natural gas.

I'm often asked why we didn't use UV for disinfection. Two reasons. First, a \$7 M capital cost with 40 to 50 uses a year for a system that requires more maintenance than a simple hypochlorite feed system that uses small peristaltic pumps. Secondly, our existing main plant disinfection system uses hypochlorite and needed maintenance. We built a single storage and control facility from which both systems operate at a fraction of the cost.

Final Remarks

All in all the Wet Weather and Capacity Improvements Project was a nearly seven-year adventure. Designers and regulators were pulled from their comfort zones, conventional practices were put under a microscope and found to come up short, local leadership had to be educated, and we were warmed by the depth of trust they had in us. I couldn't be more pleased with this project or with the efforts, energy, and commitment of Mark Boner, Doug Borkosky, Black & Veatch, WesTech, Kokosing, and particularly the staff at the WWTP, who continue to tweak loose ends you ALWAYS have after any large project and for continuing to refine our operations for better efficiency and reliability.

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Buckeye Bulletin History

Stay tuned through 2017 as we share a little Buckeye Bulletin history in each issue. Remember Johnny Clearwater and his quarterly advice through the '70s and '80s?



JOHNNY CLEARWATER SAYS:

*"Certification Examination Time is nearly here.
Make Sure You Are Ready."*



JOHNNY CLEARWATER SAYS:

*"The energy crisis is not going to keep me
from attending the National Conference."*



JOHNNY CLEARWATER SAYS:

**YOU CAN NEVER BE TOO SAFE WHEN
ENTERING MANHOLES!!!!**



JOHNNY CLEARWATER SAYS:

"Clean Water is a Refreshing Break"



JOHNNY CLEARWATER SAYS:

"The river keeps getting dirtier, but I suppose folks keep gettin' more able to stand it."



JOHNNY CLEARWATER SAYS:

"Clean Water is Fun in the Pool"



JOHNNY CLEARWATER SAYS:

"Operator Training Is One Of The Big Keys"



JOHNNY CLEARWATER SAYS:

"Clean Water is Happiness on the Farm"

Everybody Likes a Comic...

Right?

OWEA is looking to reimplement a cartoon in the Buckeye Bulletin. If you have a funny wastewater related story and want to see it in comic form, email your idea to meganberror@ohiowea.org.

Better yet, if you would like to be involved with the artwork / doodling of the cartoon or know someone that would be interested, please reach out at meganberror@ohiowea.org or 614.488.5800.

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Deadline September 15, 2017
Questions meganberror@ohiowea.org

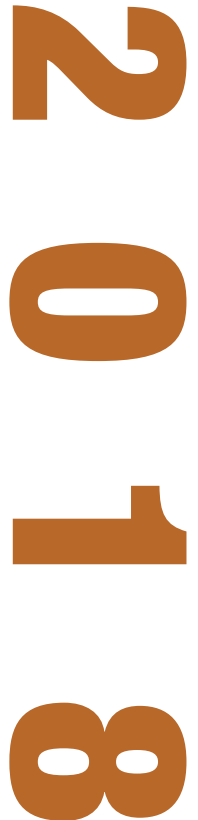
*Photo Requirements:

- Minimum of 2010 x 1558 pixels
- Landscape orientation
- Intended to print at approximately 11"x8.5"

*Any photos not meeting the minimum requirements for quality will not be considered.

Once submitted, the photographer gives OWEA permission to reproduce and publish. Photographer's name will be printed with their photograph.

A short description of the photo or plant represented must be submitted with the photo, along with the photographer's name and contact information.



2017 Technical Conference & Expo Wrap Up

by Sharon Vaughn, 2017 Conference Co-Chair

Golf Outing

City of Mason Golf Center was the host of this year's event. There were 24 foursomes who participated in 18-holes of golf, continental breakfast, lunch, dinner, beverages, and the driving & practice facility. Prizes were awarded during this event....Congratulations goes to the winners!

OPS Challenge

The 2017 Operations Challenge Invitational was held on Monday – June 26th. The event was comprised of several events: Process Control, Laboratory, Safety, Collection Systems, and Maintenance. There were six teams that competed this year with competitors from outside states. This year's winner was Cincinnati Grit in Division II and NWWSD Dirty Deeds in Division I.

Welcome Social

The first day of the conference was complimented by the addition of a Welcome Social. The event was conducted in concert with the final competitions of the OPS Challenge; and the two events provided excellent synergy between the two events conducted over two floors of the Hyatt. There were some wonderful selections of food and beverages along with a live performance. Eric Jerardi began the entertainment for the conference; and it was quite a show. Eric Jerardi, of the Eric Jerardi Band, is considered a true blues rocker. He has played in countless blues festivals, major concerts, and shows around the country for the last 25 years.

Awards Breakfast

The breakfast is the largest attended event of the conference. There is great networking and peer recognition that occurs during the morning event. The Science Day and SJWP Award winners are recognized; Safety Awards are presented; and Life Member/Quarter Century award winners are introduced. The following WEF awards are presented: F.D. Dean Stewart Award, J.W. Ellms Award, F.H. Waring Award, W.D. Sheets Award, L.T. Hagerty Award, Engineering Excellence Award, Laboratory Analyst Award, P.W.O. Award, Public Service Award, Collection System Award, WEF Laboratory Analyst Award, and the Facility Image Awards. Award winners received praise from the OWEA/WEF organization and fellow colleagues! Also, the 5S Inductees were announced along with the Crystal Crucible and Golden Manhole winners.

Exhibitor Hall

The hall opened after the Awards Breakfast concluding with a social reception. There were 90+ exhibitors in attendance with a myriad of technology and equipment for attendees to review. There were Exhibit Hall tours provided during the day for contact hours along with a Round Table Seminar. The exhibit hall tours were 15 minute sessions held inside the hall educating attendees about new technology systems and BMP's for water reclamation and treatment.

Plant Tour

Mill Creek WWTP/MSDGC is the largest WWTP for Cincinnati – treating @ 100 MGD. The plant tour provided attendees the opportunity to view the operations located in central Hamilton County. The MSD's Watershed Operations division was also located at the plant. A packed tour bus left the Hyatt for a rewarding and informative tour of this plant.

Meet & Greet

This social event was held Tuesday evening at the National Underground Railroad Freedom Center located on the banks of the Ohio River. There were theme based selections of food – Kentucky BBQ, Cincinnati Chili, and Latin Five Star Stations and plenty of liquid refreshments consumed this evening. The location provided for mixed levels of atmosphere conducive to networking, enjoying the river view, sitting by the fire, listening to the band, and fellowship with food. The evening entertainment was provided by My Sister Sara - considered to be one of Cincinnati's most successful and popular Party/Show bands. Their high energy performance, unique adaptations and medleys of popular songs, and state of the art sound system and light show complimented the performance. OWEA enjoyed one of Ohio's premier party bands!





Technical Sessions

Educational sessions were conducted over a three day period providing numerous contact hour possibilities for the attendees. The topics were centered on energy, operations, collections, maintenance, biosolids/green infrastructure, regulatory, wet weather, and nutrients. The variety and depth of the presentations were excellent – allowing for attendees to select the topics and specific tracks most helpful for their needs. The vast knowledge and hands-on experience found in the many speakers provided an excellent resource for new technologies, old and proven methods, and current Research & Development.

Annual Banquet & Awards

The evening event began after a long day of technical sessions with a social reception prior to the banquet. Attendees enjoyed beverages and hors d'oeuvres while networking with fellow colleagues while the 5S inductions always provided excellent entertainment. After a wonderful dinner, the WEF awards: Lifetime Engineering Achievement Awards, WEF William D. Hatfield Award, WEF Arthur Sydney Bedell Award, and the WEF George W. Burke Award. The Larry Moon Award was also announced.

Spouse Program

The events and activities for the spouse program were diverse. On Tuesday, the spouses attended the Admiral's Lunch on the BB Riverboat followed by carriage rides in Newport, KY. On Wednesday, the spouses enjoyed a walking tour of Over the Rhine, Lunch at Salazar's, and a guided tour of Findlay Market. Attendees for the guided tour of the Findlay Market were provided gifts from Maverick Chocolate Co. and Colonel De.

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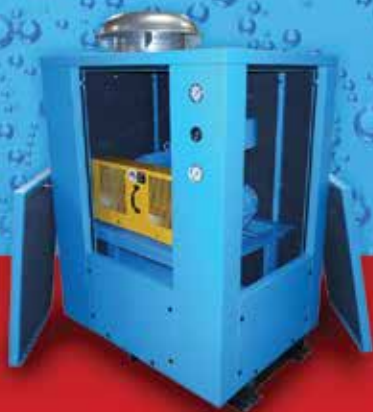






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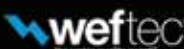
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A Chat with Past President, Stuart Bruny

by Megan Borrer, OWEA Staff

Staff: Where did you go to school and what did you study?

