



Buckeye Bulletin

Ohio Water Environment Association | Volume 84:1 | Issue 1 2011



2011 Annual Conference
Survival and Sustainability
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City of Findlay WPCC
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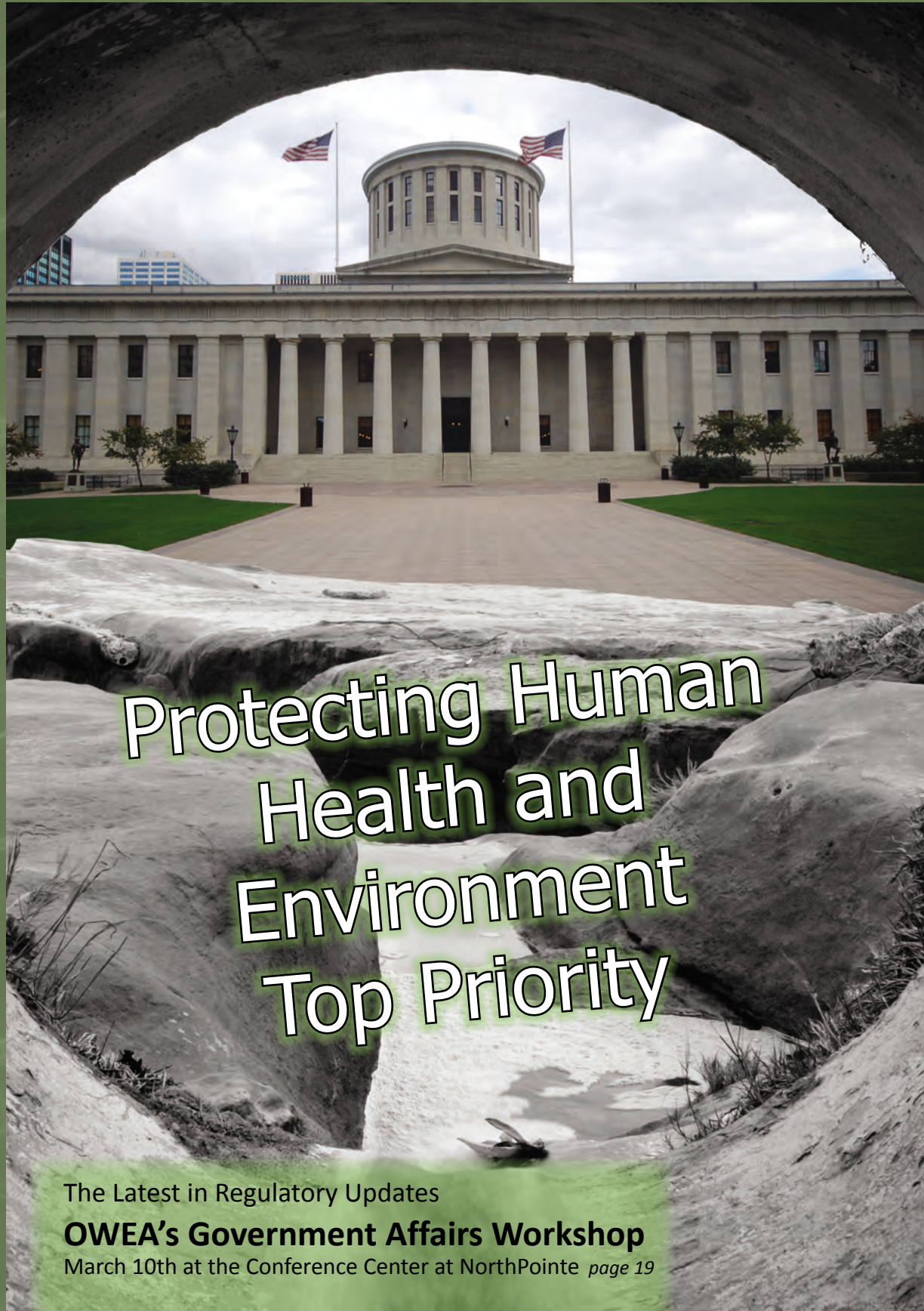
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Association

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The Latest in Regulatory Updates

OWEA's Government Affairs Workshop

March 10th at the Conference Center at NorthPointe page 19



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

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Check out OWEA's website ohiowea.org for a complete listing of OWEA approved training.

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Get Involved

Join a Committee Today

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

OWEA needs your skill, experience, and energy. Contact OWEA at info@ohioweaa.org or the chair of a committee that interests you for more information.

OWEA ASSOCIATION NEWS

OWEA Exhibits at Science Education Council of Ohio 2011 Conference

The Ohio Water Environment Association shared information regarding preserving and enhancing Ohio's water quality environment through education and encouraging students to consider careers in the water quality industry. Volunteers John Rogers, David Stewart, and Nick Bucurel helped OWEA staff a booth February 11-12 at the John S. Knight Center in Akron.



John S. Knight Center - Akron, Ohio

Central Ohio Children's Water Festival

Cindy Jacobsen, OWEA's Publicity Chair, will work with the Columbus Department of Public Utilities and other water related organizations to assist with the 2011 Central Ohio Children's Water Festival, scheduled for May 5th. In 2010, over 400 fifth grade students and teachers were hosted for water related presentations, demonstrations, and hands-on activities. OWEA will provide information on keeping undesirable products and materials out of the wastewater stream. Please contact Cindy at cjacobsen@pirnie.com if you would like to help.

Contact Hour Tracking

President-Elect Doug Clark is spearheading the effort to automate OWEA's contact hour tracking program, which will allow attendees of OWEA training events to track their contact hours via the OWEA website. This system will be phased in during the 2011 year. Watch for the badge scanners at an upcoming workshop this year.

ABC Conference

Certification Chair Kathy Cook and Secretary/Treasurer Jane Winkler attended the Association of Boards of Certification Conference in Phoenix, AZ January 25-28. The ABC Conference focuses on certifiers serving on the front lines of protecting public health and the environment.

OWEA Intern

Keith Justice, a senior Ohio State University student, is serving an internship at OWEA during winter quarter and earning class credit for his efforts. Keith will graduate this spring with a B.A. in Information and Communication Technologies and hopes to continue on in a career of web programming.



2011 Calendar of Events

February 2011

- 24 NESOWEA Industrial Wastes Meeting
- 24 OWEA Webinar

March 2011

- 10 Government Affairs Workshop
- 16 NWOWEA Section Meeting
- 23 Executive Committee Meeting
- 31 OWEA Webinar
- 31 NESOWEA Section Meeting

April 2011

- 8 NWOWEA Executive Committee Meeting
- 28 NESOWEA Watershed Seminar
- 28 OWEA Webinar

May 2011

- 5 Collection Systems Workshop
- 11 Executive Committee Meeting
- 24 2011 Ohio Operations Challenge and Hands-On Operator Training Day

June 2011

- 20 OWEA Annual Golf Event
- 20 Executive Committee Meeting
- 21-23 Annual Conference and Exhibit Expo

July 2011

- 28 OWEA Webinar

August 2011

- 5 NWOWEA Section Meeting
- 25 OWEA Webinar

September 2011

- 21-22 Plant Ops/Lab Analysts Workshop
- 29 OWEA Webinar

Please send all calendar updates to info@ohioweat.org. Your event will be noted in the Buckeye Bulletin and on OWEA's online calendar at www.ohioweat.org.



Dale Kocarek
OWEA President

As we begin a new year, I wanted to take a moment and extend my best wishes to you – our valued WEF/OWEA members. I wish for you good health, happiness, and prosperity in the upcoming year. I pray that the fragile recovery of the U.S. economy, which appears to have begun its recovery in earnest last year, continues a positive trajectory for the future. One economic “expert” is predicting that in all probability the Dow Jones Industrial Average

could surpass its all time high of 14,500 in 2011 if things continue on a good path. Of course, this is speculative, and things will remain uncertain for awhile as people try to figure out if the recovery is for real. One potential problem on the horizon is the pending crisis in the European Common Market and deflation of the U.S. dollar.

The Great Recession has taught me several important lessons. The first is the importance that the home building industry plays in the health of the US Economy. Until the Great Recession, I had erroneously believed that our principal work – the stewardship of our water resources through wastewater collection, treatment, and management - was largely unrelated to the homebuilding industry except that with more homes, comes more people and hence, more sewage flow to be collected and treated. How wrong I was! I have learned that much of what we do to rebuild and improve our infrastructure depends in large part on the vitality of homebuilding in our communities. Tap fees, permit fees, and general user fees are used to leverage important improvements that spark the drive to revitalize our infrastructure. Even if “enterprise funds” for water and sewer are solvent, we are seeing many public sector employees in our utilities furloughed as a result of calls for “everyone to share in the pain.”

My second lesson of the Great Recession is the renewed importance of personal resiliency, focus, and adaptability - all lessons that I was taught many years ago, but now they take on new meaning. To survive in today’s marketplace one must be willing to aggressively learn new things and take on new challenges. Those that recognize opportunity and seize it will adapt and thrive in the long run, while those that adhere to old patterns of behavior will be left behind. If there is a lesson that I would like our Young Professionals to learn (the easy way of course) it is this one.