Bruny: I attended The Ohio State University and my major was Agricultural Engineering. I also had several civil engineering courses, environmental courses, more as electives but my major was actually in Agricultural Engineering.

Staff: What is something that most people don't know about you?

Bruny: I would say that most people don't know that I like old farm tractors. I restored an old tractor that was my grandfather's. I don't talk about it much. It's just an interest I have.

Staff: How did you get into wastewater?

Bruny: When I graduated from The Ohio State University I interviewed with the Ohio EPA and they offered me a job out of college. I took that job and it was in the water pollution control program. So that's how I sort of got involved with the wastewater business or the environmental business.

Staff: Explain what you did exactly for Ohio EPA.

Bruny: I worked for Ohio EPA for thirty years. During that time I had the opportunity to work in many different programs as well of different locations in Ohio. I started at the Southeast District Office in Logan, Ohio and worked in the wastewater program for several years, about 12. At that time I became chief of the Northeast District Office up in Twinsburg, Ohio. I was there about a year and a half. And then I moved to the Central Office in Columbus, Ohio and I became Chief of the Drinking Water Program. I was there about four and a half years and then I returned to where I started in the Southeast District Office and became chief of the Southeast District Office and I was there about 13 years. During that time I also had some opportunities to serve in other roles within the agency. I was Acting Chief of the Solid Waste Division a couple of different times for about six months each, and Acting Chief of the Surface Water Division for a six month stint. I had a great career with the agency; working in different programs, working in different offices, and I enjoyed it very much.

Staff: What kept you in this field or at the Ohio EPA for the entire length of your career?

Bruny: I think the variety of the work. I started in



wastewater, I worked in drinking water and solid waste. As you get into administration you have the opportunity to get involved in all the environmental areas: Air Pollution, Hazardous Waste, Solid Waste, Drinking Water, and Wastewater. I wasn't just involved in the Wastewater side of things. There was always something new to learn. Also, I felt good about the accomplishments that were being made and environmental improvements over the years. [There was] a lot of progress made in the 70s and 80s and 90s, tremendous progress and I think that was pretty fulfilling.

Staff: What would you say is the coolest advancement that you saw during the 70s or 80s?

Bruny: Picking out one would be pretty difficult. Think back when the Cuyahoga River was on fire. Rivers and streams were just like open sewers and today, my gosh, [look at] the improvements in clean water, the aquatic life, the recreation that people can enjoy in Ohio's waterways. It just wasn't that way in the 70's. Open dumps were on fire everywhere. You don't see that today, we have engineered sanitary landfills. We had air alerts all the time [and] dark clouds above our industrial cities. Air quality is in pretty good shape today. So there's been extensive improvements in all the environmental medias over the last few years. It'd be hard to pick one out.

Staff: How have you filled your days since retirement?

Bruny: I travel. [We have] done a lot of traveling. We have a large Fifth Wheel that we pull behind a truck and we've been all around the United States. I have six grandchildren I enjoy spending some time with. I spend time hunting [and] some time fishing. There's always lots to do around the house if you're a homeowner.

Staff: What are you looking forward to as ORSANCO's new Chairman?

Bruny: ORSANCO has a lot of challenges that it's dealing with right now and I hope to see progress on some of those. Like many government or pseudo government agencies, budget is always a concern. So we have budget issues like most state agencies or federal agencies at the present time. We're looking to improve our Pollution Control Standards Program. ORSANCO has instream Water Quality Standards for the mainstem of the Ohio River and we're looking at ways to improve that program. We're also looking forward to completion of a Mercury Study on

the Ohio River mainstem. We're looking at how much mercury is in the river, where it's coming from, and hopefully determine what, if anything, we can do to improve that.

We're also working with an organization called the Ohio River Basin Alliance. That's a group of stakeholders that have an interest in Ohio River activities whether it be recreation, flood control, infrastructure, navigation, [or] commerce along the river. Of course, ORSANCO's the water quality arm of that, and that organization is just sort of getting its feet off the ground and I'm looking forward to seeing how that works. So there's three or four challenges I see for ORSANCO in the coming year or so.

Staff: What would you say was your biggest career accomplishment?

Bruny: That's a pretty tough one. I'm not one to tout my own accomplishments. I guess my biggest accomplishment might be playing a leadership role in several areas of Ohio EPA when I worked [there]. I was pretty blessed with having those opportunities. Whether it be to lead a Drinking Water Program in Ohio, a Solid Waste Program, a Wastewater Program, or District Office I just feel that having the opportunity to do that and hopefully accomplishing some things along the way and seeing the improvements is probably the thing I would think of most. I also enjoyed going through the chairs at the Ohio Water Environment Association. That was a significant thing during my career. Being appointed to ORSANCO by President Bush and later by Governor Kasich. Those were accomplishments as well but it's hard to pick out one.

Staff: What would you say drives you to succeed?

Bruny: I guess I just sort of had it instilled in me probably from a child. If you're going to do it, do it your best, do it right. I don't like to do things twice so I try to do it right the first time. *laughs* I've just always had that culture instilled in me and it's just led to whatever I do I try to do it the best. Sort of like—work hard and play hard—that type of thing. I just don't know any one thing that caused me to be that way but probably just [the way I was raised] and [I] still kind of am that way today. I guess that sort of culture is just instilled in you.

Staff: Do you have any tips for someone not as far along in their career of how to move up in rank or at an organization they volunteer for?

Bruny: Well I think there's several things, and not just in the environmental arena, but probably anywhere you might work or be employed. Knowledge is huge in my opinion. You need to be knowledgeable on the subject matter that you're involved in. I think it's important to be an expert in some area but it's just as important to be knowledgeable in several areas. That will carry you a long way. You need to be persistent, patient. I think [with] a lot

**"If you're going to do it,
do it your best,
do it right."**

of young people today everything has to be instant. So patience and persistence, to me, is important. You have to get along with people. If you're going anywhere in the employment world you've got to get along with people, be a team player, that sort of thing. So knowledge, patience, persistence, getting along with people, and doing the best you can. Some people kind of do the least they can get by with to maintain their job and wonder why they don't go very far. I think you've got to do the best you can all the time. Those are some of the things, and I'm sure there's many more, but those are what I think are a couple of important ones off the top of my head.

Staff: What are some good characteristics for a leader to have?

Bruny: Being a leader [and] developing leadership skills. You have managers that maybe don't do well at leading and leaders that maybe don't do well at managing. I think you have to have a little bit of both of that and work hard at it. You've got to come to work every day and work hard at it to advance at not only this profession but most of them.

Staff: What advice do you have for a young professional looking to enhance their career?

Bruny: Becoming involved in an association or an organization that's very separate but very related to your work. You see people that have joined the Ohio Water Environment Association or the Ohio Section of the American Water Works Association. Organizations such as these give you the opportunity to meet other professionals in the field [and] become more knowledgeable of activities within the field. I'm sure a lot of jobs have been acquired through those sort of associations and advancements in the field because of your involvement in that association. Becoming involved in a related professional organization or association I think also would help one advance themselves in the field.

Staff: What advice would you have for someone that wants to get more involved with OWEA or how they would do it?

Bruny: I'm sure this was answered many times before but find an area you are interested in and get on a related committee. That's a great place to start. If you're interested in Biosolids or Collection Systems or Operations, find an area that you're interested in and would like to be involved in. Become a committee member and be active in that committee. Aspire to be a leader in that committee. You may become a committee chair.

Each year the sections within OWEA are looking for committee members and committee chairs and people who aspire to go through the leadership positions within that section. First Year Director, Second Year Director, Third Year Director, just start out and learn the ropes along the way. That's how most of the leaders within

our organization started out. It was within a section and becoming a committee chair or being active on committees and then start through the leadership positions within the section. Your leaders within OWEA are typically ones that have been leaders in a section: NE, SE, NW, SW. So you have got to become involved at the section level and aspire to become more involved in some of those leadership positions.

Staff: What advice would you have for someone having a hard time in their current position?

Bruny: My advice would be to try to determine what is causing you to have a hard time in your position. Is it competition? Is it you're in an area you're not knowledgeable in? Is it the people that you're working with? Is it, 'I just don't like the hours of the job?' You've got to determine the reason that you're having a hard time in a position. Once you figure out the reason you can come up with options of how to fix it. You develop a list of options of how to rectify that and look at the pros and cons of each of those options. At that time I think you're probably in a good position to make a well thought out and informed decision as to what you need to do about it. It's just a systematic evaluation of: 'What's causing it?', 'What are the options to fix it?' and 'What are the pros and cons of each option?' and make a decision. That's the best you can do. I would not do something on a whim. That's just my nature but it needs to be well thought out. Rash decisions are often not good decisions.