My third lesson from the Great Recession is frugality. While I was not alive in the Great Depression, I saw the lives of my relatives that became adults in the late 1930s and early 1940s shaped by the Great Depression and the Second World War. Prosperity to America as we know it today came in the mid 1950s, so throughout the 1930s and 1940s, goods, or the means to purchase them, were lacking. This shortage caused wisdom and discipline in spending habits, which lasted a lifetime. Prior to this current period of time, the only economic recession that I experienced in earnest was during the

early 1980s when I joined the workforce. The scarcity of jobs led me to join the Ohio EPA in 1982. My starting salary as a “District Engineer” for OEPA-Central District Office was a whopping \$7.96/hour. Having now experienced the recent downturn has made me more appreciative of what I have and has renewed my empathy for others less fortunate.

I have carried the same thought through processes into my work as the President of the Ohio Water Environment Association (OWEA) this year. As President, I am compelled to ask myself the following questions:

1. What lasting impact will the Great Recession have on OWEA, and what must our organization do to meet the needs of our current and future members? I have heard many stories that “bare bone” budgets will make travel to attend traditional “classroom style meetings” more difficult in the future. Is this a problem or an opportunity - or both?
2. Are we reaching our entire base of potential members as well as we could or should through effective outreach and publicity?
3. For “front line” operators who may never wish to become WEF members, but are part of our extended community, what can OWEA do to help train a new generation of operators? Can OWEA provide training and instruction that is motivating, effective, and sufficiently “skills based” to allow them to “pass the test”?

Ultimately, I concluded that what is most important for OWEA is to maintain focus on the type and quality of our educational programs, regardless of the size of our membership base. Overall, I would grade OWEA with an “A” or “A-” for program quality, but I would give us only a “C+” for publicity and outreach to our community of professionals. I think that we need to do better, and learn from others - including our sections - who appear to do this well. During the past four months of my presidency, I have sought to improve the function and structure of our internal organization through studies and evaluations of business case analysis modified to the nonprofit sector. I hope in 2011 OWEA can hire a part-time staff person to assist in the office to allow us to focus more on publicity and member outreach. During the next few months, I will work with Chairs of my Ad Hoc Training/Development and Publicity Committees to take initial steps to improve member outreach as we seek to find our place in our new world.

Recently, I have established two initiatives through one new policy and procedure to better ensure that we can maintain quality educational programs:

1. Starting in January 2011, WEF/OWEA speakers can attend workshops at reduced cost as a gesture of appreciation.
2. In special instances, OWEA may help pay travel costs for speakers of renowned reputation. This was done recently for the Biosolids Workshop, and turned out to be a good move as the speaker was excellent.

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THANKS TO THE BIOSOLIDS COMMITTEE

I wish to thank Jamie Gellner, Steven Reese, and the Biosolids Committee for their hard work in putting together an outstanding workshop on December 9, 2010 at the University Plaza. The Biosolids Workshop presented a variety of topics on all aspects of biosolids and featured a speaker, Dr. Hundal, of national reputation as an added bonus. For those who may think that this workshop is highly specialized leaning towards esoteric, I can assure you our workshop covers a wide array of issues and topics that include calculation of a carbon footprint, effectiveness of grit systems, regulations, and practical solutions that involve mixing, aeration, and energy recovery. The Biosolids Committee is also one in the process of enacting a change in leadership. Dave Brewer is stepping down as a Chair, and Jamie Gellner of Hazen and Sawyer will be taking over as the new Chair. Biosolids is a dynamic and highly active committee. If you are looking for an opportunity to volunteer with OWEA, this committee is worth exploring.

GOVERNMENT AFFAIRS WORKSHOP

Looking ahead, the next workshop will be Government Affairs on March 10, 2011 at the NorthPointe Training Center in Lewis Center. OWEA is conducting an experiment this year to try a new location which will accommodate larger seating, better lunchtime and break accommodations, but yet is conveniently located just minutes from the Columbus outer belt on US Route 23 at the corner of Powell Road/OH-750 (from I-71 the same exit as the Polaris Fashion Mall.) As we move into and through 2011, we would like your opinion on this new facility.

Recently I have joined the WEF Government Affairs Committee. I hope that this step will take me on a path that further forges strong bonds between OWEA and WEF. WEF is important to OWEA in that they are a guiding light and a reservoir of institutional knowledge on many fronts. By being part of a national standing committee of WEF, I will be better equipped to transmit this knowledge of key issues on government affairs to Ohio. I feel that this will impart value to OWEA and may help improve our relevance and profile without our community. In the end, I hope that these steps will build excitement and pride of our members in OWEA, which may change the way people view us - not only as an organization that provides training, but as one who participates on the stage of world affairs, not forgetting those in our own back yard!

Industrial Waste and Pretreatment

I have named a Chair for Industrial Waste and Pretreatment, Sharon Vaughn, of the City of Dayton. I had the opportunity to meet Sharon in December, and I believe that she will provide leadership, energy, and special insight to this important area of our organization.

Dale Kocarek

OWEA President

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Stantec Consulting Services

WEF DELEGATE CANDIDATE APPLICATIONS

Due May 10, 2011

The OWEA Executive Committee will appoint a new WEF Delegate in June 2011 to represent OWEA in the WEF House of Delegates. This appointment is open to any current WEF/OWEA member in good standing. The successful candidate will have shown past interest in positively supporting OWEA and WEF by serving on committees, on an Ohio Section Executive Committee, on OWEA's Executive Committee, or other relevant service.

The position would require a 3-year commitment to serve in the WEF House of Delegates. The delegate position starts in October 2011 and runs through WEFTEC in 2014. The successful candidate will replace Phil Anderson, who is completing his 3-year HOD position. Kim Riddell is OWEA's second WEF Delegate and is completing her first year of service.

If interested, please send an email with appropriate supportive information by May 10, 2011 to Dale Kocarek, OWEA President, dale.kocarek@stantec.com

WEF is also accepting applications for HOD At-Large Delegates and WEF Vice President. Visit www.wef.org or contact either of OWEA's WEF Delegates for more information.





JUNE 12-15, 2011







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WEF DELEGATE REPORT



Phil Anderson, Sr. WEF Delegate



Kim Riddell, Jr. WEF Delegate

The holiday season takes up a significant amount of the calendar from the end of WEFTEC and into the New Year; however, for WEF Staff, the Board of Trustees, and the House of Delegates this period has been very busy and productive. Below are some of the highlights of the last quarter of 2010.

WEF Announces New Executive Director

The Board of Trustees announced the first week of December that Jeff Eger has been named the new Executive Director of the Water Environment Federation (WEF).

Eger comes to WEF from Sanitation District 1 (SD1) in Fort Wright, Kentucky where he has been serving as Executive Director since 1994. SD1 is the second largest public sewer utility in Kentucky, maintaining \$1 billion in physical assets. SD1 is recognized as a national leader in terms of embracing and implementing green infrastructure in wet weather control strategies, advocating for legislation and policy change on the state and national levels, and using adaptive watershed management in controlling and managing storm water.

During his tenure, Eger developed and implemented a regional stormwater management program to comply with U.S. EPA's regulations, and began taking responsibility of public stormwater collection systems in 2009. He also supervised the regionalization of 30 municipal sanitary sewer systems in response to pending federal environmental regulations and legislative changes.



Eger has vast experience in working with organizations active on the regional and national levels. He is a member and past chairman of The Ohio River Valley Water Sanitation Commission, the water pollution control agency for the Ohio River and its tributaries. He also chairs the Wet Weather Partnership, a national organization dedicated to seeking environmentally responsible solutions to urban wet weather issues.

Jeff Eger, WEF Executive Director Eger will assume his new role on January 24, 2011, a position that was held by William (Bill) Bertera since 2001. Bertera leaves a legacy at WEF by increasing membership and financial stability, and growing WEF's annual

conference, WEFTEC, to the largest annual water quality conference and exhibition in the world.

WEF Nominating Committee Seeks Vice President and Delegate-at-Large Nominations

The WEF Nominating Committee invites you to submit nominations for WEF Vice President and House of Delegates - Delegate-at-Large.

The WEF vision of preserving and enhancing the global water environment is achieved through the dedication and active involvement of water environment professionals around the world. WEF will continue to advance its vision through accomplished leadership by dedicated WEF members who have distinguished themselves as leaders in the water environment profession.

Help shape the future of WEF leadership by nominating WEF's experienced and accomplished members! Log into the Members Section at www.wef.org and follow the links for the position descriptions and nomination forms for WEF Vice President or Delegate-at-Large nomination forms.