Staff: Do you have any other wisdom for people in this industry that we haven't gone over yet?

Bruny: Let me speak just for a minute on the environmental industry in general. It doesn't necessarily pertain to drinking water or wastewater or hazardous waste or air pollution but just the environmental industry in general. I think it's important for not only young people but all people in the industry today to look at where we've been, where we've come from, and where we are today in terms of environmental quality. We've made huge, huge strides in environmental quality in the last 45 years. In fact, I think our environment is about as good as it has been since the start of the Industrial Revolution in 1850. Our environmental quality is pretty good today. I mean, we need to know that and understand that we're not going to make those same improvements in the next 45 years. Environmental protection is becoming more and more costly. We're cleaning the water [and] the air down to very small amounts and it's more costly to do that than it was to get the big chunks out in the 70s.

We have to strike a balance with how much we pay for environmental protection and the other burdens on society and I say that in terms of costs. There's a lot of problems in the United States today that we need to be working on and environmental issues is just one of them. We need to have folks be able to strike a balance and prioritize environmental protection in the proper place with other issues that society must deal with and pay for.

I had an article in the Buckeye Bulletin three issues ago that kind of touched on that. I think that's really important today for folks that are working in the environmental arena. I'm not suggesting at all that we backslide from where we're at. We need to maintain what we're doing and we've got some problems that we need to work on in the environmental area but I don't think we can continue to just ratchet down requirements in water and drinking water and wastewater and air for the foreseeable future. There's got to be an end to it and it begs the question, 'When will the environment be clean enough?' I think we all need to think a little bit more about that concept as a whole.

You know [there are] people looking for jobs, education is an issue, the war on terror, health care, prescription drug costs, housing.....these are all important issues today. I would guess that we have many more people dying of drug overdoses today than environmental issues. We have got to be able to stand back and look at that from the 10,000 foot level and say, 'Where should we be putting our dollars to do the most good for the citizens of the United States?' I guess I would encourage folks to think about this concept.

Staff: When did you join OWEA? Or it wasn't OWEA yet, but the organization.

Bruny: I think it was called the Water Pollution Control Conference when I joined. I joined in 1975 and became one of those First Year Directors. I was in Southeast and I think it was a relatively small section and they had a hard time getting people to raise their hand to take assignments within the section. I was encouraged to do that and thought, 'Well I'll get involved,' and I did.

Staff: What have you all done through OWEA? I know you were a Section Chair so you worked your way through that and the Executive Committee but did you hold any other titles?

Bruny: I went through the various chairs at the section level and then chairs through the state association. Along the way you seem to be on several committees. The Program Committee, I've assisted with Local Arrangements, Membership, we used to have a Public Image Committee that I worked on. So I've had the opportunity to be on several committees but the bulk of my work with OWEA was going through the various chairs.

Staff: Did someone in particular spark your interest in this organization?

Bruny: When I started work, a few coworkers were already involved or becoming involved in OWEA and they encouraged me, some of my early coworkers. I guess I might say in particular [it was] Bob Cottrill. Bob was involved and encouraged me. He was my supervisor and he encouraged me to become involved in it. That was a good thing. My opportunities with OWEA have been great

over the past 40-some years.

Staff: How did you balance your work with your active involvement organizations such as us and you were also involved with ORSANCO throughout your career, right?

Bruny: Well again, the folks at Ohio EPA saw the importance of agency employees being involved in the Association. Agency employees are an important part of the Association just like consultants, operators, or manufacturers. You look at all facets of OWEA and each of those play an important role to the success of the Association as a whole. The people I worked with at Ohio EPA saw the importance of my involvement in the Association so that was a good thing.

In terms of ORSANCO, I represented the Director of

Ohio EPA on ORSANCO for 10 or 12 years before I was appointed a Commissioner. So it was actually a part of my work as opposed to an extra-curricular because I represented the Director on the Commission as a proxy. I wasn't appointed a Commissioner until after I retired.

Staff: Is there anything else you would like to share with the membership?

Bruny: I would say to the members: OWEA is a great organization. If you give yourself a chance it provides you lots of opportunities to become involved, to meet people, to learn so much. You really can't afford not to be involved. Just some general advice, you really can't afford to not be involved. Great Organization.



Fireside Chats - Looking for Recommendations!

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

STUART BRUNY NAMED ORSANCO CHAIRMAN

The Ohio River Valley Water Sanitation Commission (ORSANCO) elected Stuart F. Bruny of Logan, Ohio as Chairman of ORSANCO. He assumed office July 1. ORSANCO is the water pollution control agency for the Ohio River representing Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Virginia, and West Virginia.

ORSANCO operates water quality programs through representation from its eight member states. Twenty-seven Commissioners are appointed from the member states and the federal government. In addition, numerous ORSANCO committees address specific Ohio River water quality topics and interests. Bruny will serve as Chairman to this extensive network of Ohio River representatives.

ORSANCO has benefited from Bruny's leadership, as he has served many roles within the Commission. In 2014, Ohio Governor John Kasich reappointed him as an Ohio Commissioner for a term ending in June 2020. Bruny was first appointed as an Ohio Commissioner by Governor Kasich in 2012. Prior to serving as an Ohio Commissioner, he was appointed to ORSANCO as Federal Commissioner by President George W. Bush in

2003. During this Federal appointment, Bruny served as Chairman initially in 2007 to 2008. He also served on multiple ORSANCO committees, including serving as Chair of the Technical Committee.

Bruny has an extensive background with environmental policy and water quality issues. For 30 years, he worked for Ohio EPA, holding multiple leadership positions in the agency. He served as Chief of the Southeast District Office, Chief of the Northeast District office, and Chief of the Division of Public Drinking Water.

Bruny is a life member of the Ohio Water Environment Association, the Water Environment Federation, and the Ohio Environmental Health Association. He has received honors related to his work and he provides balanced leadership to complex challenges to environmental protection.

In addition to electing Bruny, ORSANCO also elected Ron Potesta (West Virginia Commissioner) as Vice-Chair and John Kupke (Indiana Commissioner) as Secretary-Treasurer. Potesta is President of Potesta and Associates. Kupke is an ORSANCO Commissioner representing Indiana.

A Look Back on Stuart Bruny's Presidency in 1986-1987

Chairman's Message

By the time you receive this message the 60th annual meeting of the **Ohio Water Pollution Control Conference** will seem long ago but hopefully not forgotten history. If you were fortunate enough to have been able to attend you know what a successful conference it was. From the inspirational beginning when **Ohio EPA Director Warren Tyler** presented **Governor Celeste's** proclamation of Ohio's First **Water Quality Awareness Week** through the operator review session and the many fine technical sessions it was certainly one of our best conferences for the record numbers in attendance. A final look at conference statistics indicates 568 in attendance including 54 spouses. The Awards Luncheon had 287 on hand and the Banquet 246. A record number 74 table top exhibits also helped make this meeting a big success. The local arrangements and program committee members are to be **congratulated** for a fine effort.



Even though it's nice to reminisce about a victory in the past, we, as an **association**, cannot win today's game on yesterday's press clippings. We must move forward to bigger and better things and accomplish tasks to better **serve our membership** and strengthen our already strong standing as a member association in the **Water Pollution Control Federation**.

At the time of this writing, many of our executive committee members are finalizing plans to attend this year's **WPCF Regional meeting** in Grand Rapids, Michigan. The regional meeting is an important meeting attended by leaders of member associations in Region IV; Ohio, Indiana, Michigan, Illinois, and Central States Member Associations. The primary purpose of the two day meeting is to **receive information and guidance from the Federation** and probably most importantly serves as an **information exchange between member associations**. These meetings have proved most valuable and worthwhile in the past.

I have recently sent correspondence to all **State committee chairpersons**, urging them to initiate their committee work early this conference year. Many times in previous years some of our committees have had a tendency to not swing into full gear till fall or during the winter months. This has resulted in some activities not getting off the ground and much of the conference year passing us by. Their **immediate attention** to this most important matter will provide **early direction** to our committees and give us a faster start this year.

There are more opportunities for you to **become involved** in the activities of your association than ever before. I challenge each of you to choose an activity that interests you whether you feel you have an ability or not and become involved in some of our committee work. Possibilities include membership committee developing goals and contests between sections and other member associations; **Lab Analysis Committee** developing a voluntary certification program; **Personnel Advancement Committee** promoting Water Quality Awareness Week; **Legislative Committee** reviewing changes in State and Federal legislation and updating our constitution and by-laws; **Education Committee** furthering the efforts of the Operator Training Committee of Ohio; **Public Relations Committee** continuing Johnny Clearwater Awards at Science Fairs; **Safety Committee** promoting safety awareness and a design contest for a national danger symbol for confined spaces; **Fund Raising** for the new Federation offices; and program planning and local arrangements for the 1987 meeting in Akron. We are looking for your support, involvement and new ideas.

This is a **strong association**.... one that has refused to accept a "got it made" attitude. Let's go into this new year with not just a "keep alive" attitude but a **"make it better"** attitude toward membership growth and association participation. Don't allow yourself to just be along for the ride but **actively support** the association by recruiting new members, working on committees, writing articles for the Buckeye Bulletin, and attending section meetings.

As always, please contact me or any of the executive committee members if you have questions or comments.

Stuart Bruny

Chairman's Message

Welcome new members and hello to those of you who have supported our organization in the past. As we continue our efforts to attract new members we must not forget about our long standing members as well as those of you reading the **Buckeye Bulletin** for the first time. The **Ohio Water Pollution Control Conference** has served our profession for over **60 years** and our present leaders are committed to improving the association for all members.



The climate has never been more receptive to speaking out for environmental improvements. The public's interest in, and awareness of, **environmental water quality issues** has never been greater. These issues dominate much of the legislative process and produce headline stories by all news media. Our association must capitalize on this **"visible moment"** and seize every opportunity to influence decision makers on the issues that face all of us today. One way of doing this, as well as making our association stronger, is to have more involvement by each of you. New members are entering the association at a time when there is more opportunity to become involved than ever before. This same opportunity is available to all members. I feel strongly that we have a vast untapped resource within our own organization. I have taken the liberty of borrowing an excerpt from another publication that gets this point across better than I can.

DO YOU 'JUST BELONG'?

Are you an active member,
The kind who would assist,
Or are you just contented
That your name is on the list?
Do you attend the meetings
And mingle with the crowd?
Or do you stay at home and
Oxy both long and loud?
Do you take an active part
To help the cause along?
Or are you satisfied to be
The kind to "just belong"?
Do you try to be among those
Who help the local group....

Or leave the job for others
And just not give a hoot?
There's quite a program scheduled
That means success, if done...
And it can be accomplished
With the help of everyone.
So attend each business meeting
And help with hand and heart.
Don't be just a member—
But take an active part.
Think this over, member...
Is this right or wrong?
Are you an active member,
Or do you "just belong"?

Take a few minutes to read the remainder of this issue and learn about some of the areas in which you can become active. We need your new thoughts and ideas. You can make a difference and influence the direction of our organization and its various committees. As spring approaches, your section will be seeking out nominations for officers and appointments to various committees. Let them know you are interested at your next section meeting and while you are there, introduce yourself to a new member and make him/her welcome.

Recent executive committee meeting highlights include:

- **Building Fund Campaign**, \$40,000 of our \$75,000 goal has been pledged. Order your Stodolaster Tee-Shirt now!
- **Voluntary Lab Certification** — First exam scheduled for April 24, 1987
- **OESANCO** to initiate a "Registry of Distinguished Water & Wastewater Operators"
- **Conference Constitution & Bylaws** being reviewed and updated
- **Buckeye Bulletin Editorial Guidelines** being finalized
- **Local Arrangements Chairman Gary Johnson** promises a great annual conference June 17-19, 1987 in Akron. Plan to be there.

More next time...

Stuart Bruny

Chairman's Message

By the time you receive this message we should be nearly half way through the 1986-87 conference year. Many things are happening within the **Water Pollution Control Federation** and the **Ohio Water Pollution Control Conference**. Recent reports indicate that all sections hosted excellent meetings around the state this fall. While my success to date has been less than desirable, I remain with good intentions to attend at least one meeting in each section this conference year.



I would like to devote this message to reviewing some highlights of our first **Executive Committee Meeting** (September 24, 1986), as well as some happenings at the recent annual Federation Meeting in Los Angeles.

The Ohio Conference continues its strong commitment to the **National Building Fund Campaign**. The Executive Committee voted in favor of pledging \$15,000 from our Treasury to the National Fund Raising Drive. This pledge, over a five year period at \$3,000 per year, was made based on successful conferences over the next five years. The first installment of \$3,000 was presented to **Charles Jones, National Fund Raising Campaign Chairman**, at a fund raising luncheon in Los Angeles. The Ohio Conference goal of \$75,000 is among the most ambitious of all member associations. At last count our pledges totaled approximately \$32,000, so you can see we have quite a way to go. **Jon Keel, our Fund Raising Chairman**, needs your support, assistance, and tax deductible donation to help Ohio achieve its goal.

The Ohio Conference has been active in their support of **Clean Water Act** reauthorization. Correspondence was sent to congressional conferees urging them to pass this most important legislation prior to recess. Our efforts proved worthwhile, as the Act was reauthorized during mid October. However, President Reagan has vetoed the bill.

The Ohio Conference was well represented at the Federation's Annual Meeting in Los Angeles. Some highlights include:

- **Board of Control** passed \$5.00 (active) \$2.50 (PWOD) dues increase. Ohio Directors and our PWOD Zone Director voted **no** on this proposal.
- Despite our strong efforts to locate the 1984 meeting in Cleveland, Ohio, Chicago was the selected site. Will try again for 1988!
- **Dr. Quincelee Brown** was selected to replace the retiring **Robert Canhan** as Executive Director of the Federation.
- Ohio received an award at the Federation luncheon in the name of **Dave Van Fleet** (membership chairman) for the most new members of any association. Congratulations Dave, keep up the good work!
- Other Ohio award winners include:
Bedell — **Kathy Cook**, Fairborn
Hatfield — **John Hornbrook**, Eaton
George W. Burke Facility Safety Award — **City of Dover**
George Bradley Gascoigne Medal — **Mike Mulbarger**, Ken Zacharias, Farooq Nazz (Havens & Emerson) and **Dale Patrick** (NEORS) for their paper on Activated Sludge Reactor/Final Clarifier Linkages
- **Los Rioser** replaced **Ed Mohler** as a Director on the Board of Control. Thanks to Ed for his hard work during his three year term.

The Executive Committee, Committee Chairpersons, and active participants on the various committees continue their strong commitment to improve our member association. We must also continue to improve our programs to better serve the needs of our membership. Each of you can play an important role in these endeavors by getting involved and supporting our activities. My guess is that if you do, you will find it enjoyable, educational, and rewarding. More next time...

Stuart Bruny

Chairman's Message

The end of another Chairman's term is fast approaching as we draw near to our **ANNUAL MEETING** in June. The months seem to pass like weeks during the term as chairman, as those who have served in this office before me can attest. The many evening and weekend hours spent on association business has been most rewarding and enjoyable.



As I prepare my final message for the **Buckeye Bulletin** I am experiencing feelings mixed with **humility, emotion and satisfaction**. **Humility**, because the activities of the past year make me realize how much we must depend upon each other to achieve success for the association. Remember that an association exists because members choose to band together for a common cause. **Emotion**, because of your encouraging, cheerful and willing responses when I asked any of you for help or advice. One just does not forget the efforts and dedication of so many concerned friends. **Satisfaction**, because of seeing some of our objectives accomplished and observing our association grow in strength and professional recognition.

I'd like to take a moment and reflect on some of the major accomplishments during the past year.

- Under the leadership of new editor **Ted Burcek** we have expanded the **Buckeye Bulletin** using a new format. An editorial committee and guidelines have been established under the direction of **Tom Cardarelli** and **Keith Radick**.
- Thanks to **Dan Bryan** and the **Personal Advancement Committee**, Ohio held its **First Annual Water Quality Awareness Week**. Over 95 treatment facilities participated.
- Because of the hard work and dedication of **Kathy Cook** and the **Laboratory Analysis Committee**, our first **Voluntary Lab Certification Exam** was held on April 24, 1987. Approximately 170 took the exam.
- With the help of **Jon Keel** our **WPCF Building Fund Campaign** got into full swing. At the time of this writing we stand at over \$50,000 in pledges, well on our way to our goal of \$75,000. We hope to wrap this up at the June conference. **ORDER YOUR SLUDGE BUSTER TEE-SHIRT NOW!**
- Under the leadership of **Dave Van Fleet** our growth in membership has flourished. Ohio received awards for the largest increase in membership (total numbers) at the Federation's October meeting.
- Two other things unique to this conference year are yet to come. One is the location of our June conference. It will be held in **Akron, Ohio** for the first time in over 20 years. The other is our name change. After our annual business meeting on June 18, 1987 we will be known as the **Ohio Water Pollution Control Association**.