House Operator Outreach Recommendations

As reported to you in the previous Buckeye Bulletin, the House of Delegates made seven formal recommendations to the Board of Trustees regarding Operator Outreach. The Board voted, as requested, to consider the recommendations presented by the Operator Outreach work group. These recommendations will be considered in the larger context of the WEF Operator Initiative to address training and certification needs of operations personnel. The House Operator Outreach work group, the Board of Trustees Operator Initiative task force, relevant WEF committees, and WEF staff will collaborate on the desired path forward for the WEF Operator Initiative. This is an important topic for WEF and its MAs, and especially for the operations members of our profession, and the Board and the staff look forward to defining and implementing sustainable programs that add value. The staff is working closely with the House work group and will be distributing an overall communication to MA leaders, the House and others in the next few weeks, which defines the work and the immediate path forward.

WEF and MA Standing Committee Alignment

The WEF Committee Leadership Council (committee chairs & vice chairs) wants to learn more about our Member Association's (MA) committees. In other words, the Standing Committees of

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WHEN YOU EDUCATE, YOU ELIMINATE

by David Markley, Superintendent Zanesville WWTP and MCRST Member

Most people are unaware that ordinary household chemicals are actually hazardous chemicals full of toxins that are bad for the environment. They simply don't realize that something seemingly harmless could be detrimental to a wastewater treatment facility.

The Muskingum County Responsible Solution Team (MCRST) is a tax exempt organization dedicated to increasing public awareness and offering solutions to important environmental issues. The MCRST team is a nonprofit organization made up of volunteers from businesses, educators, service clubs, private industries, and local governments. Each year, the MCRST conducts an annual Household Hazardous Waste Collection Event. This is an annual community event for residents of Muskingum County, which is held at the OUZ-Zane State Campus in Zanesville, Ohio.

The MCRST initiated the first event in 1995 in conjunction with Earth Day events. It gave the residents the opportunity to dispose of and recycle their hazardous wastes at no cost to them. It is also a great opportunity to educate the public about what they are using and how to properly dispose of it, as well as offering less toxic alternatives to common cleaning solutions and household products. The event has had great success and every year there has been increased participation from a wider area across the county. By teaching people about the issue and bringing it into the spotlight, thousands of pounds of hazardous waste has been kept out of the sewer system.

Environmental Enterprises Incorporated of Dayton was contracted by MCRST in a partnership with SouthEastern Ohio Joint Solid Waste Management District to handle the proper packaging and disposal of the waste that is collected. Genesis Health Care system had representatives on hand to collect medications for disposal and the Zanesville Fire Department was there to collect old ammunition

and fireworks. Participants can rest assured that the items they brought were either recycled or incinerated in accordance with the laws.

In the past, this event has been funded with financing from the City of Zanesville, SouthEastern Ohio Joint Solid Waste Management District and Muskingum County.

The MCRST team has worked hard to obtain the \$30,000 necessary to keep this event cost free for citizens.

This year, 514 cars passed through the entrance. Each driver was asked to answer a brief survey about where they are from and the types of materials they brought in. The most common item brought in has been paint, although volunteers have seen containers of DDT, gunpowder, and jars of mercury. Residents are now used to the idea of holding on to chemicals for disposal instead of just pitching them out. Many participants indicated on their survey that they look forward to it every year.

The most important thing about this event is preventing hazardous wastes from entering the collection system and ending up at the wastewater plant, or down a storm drain and in the surface water system.

David Markley
Superintendent
Zanesville WWTP
wwsupt@coz.org



The **Water Environment Federation's new data management system** was put into place in November and Member Associations received access to the new data in December. Please check your member profile at www.wef.org to verify its accuracy. OWEA uses your WEF data contact information to mail the Buckeye Bulletin and workshop flyers and uses your email address to inform you of important water quality news and upcoming events.

If any changes are needed in your contact information, please contact OWEA at 614.488.5800 or info@ohiowea.org. You may also update your member record at www.wef.org or by contacting the Water Environment Federation at 800.666.0206 or csc@wef.org.

WEF Delegate Report continued from page 8

OWEA and how they align with WEF committees. The goal of this project is to develop a better understanding of the all MA committee structures, to more easily and effectively communicate and collaborate with MA committees. As for OWEA this should provide additional resources to our Standing Committees and access to WEF committees. It is also the intent of the WEF Committee Leadership Council (CLC) to provide for a corresponding member from the MA committee to the WEF committee. The MA corresponding member would receive updates from the active WEF committees on current projects such as specialty conferences, webcasts and publications being written or reviewed. This will provide a means for the MA committees to become actively engaged in what the WEF committees are working on and also provide a way for MA leaders to obtain ideas, speakers and other things vital to the work they are doing at the MA level.

On behalf of OWEA, Executive Administrator Judi Henrich matched our Standing Committees with a listing of WEF committees. The information collected will be included on a master chart, to be posted on the WEF web site for all to view. Eventually the goal is for this list to be updated regularly so that MA committee leaders will have access to WEF committee leaders and vice versa. It will also allow for MA committee leaders to have easy access to communicate with other MA committee leaders regarding like projects at the MA level.