One might think I had a lot to do with these and many of the other unmentioned accomplishments over the past year. I wish I did, but that's not the case. I've been blessed with a hard working and dedicated executive committee, committee chairpersons as well as the members of each committee. The involved members of our association and these key individuals are the ones that get things done.

Everything is set for the annual June Meeting to be held in Akron, June 17-19, 1987. You are strongly encouraged to attend as **Gary Johnson** (Local Arrangements) and **Keith Radick** (Program) have promised the best conference ever. Opening day will include remarks by the OEPA Director and sessions on plant operations and laboratory analysis. An exam preparation and review session for those taking the Class I exam in June is scheduled. The table top exhibits and other technical sessions also deserve your consideration and attention. The Thursday evening entertainment and Spouses program promise to be great. Please refer to the program and other details in this Bulletin.

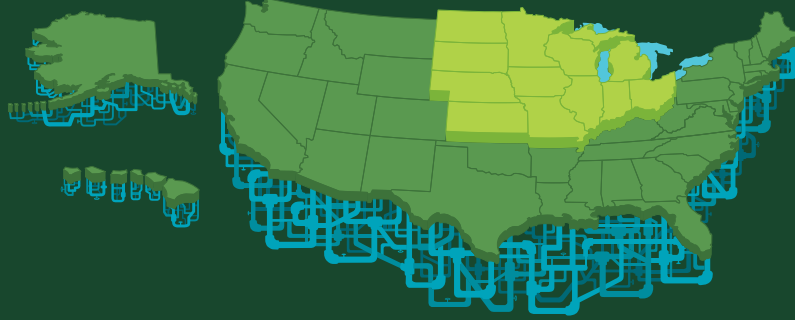
As the sun goes down on my term as Chairman, I feel even more strongly about the fine organization we have. I have enjoyed working with and serving the association this past year. Despite our achievements and accomplishments, there's much more to be done. I ask that all of you give my successor the same support, dedication and cooperation that you have given me. Thanks. See you in June!

Stuart Bruny

THE UNITED STATE(S) OF WATER

THE MIDWEST*

Ongoing access to clean, safe water is critical to our economy, health, and way of life. Although we live in different parts of the country, Americans are united in our dependence on water and the infrastructure that connects, protects, and supports it.



WE NEED WATER

The average person living in the Midwest uses **116 gallons** of water per day.



LOTS OF NEW TECHNOLOGY EXISTS

Cincinnati is using green infrastructure and sewer separation to prevent more than **1.5 billion gallons** of stormwater and sewer overflows from reaching local waterbodies.



WE RELY ON REGULAR SERVICE



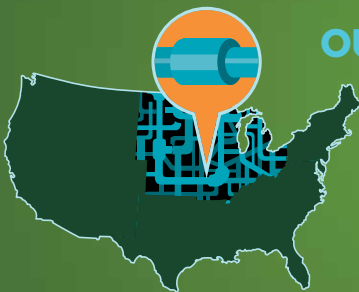
Chicago provides **just under one billion gallons** of water and cleans **1.4 billion gallons** of wastewater from the city and surrounding suburbs each day.

PROVIDING WATER ISN'T FREE



People who live in the Midwest pay an average of **\$4.45 per 1000 gallons** of drinking water, and **\$5.48 per 1000 gallons** of wastewater they use. In some cases, the true value of water can be as high as **\$30 per 1000 gallons!****

OUR SYSTEMS ARE AGING



Most major Midwestern cities installed their first drinking water pipes in the **late 1800s** and their wastewater systems date back to the **Civil War**. Most of their current systems date to the **post-WWII era**.

WHAT WE CAN SAVE



6 trillion gallons of water, wastewater and stormwater is lost each year in the U.S. to faulty, aging or leaky pipes.

WHAT WE MUST DO

Invest in water, wastewater & stormwater!

In the Midwest, they need **\$280 billion** just to modernize their drinking water systems.



WE CAN DO THIS

60% of Americans say they are willing to pay more for water.



American Water Works Association



Water Environment Federation
the water quality people™

SOURCES: <http://bit.ly/2mF7TH>

* Regions based on U.S. Census Bureau Designations. https://www2.census.gov/geographies/basics/states/data/maps/reference/us_regions.pdf

** This is a general statement. The value, price, and cost of clean water services across the country are complex and diverse based on a wide degree of variables and circumstances.



DID YOU KNOW?

Michigan borders 4 of the 5 Great Lakes and its 3,288 miles of coastline is second only to Alaska.

Maumee River Watershed

by Jennifer English, City of Defiance

If you could follow a drop of rain that falls in **Northwest Ohio** you would soon find yourself in the **Maumee River** heading toward **Lake Erie**. From there it flows over **Niagara Falls** into Lake Ontario, finally flowing into the **St. Lawrence River** and ultimately into the **Atlantic Ocean**.

The Great Lakes are one of the few recognizable geographic features than can be seen from outer space, and collectively they hold approximately 20% of the world's

fresh water – this may not be a surprise to any of us. But did you know that almost 4,000 miles of streams, creeks, & rivers empty into the Scenic Maumee River, which has the largest watershed of any river flowing into any Great

Lake? The St. Marys River and the St. Joseph River come together in Ft. Wayne, IN to form the Maumee River. From there it flows 150 river miles through Defiance, OH where the Tiffin and Auglaize Rivers join and continue on to Toledo in a northeasterly direction to its mouth in Maumee Bay, entering the Western Lake Erie Basin.

The Maumee River was also the main channel of the Great Black Swamp, which has gone through a dramatic transformation – having once been a dense forested

wetland; it is now the least forested and most highly concentrated area of subsurface tile drainage in the Great Lakes Region. Historically the Great Black Swamp was an area the size of Connecticut, some 2,000 square miles; in order to create a habitable environment there have been unintended environmental consequences. The filtering capacity of a wetland can be compared to the role of the kidneys for a human body. According to the USDA, Ohio ranks second in the amount

of wetland losses in the US, with about 90% of original wetlands lost to other uses. In order to create conditions that were tolerable for daily life and fit for transportation, the drained and deforested Great Black Swamp remains only in small fragments; as a consequence, we have lost the filtering capacity and ecosystem services that wetlands provide. The draining of the swamp left behind very fertile soil and our watershed now has approximately 75% of land in agricultural production.

The significance of the Maumee River Basin and the importance of our most vital natural resource can no longer be overlooked. With a drinking water crisis in Toledo, OH in August of 2014, our region made the national news – not because Lake Erie provides drinking water for millions every day, but because we have been taking our most precious resource for granted. There are regions of the country with scarcely enough water to drink while we have the most abundant water resources in the world “at our disposal”. How ironic, that we have used creeks, ditches, ravines and rivers to dispose of pollutants – from household sewage to agricultural and urban stormwater runoff to industrial waste – all of which inevitably ends up in Lake Erie. This is changing, but unfortunately, very slowly.

During the 1970's we watched the Cuyahoga River catch fire – and although this resulted in a numerous changes – namely the implementation of the Clean Water Act, there are many challenges that remain. After 40 years, it has become clear that regulatory mandates are not the sole answer. Voluntary incentive programs that offer payment for conservation practices are helpful, but these programs cannot be implemented fast enough to reverse the dramatic changes in land use that have happened over the last 150 years. We must do more as individuals to care for and steward our water resources.

According to the USEPA State of the Great Lakes 2017 Highlights Report, “**Lake Erie's ecosystem is in poor condition and the trend is deteriorating.**” The primary concern is the harmful algal blooms (HAB) resulting from excessive





called for the silver buckshot approach instead! It is widely understood that conservation is not free – but it is the only way to move forward; in the Maumee River Basin we must act to protect Lake Erie. We all live in a watershed and water is our most valuable resource on earth. We need to continue to shift mainstream thinking – from many years of treating stormwater runoff as a waste product to be removed, towards a new watershed mentality; treating **rainwater as a resource**. Let's treat our rivers as the asset that they are, take ownership of our actions on the land, and cultivate a new attitude of shared responsibility and community pride in order to benefit future generations.



nutrient inputs that occur regularly in the western basin during summer impacting drinking water systems. In addition to the HAB's, invasive species, eutrophication, overfishing, habitat loss, and degradation are also major concerns. As experts develop a greater understanding about the current water quality problems, the region is responding in various ways. The academic community and government agencies are responding with tremendous amounts of funding for research, local municipalities are working to develop source water protection plans and integrated planning strategies, non-profit agencies are finding synergies with riverfront development and recreational opportunities, conservation districts are working with farmers to provide funding and implement best management practices, local food hubs are scaling up to invest in small-scale and sustainable agriculture, volunteers and scientists are teaming up to do stream monitoring.

Water has no regard for political boundaries, which requires unprecedented cooperation between federal, international, interstate, and regional agencies that are creating task forces and committees to bring together decision makers to develop and implement solutions. There is no silver bullet for these problems; leaders have



Jennifer English is the Urban Stormwater/MS4 Coordinator for the City of Defiance. Visit landtolake.com to learn more about local projects that work to promote water quality in the Maumee River Watershed.

Path Forward for TMDL Projects in Ohio

by Elizabeth Wick, Ohio EPA, DSW, NWDO

The Total Maximum Daily Load (TMDL) program, established under Section 303(d) of the Clean Water Act, focuses on identifying and restoring polluted rivers, streams, lakes and other surface waterbodies. TMDLs are prepared for waters identified as impaired on the 303(d) list in the Integrated Report.

A TMDL is a written, quantitative assessment of water quality problems in a waterbody and contributing sources of pollution. It specifies the amount a pollutant needs to be reduced to meet water quality standards (WQS), allocates pollutant load reductions, and provides the basis for taking actions needed to restore a waterbody.

Ohio TMDL Process Overview

1. Design survey
 2. Collect data
 3. Assess data
 4. Define goal
 5. Develop targets
 6. Select scenario
 7. Prepare plan
 8. Submit report
 9. Implement internally
 10. Implement externally
 11. Annual validation
 12. Check status
- Assess
Develop
Implement
Validate

In 2015, in response to *Fairfield County Board of Commissioners v. Nally*, (143 Ohio St.3d 93, 2015-Ohio-991) the Ohio Supreme Court determined that TMDLs established by Ohio EPA were rules, and therefore subject to the requirements of Ohio Revised Code (ORC) Chapter 119. They determined that Ohio EPA must follow the rulemaking procedures in the ORC before submitting a TMDL to U.S. EPA for approval and before implementation in a National Pollutant Discharge Elimination System (NPDES) permit.

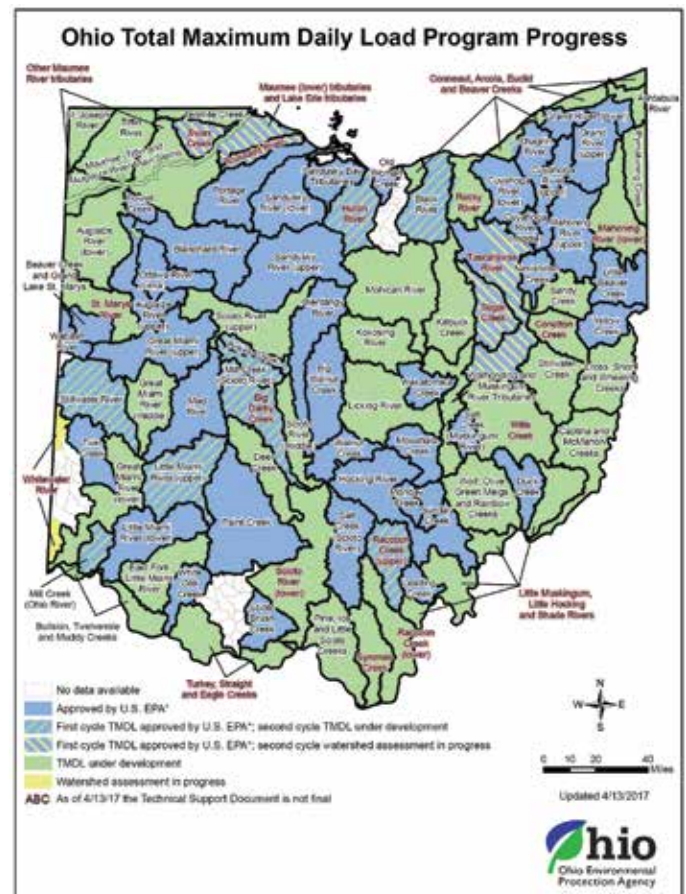
Statutory revisions to the TMDL process were authorized with the recent signing of the Budget Bill (HB 49). The ORC now exempts TMDLs from rulemaking procedures and clarifies that TMDLs may be challenged as part of an appeal of TMDL based discharge permit limits. The revisions also reinstate U.S. EPA approved TMDLs, formalize stakeholder involvement opportunities, and include additional items for consideration during TMDL development. Ohio EPA must establish rules for stakeholder notification and determining significant public interest by the end of next year.

U.S. EPA approved 56 TMDL projects from 2000-2014. The majority identified bacteria, total phosphorus and sediment as pollutants of concern. With the signing of

HB 49, all existing TMDLs approved by U.S. EPA before March 24, 2015 are valid and remain in full force and effect as approved. The bill established a process to modify these TMDLs to include formal public notification and comment periods.

Any TMDLs approved by U.S. EPA after March 24, 2015 must provide for stakeholder involvement opportunities throughout the process. Opportunities for input from potentially affected dischargers, county soil and water conservation districts and other stakeholders are required at each of the following stages of TMDL development.

- ◆ The project assessment study plan, including portions of the plan that seek to determine causes and sources of impairments or threats.
- ◆ The biological and water quality study report or its equivalent.
- ◆ The loading analysis plan, including, but not limited to, the proposed modeling approach and the water quality restoration targets, goals or criteria.
- ◆ The preliminary modeling results including any management choices, load allocations, wasteload allocations, allowances for margin of safety and future growth, and permit limits necessary to achieve a water quality target, goal or criterion and the preliminary TMDL implementation plan establishing specific actions,



schedules and monitoring proposed to fulfill a TMDL.

Ohio EPA must prepare a draft TMDL and make the report available for review and public comments a minimum of 60 days before finalizing plans and actions necessary for TMDL implementation. The public notice for the draft permit and comment period must be sent to all individual NPDES permit holders that discharge into the water of the state to which the draft TMDL applies, all significant industrial users listed in the permit holder's annual report, and any other stakeholder that has provided input. There will be opportunity for a public hearing if there is significant public interest. A written responsiveness summary for any significant comments received will be prepared after the comment period and prior to issuance of the final TMDL.

Ohio EPA has more than 40 projects in various stages of the TMDL development process. Ohio EPA must provide at least two opportunities for stakeholder input for any projects that have not been approved by U.S. EPA. The methods of stakeholder input will vary for each project depending on what stage the project is in and the level of stakeholder interest.

Ohio EPA is in the process of updating our webpage to include these process changes. For questions about a specific TMDL, contact Melinda Harris at melinda.harris@epa.ohio.gov or (614) 644-2001.

Consolidation of Ohio EPA's NPDES Permit Fees

Historically, Ohio EPA has required an application fee to be paid at the time of NPDES permit application submission, and a separate issuance fee paid at the time the NPDES permit is issued. Paying both fees has been confusing to some applicants, and has been an extra administrative burden for both the applicant and Ohio EPA. Because this can be confusing and burdensome, Ohio Revised Code 3745.11(L) & (S) has been changed to consolidate the NPDES application fee and NPDES issuance fee into one fee that would be paid at the time of application. Starting this fall all new and renewal NPDES permit applications will be using this simplified fee structure.

The statute change has only consolidated these two fees into one, and there has been no increase in the total fee for NPDES permits.



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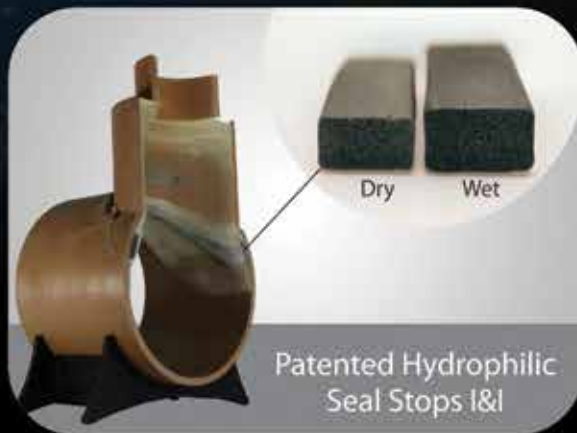
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Did you know?