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“TO GO WHERE NO ONE HAS GONE BEFORE”

by Dale E. Kocarek, P.E., BCEE - OWEA President

I am a Star Trek fan. In making this admission, I must be perfectly clear that I much prefer the original series that ran on television between 1966 and 1969. What I enjoyed most was the camaraderie and interaction between the lead characters Captain Kirk, First Officer Spock, First Engineer Scott, and Doctor McCoy. I also enjoyed the science aspect of the series and the problem solving that key officers demonstrated in dealing with aliens and situations “where no man has gone before.”

In making this introduction, I am prompted to think about the future and what it may hold for OWEA and our industry this coming year and in the future. As President of the Ohio Water Environment Association, thinking, and often worrying about the future, is one of the things that I do best. I have always enjoyed planning and pontificating about the future and have always tended to think of myself a bit of a visionary. While some of this comes naturally to me, I largely credit the Ohio EPA for developing this ability to where I am today.

In attending WEFTEC.2010 in New Orleans in October 2010, I was drawn to several sessions that featured topics pertaining to the “future.” One session spoke of the future of wastewater treatment and presented opinions on what plants of the future may look like. On hearing the presentation, I found myself in general agreement with the presenter.

Before I continue, I need to make a clarification. When I talk about the future, I am not speaking about the year 2015 - from the movie trilogy “Back to the Future.” For gosh sakes, 2015 is only 4 years away! No, what I am thinking of is the second half of the 21st Century or the time period of 2050 - 2100, which presumably is beyond the lifetime for many of us. Some technologies that may be commonplace may not even be invented yet. However, in general terms and based on what I have heard, read, and dreamed, this is what I think could happen:

- ◆ Future treatment plants may be designed to have no adverse impact on the environment, neither in the direct discharge of pollutants in the water nor will create little carbon footprint, in comparison to baseline standards. The term “no net pollution discharge” will be used in active discussion as an objective.
- ◆ Nutrient treatment will be the norm for all dischargers, much like CBOD₅ and Total Suspended Solids are today. (This is no big surprise since we are seeing signs of this today through proposed changes to BADCT to include limits for Total Nitrogen and Total Phosphorus.)
- ◆ Wet weather issues will continue to haunt us. However, in the future, there will be a renewed focus on holistic thinking about the impact of *all* wet weather discharges to water quality, whether they originate from storm sewers, sanitary sewers, or combined sewers. In select circumstances, combined sewers could enjoy some resurgence as a means to achieve standards of “maximum pollution removal.”
- ◆ Regulations on the definition of secondary treatment as defined in 40 CFR 122 could be revised to include broad

definitions of treatment, which are not based on “means and methods of achieving a minimum of secondary (biological) treatment” but on the total watershed approach for pollutant removal and how to best achieve this goal.

- ◆ Energy conservation technologies will become a mainstay of wastewater treatment plants. Plants will harvest energy through enhanced anaerobic digestion or reduce mass will continue to grow in popularity and be made more affordable and efficient.
- ◆ Green solutions will abound in our communities. We have only seen the beginning of this. Municipal leaders will learn that green space, environmental protection and recreation can be achieved cost effectively in “win win” scenarios. While traditional “gray solutions” are clearly here to stay, these will be coupled with “green solutions” in innovative holistic applications that achieve maximum benefits for the environment at minimum cost.
- ◆ Treatment plants will be designed and operated to remove refractory compounds introduced by personnel care products, which have been traditionally resistant to conventional means of treatment.
- ◆ World water shortages due to climate change and population growth in the south and west United States will “push the limits and accelerate” water reclamation to levels not seen today. Those living in the future will see single treatment plants convert “dirty water” to “drinking water.”
- ◆ After decades of losing population, the Great State of Ohio will again enjoy resurgence in popularity as people from around the United States recognize that “Ohio is where the water is.”

In terms of treatment technologies, the WEF “futurists” predicted that some treatment plants of the future - particularly new facilities built on green sites - may feature one or more of the following technologies:

- ◆ Specially enhanced primary clarifiers will extract high percentages of total suspended solids to fuel energy recovery systems
- ◆ “Waste to Fuel” centers will develop as a central repository for FOG and food waste similar to household facilities that exist in rural China
- ◆ High efficiency anaerobic digesters will produce methane gas
- ◆ Energy harvesting and electrical generation facilities will be the norm. Energy derived from these facilities will be used to operate blowers for the biological reactors to make a “self sufficient” system
- ◆ A new type of membrane treatment technology will be invented that requires little power to operate, can treat peak wet weather flows, but possesses all of the benefits of current MBR technology.