- The United States has a remarkable infrastructure system that has silently and reliably provided safe drinking water, wastewater collection and treatment, and stormwater and floodwater management for many years.
- Much of the U.S. water infrastructure was built nearly a century ago. It is aging and crumbling at a significant rate but investment is lagging and we are fast approaching a critical point. In some cases, our pipes and plants are literally falling apart.
- The U. S. Government Accountability Office estimates that water and wastewater utilities are not generating enough revenue from user rates to cover the full cost of their service.¹ As a result, we are starting to experience the effects of chronically postponed maintenance from funding shortfalls.
- U.S. cities are spending more dollars on water and wastewater each year, but the investment needs far outweigh local governments' abilities to keep up with aging infrastructure. Americans will likely face increased service disruptions, increased water main breaks, and greater impacts on local economies and threats to public health.²
- In 2006, U.S. infrastructure was number six on the World Economic Forum's ranking of best national infrastructure systems. By 2012, we had fallen to number 16!³

- More than \$180 billion is needed to repair or replace U.S. water, wastewater and stormwater systems. Investing in water infrastructure will produce healthier communities, reduce water pollution, and directly generate nearly 1.9 million jobs. An additional 800,000 jobs will come from increased economic activity in related sectors.⁴

Why should you care about water?

Our communities and our lives are built on water. In addition to protecting our health and the environment, we need clean water for a healthy and growing economy. Clean water and wastewater services support a \$50 billion per year recreation industry, \$300 billion in coastal tourism, \$45 billion in commercial fishing and shell fishing industries and hundreds of billions of dollars a year in basic manufacturing.⁵ Without water, we don't have a future.

Small actions can make a BIG difference.

- Invest in your water infrastructure.
- Don't take water for granted. The water we have now is all that we will ever have. Use it wisely.

- Think before you flush. Everything you send down the pipe ends up at your local wastewater treatment plant. We are all part of the water cycle. We all live downstream.
- Educate yourself. Take a tour of your local water and wastewater treatment plant to learn what happens to the water that you drink and use.
- Read and understand your water and wastewater bill.
- Stay informed about the water quality issues facing your community by contacting your local municipality and attending public meetings.

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AMERICA'S ECONOMIC FUTURE DEPENDS ON SAFE AND CLEAN WATER

America's future economic strength depends on investments made today in water infrastructure. These investments create jobs and support the economy. Consider these facts: Every \$1 invested in water and wastewater infrastructure increases long-term GDP by \$6.35; each job created in water and wastewater leads to 3.68 jobs in the national economy; over \$86 billion annually is spent on water-related sports activities. Studies also show that the US economy would stand to gain over \$200 billion in annual economic activity and 1.3 million jobs over a 10-year period by meeting its water infrastructure needs. But, without this investment, breakdowns in water supply, treatment and wastewater capacity are projected to cost manufacturers and other businesses over \$7.5 trillion in lost sales and \$4.1 trillion in lost GDP from 2011 to 2040.

AMERICA'S QUALITY OF LIFE DEPENDS ON SAFE AND CLEAN WATER

Well-functioning water and wastewater systems, and the research efforts to support them, are critically important to America's quality of life. Past investments in drinking water, wastewater and stormwater infrastructure have left America with some of the best drinking water in the world, while providing our children with safe water for swimming and bathing, and our cities and towns with opportunities to revitalize waterfronts to support new businesses, residences, and recreational activities.

However, investment in water, wastewater and stormwater infrastructure and research has failed to keep pace with maintenance demands and emerging hydrological threats, putting our quality of life gains at risk.

FEDERAL INVESTMENT ENSURES SAFE AND CLEAN WATER

Since enactment of the Clean Water Act in 1972 and the Safe Drinking Water Act in 1974, Congress has supported a strong federal funding partnership with States and local ratepayers to pay for this critical infrastructure through:

- Investments in the Drinking and Clean Water State Revolving Funds, which return over \$.93 to the Federal Treasury for every \$1 invested;
- Tax-exempt municipal bonds, which financed nearly \$38 billion in water and wastewater infrastructure in 2016; and,
- WIFIA, the Water Infrastructure Finance and Innovation Act, which has the potential to leverage over \$60 for every \$1 invested in major water and wastewater projects.

Yet EPA estimates that America's water and wastewater infrastructure requires more than \$650 billion worth of investment over the next 20 years just to maintain current levels of service, and independent estimates place this figure over \$1 trillion. While local ratepayers will shoulder much of this burden, all levels of government must be part of the solution.

IT IS TIME TO RENEW THE LOCAL-STATE-FEDERAL SAFE AND CLEAN WATER FUNDING PARTNERSHIP

WE CALL ON CONGRESS TO ENSURE:

- ◆ **\$2.8 BILLION** for Clean Water State Revolving Fund for FY2018
- ◆ **\$1.8 BILLION** for Drinking Water State Revolving Fund for FY2018
- ◆ **\$45 MILLION** for Water Infrastructure Finance and Innovation Act for FY2018 (WIFIA)
- ◆ **\$50 MILLION** for the Bureau of Reclamation's water reuse and recycling program (Title XVI)

- ◆ **\$5 MILLION** for National Priorities Research Funding
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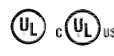
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Building Better Water Quality One Job at a Time

National Green Infrastructure Certification Program Celebrates a First Year of Success

by Pallavi Raviprakash



The National Green Infrastructure Certification Program (NGICP) has two main purposes: to encourage water quality improvements via green infrastructure (GI) projects and to create jobs for those who know how to build them. NGICP took several major steps in the past year toward achieving these goals and has several more in the works.

Initiated under the leadership of DC Water and the Water Environment Federation, NGICP sets certification standards for green infrastructure (GI) construction, inspection, and maintenance workers. The program takes a different tone than most GI and water quality programs. It focuses on the “how” of GI. The program’s certification establishes green workforces to give utilities and private customers confidence in their choice of landscape and construction providers. It also provides a credential to certified workers that meets international best practice standards. And because the program is national in scope the same certification will apply from coast to coast, providing a “portable” credential that will expand beyond the U.S. eventually.

Major development

During the development phase of the program in 2016, NGICP took several major steps to carefully conceive a nationally relevant certification program. WEF convened 14 founding partners (see list on p. 73) to create the necessary governance and foundational materials.

Representatives from the founding partner organizations participated in the Technical Advisory Group (TAG) and the Strategic Advisory Group (SAG). The TAG oversees the development of the program’s technical components, while the SAG develops the vision and the implementation plan for the national rollout of the NGICP. A separate Certification Council oversees the program’s governance elements.

First, these groups conducted a job task analysis survey to determine what components the program needed to cover. They fed these survey results into an exam blueprint, which led to an official curriculum. Training support materials came next as the first exam was developed.

First exam

This progression led to the inaugural NGICP exam on Dec. 13, 2016. Seven locations — corresponding to many of the founding partners — hosted the exam for more

than 90 applicants. Exam locations included:

- ◆ Washington, D.C
- ◆ Baltimore, Md.
- ◆ Rockville, Md.
- ◆ Harrisburg, Pa.
- ◆ Pittsburgh
- ◆ Fairfax County, Va.
- ◆ Milwaukee

The 3-hour exam tested applicants on their knowledge of entry-level green infrastructure fundamentals, construction methods, inspection techniques, and maintenance procedures in accordance with the Exam Blueprint.

First class and continued improvement

On Jan. 26, 2017, NGICP announced its first class of 62 certified individuals who passed the exam.

Now, NGICP will use this year to refine policies and procedures and continue to build the exam database.

For 2017, training and exams will be available only through the NGICP founding partner organizations. Plans are underway to offer additional NGICP training sessions and exams in the spring and fall. The first exam date in 2017 is set for June 6 and the second in November (specific date TBD).

National debut

In 2018, NGICP will celebrate another milestone: the national launch of the program. This expansion will broaden the partnership and enable other utilities and municipalities to join. Affiliate partners could include nongovernmental organizations, workforce centers, government entities, trainers, and training providers who share a common goal of developing a GI workforce.

Through this nationwide program certified individuals can set foot on long-term and sustainable path for living wage jobs — often in dense, urban areas where such opportunities can be scarce. By design, these are the same communities where utilities are investing in GI projects.

NGICP will help to ensure a beneficial cycle of employment, water quality improvement, and community development. The workers benefit from employment. The utilities benefit from low-impact, distributed stormwater management. The community benefits from the ancillary advantages of GI such as more green spaces and neighborhood beautification as well as air quality and habitat improvements.

For more background on NGICP as well as the latest news, visit www.ngicp.org.