With this being said, I feel compelled to divert my focus on the new and promising future to the continuing plight of very small communities, which have advanced very little in the past 40 years. The communities that I am talking of are those which lack sanitary sewer service and have suffered from chronic pollution problems, known as “pockets of pollution”, from before the signing of the Clean Water Act in 1972. Admittedly, some progress has been made, but it has been slow. As a matter of perspective, I was in the 10th grade in high school when the Clean Water Act was signed into law by President Nixon on October 18, 1972. Recently, I was told by the clerk at a clothing store at an outlet mall that I could apply for a “Senior Citizen Discount”. This illustrates that for many, the face of pollution control and the “tools in the toolbox” to solve these problems has not changed much in the last 40 years!

I do not wish to be naïve. As someone who has worked with the Ohio EPA and as an engineering consultant with small clients, I recognize that the challenges faced by small communities can be overwhelming. I have found few small community leaders ready, willing, and able to take on the challenge of a large project and even fewer leaders, who understand construction essential to the success of a project, are even less. Also, there is the ever present lack of financial capability, accompanied by its “brother”, the lack of institutional capability.

Also, from a water quality perspective, the Ohio EPA requires a NPDES holder be “all the way in.” or “nothing at all.” This means that the Ohio EPA does not recognize the philosophy, advocated by the late Bob Manson, Chief of the Ohio EPA, NWDO that “something is better than nothing,” and that some level of centralized collection and treatment, was better than nothing. A community had to implement a total system in full conformance with terms and conditions of an NPDES permit, or continue on its current path of remaining unsewered. Bob was a visionary, and a tiresome advocate of solving pollution problems one step at a time in a practical way. While Bob could be a bit of a maverick at times, I found his point of view to be interesting.

Unfortunately, really good small flows technologies designed to provide advanced levels of water treatment at reasonable cost are few and far between. Controlled discharge technology, considered by the Ohio EPA as ideal for small rural communities, are only easily applied in northwest Ohio where sites are large, plentiful and downwind, clay soils are abundant, and groundwater resources are deep. For other parts of the state, the prospect of choosing a site for a lagoon is difficult and complicated by many regulatory requirements and costly subsurface investigations.

Unfortunately, one of the best and most effective technologies, the recirculating sand filter, cannot meet stringent effluent limits for Ammonia-Nitrogen of 1 mg/l. This is unfortunate, because recirculating sand filters are a simple, scaleable, reliable, effective, and operator friendly technology, yet, they cannot meet one of the criteria that the Ohio EPA cares about the most - ammonia nitrogen. At the opposite spectrum is the traditional mechanical plant - often held in low regard by certain funding agencies and the Ohio EPA. Mechanical style plants require a large amount of electrical power and operator sophistication, which is often in short supply in small communities. Yet, this technology, if operated and maintained correctly, will meet best available control technology (BACDT) effluent limits mandated by the Ohio EPA. But,

implementing this technology may not be affordable, reliable, or ultimately sustainable for small communities.

Fortunately these days for small communities, groups such as RCAP have emerged as advocates through the creating of customized programs, which teach communities “how to begin” the process of building a central sewer system and finding money to do so. For this reason and the relationships that I have formed with several RCAP professionals including Tom Fishbaugh (former OWEA President and WEF Delegate) and Roberta Acosta, I have established the Ad Hoc Small Flows Technology Committee, with Roberta as its Chair and Tom as a member. While this committee is in its formative stages, I wanted to bring the problems of small communities front and center to OWEA, and I felt that this was a good way to do so.

This much is for certain: Today holds the promise of tomorrow. No one knows what the future will bring or what it will look like when we arrive. But in our collective journey to the future, please do not forget the brave men and women of the USS Enterprise who went “where no man has gone before!”

About the Author:

Dale E. Kocarek is an Associate with Stantec Consulting Services, Inc. in Columbus, Ohio, the President of OWEA, and Chair of the Government Affairs Committee.

Dale may be reached at dale.kocarek@stantec.com

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NE SECTION

The Northeast Section ended 2010 with two events. At NESOWEA's November event, we had 132 people tour the Wadsworth Wastewater Plant. Following the tour, the attendees then went for contact hour sessions at the Galaxy Banquet Center in Wadsworth. I would like to thank John Clark and his staff for allowing us to tour his facility and for hosting this meeting. I would also like to thank Robin Laubaugh, the Mayor of Wadsworth, for allowing us to come. She welcomed us and stayed for all of the presentations. The attendees received 3.25 contact hours for this event. The second event was the NESOWEA annual Christmas luncheon, which 19 of our past presidents attended. A good time was had by all. As the New Year has started, this is a busy time for the section with several meetings scheduled in the next few months of the New Year.