National Green Infrastructure Certification Program Founding Partners

- ◆ DC Water, Washington D.C
- ◆ Milwaukee Metropolitan Sewerage District (MMSD), Wisconsin
- ◆ Montgomery County, Maryland
- ◆ Kansas City Water Services Department, Missouri
- ◆ Fairfax County, Virginia
- ◆ City of Baltimore Department of Public Works, Maryland
- ◆ Louisville Metropolitan Sewer District, Kentucky
- ◆ San Francisco Public Utilities Commission, California
- ◆ Capital Region Water, Harrisburg, Pennsylvania
- ◆ Metropolitan Water Reclamation District of Greater Chicago, Illinois
- ◆ New Orleans Delegation, Louisiana
- ◆ Pittsburgh Water and Sewer Authority, Pittsburgh, Pennsylvania
- ◆ Metropolitan Sewer District of Greater Cincinnati, Cincinnati, Ohio
- ◆ Boston Water and Sewer Commission, Massachusetts



Pallavi Raviprakash, Technical Programs Manager at WEF has provided technical support on several stormwater initiatives at WEF. She has been involved with the development and management of the NGICP. She has over ten years of experience working in the water resource field, both in the private consulting and non-profit worlds, and holds a bachelor's and master's degree in Environmental Engineering.

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Accelerating Resource Recovery

Biosolids Can be Used to Create Valuable Products at Water Resource Recovery Facilities

by Patrick Dube, Ph.D.



Biosolids produced during wastewater treatment commonly are land applied. While this method is a great option to provide an excellent fertilizer that helps promote healthy soils, biosolids also hold much potential to help mitigate climate change, foster sustainability, and achieve zero waste. Resource recovery from biosolids represents an exciting opportunity and potentially can provide additional value while promoting meaningful change.

Utilities hoping to recover resources face questions and roadblocks when seeking the best decisions for their communities. Policies and regulations vary among states and the national level and may hinder recovering resources from biosolids. Likewise, many current resource recovery technologies are not yet established and present more risk than utilities are accustomed to. And lastly, communicating the value of a product derived from biosolids to the public can be challenging.

But solutions exist and others have already blazed many of these trails. To help utilities overcome these challenges and to promote recovering resources from biosolids, WEF has updated the 2013 publication, *Enabling the Future: Advancing Resource Recovery from Biosolids*.

The 2017 update, released in April, is titled *Accelerating Resource Recovery: Biosolids Innovations and Opportunities* (<https://www.wef.org/Default.aspx?TabID=251&productId=58093345> or <http://bit.ly/2017-biosolids-rr>). This guide aims to help promote biosolids as a valuable resource to help meet renewable energy needs, promote innovative technologies, and accelerate resource recovery.

Energy recovery

The energy contained in wastewater and biosolids is five times the amount of energy needed to treat it; this means that water resource recovery facilities (WRRFs) are potential energy generators. The latent energy in wastewater solids combined with energy management and conservation in the facility offers an excellent opportunity for WRRFs to save money by producing energy on site to offset facility costs.

Anaerobic digestion is a long-established technology that can turn solids to energy by converting digested sludge to biogas via microorganisms. The process has

many different designs and can be varied by adjusting temperature, implementing a pretreatment step, co-digesting the solids with other wastes and more. The generated biogas has an excellent energy potential and can be burned for electricity or upgraded to other fuels.

On the other hand, thermal conversion is a developing technology that uses heat to generate energy from biosolids. While thermal conversion has a higher energy output potential than anaerobic digestion, it requires more energy to remove the moisture from the solids, resulting in a lower net energy recovery. New technologies in development are looking to incorporate thermal conversion with higher moisture solids. This combination, it is hoped, would reduce energy costs and derive a higher energy potential.

Nutrient recovery

Currently, most agricultural nutrients — specifically, nitrogen (N) and phosphorus (P) — come from non-renewable, energy intensive sources. Yet at WRRFs, utilities remove these nutrients from wastewater to meet discharge limits. The utilities face high resource and energy costs to remove them as well as a waste stream that must be disposed of. Herein lies an opportunity to recover instead of remove these nutrients. The result would be a renewable, valuable product that can help offset costs and generate money for the utility.

To recover nutrients, N and P first must be concentrated either biologically (using microorganisms to accumulate N and P), physically (implementing a process like adsorption or ion exchange), or chemically (using a metal salt addition to precipitate out P). The concentrated nutrients then are released (typically biologically) before being extracted.

One example of a potential recovered product is struvite (magnesium ammonium phosphate). Struvite is generated by controlling pH and then adding a chemical precipitant. The process removes high concentrations of N and P and generates a product that can be sold as a commercial fertilizer.

Each nutrient removal method has positives and negatives. And each utility must determine how economically feasible each technology would be for their utility to adopt these systems.

Potential roadblocks

Though the potential rewards of resource recovery are great, so are the challenges. Regulations and policies have the potential to help or hinder biosolids resource recovery. Some federal regulations, such as the 40

CFR Part 503 biosolids rule, have helped outline the importance of biosolids and set in place incentives for their beneficial use. On the other hand, regulations also can hinder. Examples include limiting where biosolids can potentially be applied (USDA Code 590) or changing the Renewable Fuel Standard (RFS) and lowering the value of renewable identification numbers (RIN) for biogas.

Likewise, state regulations and policies help or hinder. Elements of solids handling such as odors, phosphorus content, and co-digestion all can be specific to states, and, therefore, regulated differently — both positively and negatively.

One of the best ways to ensure that regulations and policies help biosolids usage is to have interagency cooperation to help address issues. This could mean joining voluntary programs to promote biosolids, such as the National Biosolids Partnership (NBP) or pollution prevention programs, and encouraging research into topics that could become issues in the future.

New and innovative technologies are needed to enhance resource recovery from biosolids. There are many promising companies attempting to generate valuable products from biosolids and wastewater. These products include fertilizers, biodegradable plastics, and biofuels; but many are still in their infancy. Not only does the high moisture content make it difficult to develop an economically viable technology, but the variable nature of the solids means a universal technology isn't possible; each utility must find its own solution.

Research into a typical utility's efficiency, cost, energy balance, and recovered product is nonexistent; this means each utility must do this on its own. This increases costs and makes the barrier to entry higher. The Water Environment Federation (Alexandria, Va.) and Water Environment & Research Foundation have developed the Leaders Innovation Forum for Technology (LIFT) program to help fill this gap. LIFT promotes research into resource recovery technologies, creates a clearinghouse of information, and takes some of the risk away. But there are more hurdles to leap to bring these solutions to market.

Looking to the future

Recovering resources from biosolids represents an exciting opportunity for utilities to promote the beneficial use of biosolids while generating valuable consumer products. It begins at utilities, where professional development and skills must be developed and fostered. With this knowledge, biosolids programs can thrive and increase the quality of their products for consumers.

Effective communication with consumers is paramount. When they understand the benefits of biosolids, they will rightfully translate that into a better perception of the products. A commitment to research and development is key to develop technologies that can expand the resource recovery of biosolids.



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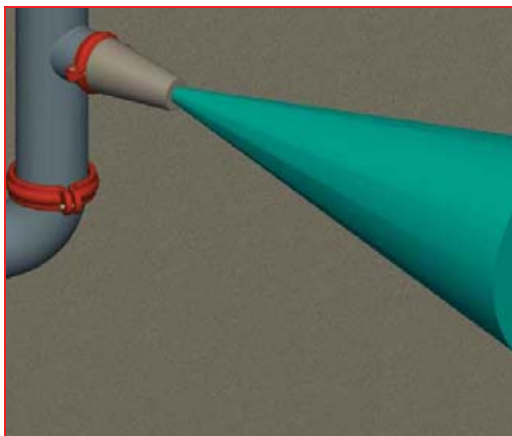
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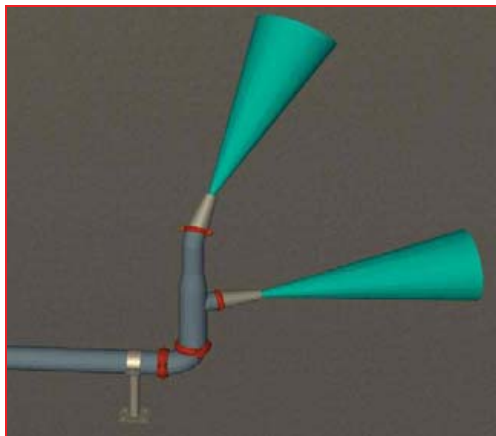
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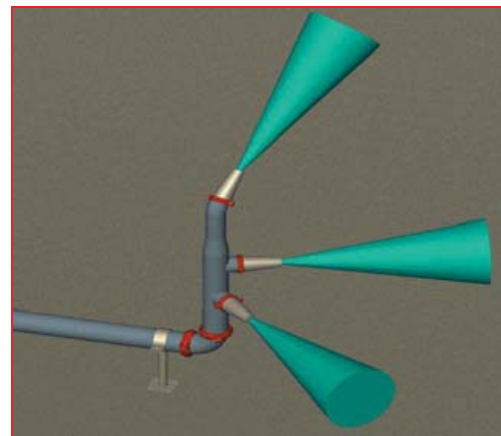
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