By the time this issue goes to print the section will have already had its Operation's Meeting in January. At this meeting there was a great slate of speakers including a hands-on portion that will get everyone excited about OPS Challenge. The event had several stations set up to represent each of the sections of the OPS Challenge. Everyone who participated in the hands-on portion will definitely have a better understanding for why those who participate are so passionate about OPS Challenge. They will also see how much fun it can be as well. Look for the report on this meeting in the next Buckeye Bulletin.

Our Industrial Waste Seminar will be held on February 24, 2011,

in Richfield. The Industrial Waste committee is putting together another great slate of speakers and vendors. Come network with the vendors and us while also receiving 6.25 contact hours. In March, we will be in Twinsburg to tour their facility and earn contact hours. The date for this meeting is March 31, 2011 so look for more info on this meeting on our web site at nesowea.org. The Watershed committee is working on a seminar to be held on April 28th, at the Furnace Run Metro Park - Brushwood Pavilion, in Richfield. In May, join us in Wooster for our Annual Business Meeting, awards luncheon, tour, and contact hour sessions (date to be determined).

I would also like to extend an invitation to anyone wanting to be more involved with WEF or the OWEA, to start with volunteering at the section level by just signing up to be on one of our committees. It will not take up much of your time and you may even want to get more involved. It was my involvement at the section level that made me realize what a great organization the OWEA and WEF are and why I decided to become a member of WEF.

In closing, don't forget to sign up for any of our meetings on line at nesowea.org or at ohiowea.org. I would like to thank Judi Henrich for setting up and maintaining the on line registration. I hope to see all of you at our meetings this year. I would also like to give special thanks to the Executive Committee and all of the section committees for their hard work.

Mike Welke, President, mwelke@warren.org



Northeast Section Past Presidents



Tour of Wadsworth Wastewater Plant

Visit ohiowea.org to register online for your section's meetings and events

SE SECTION

The SEOWEA Executive committee met on November 16, 2010 at the City of Newark WWTP. The committee discussed preliminary planning for section meetings in 2011. Notices will be sent out by email and posted on the Southeast Section's page on the OWEA website once final details have been confirmed.



On February 10, 2011, the SE Section will hold a Section Meeting and a tour of the Gorman-Rupp North Facility in Mansfield. We are also planning a joint section meeting with the Southwest section of OWEA in early 2011. No dates have been confirmed at this time.

The SEOWEA Awards Committee was launched for 2011. The members

of this committee are Michael Frommer, Paul Matrka, John Owen, and Tyler Linton. They presented potential nominees to the Executive Committee for discussion at the January Executive Committee Meeting on January 25, 2011 at the City of Newark WWTP.

The Science Fair Committee for 2011 consists of Chairman Fred Smith and Brandon Fox. Please contact them if you are interested in serving as a District Science Fair judge in the Spring of 2011.

The Executive Committee is also looking for volunteers to help with the various committees for the SE section. Please contact me if you have any interests. We have a lot of spots open on various committees. The committee level is a great way to get involved in the Ohio Water Environment Association.

Steve Elliott, President, steveelliott@mariettaoh.net

NW SECTION

The Northwest Section Fall Meeting was hosted by the City of Napoleon WWTP on October 20, 2010. Attendees were treated to a pancake and sausage breakfast, organized by Doug Borkosky and his crew. The event raised \$395 that was donated to Water for People. A special thanks to Doug and his assistants for their hard work for a very worthy cause. Tours of the Napoleon WWTP were given in the morning, featuring their new UV system and wet weather EQ basin. Thank you to Matt Bilow and his staff for their hard work in preparing for the event. Lunch, technical sessions, and the business meeting were held at the Napoleon American Legion. Adam Hoff, Stantec, presented on the design, operations, and lessons learned for the Napoleon EQ Basin project. Gabriel Novac presented on wet weather flushing gate technology utilized at the Napoleon facility; while Rick McIntyre provided an informative presentation on non-contact UV disinfection technologies. During the business meeting, the NWOEA Section Awards were handed out to the award winners on-hand. The Collection System Award was given to Steve VanNest with Lucas County Sanitary Engineering Department. Matt Cox, employed by the City of Bowling Green, was awarded the Kathleen M. Cook Laboratory Analyst Award and Joe Tillison, also employed by the City of Bowling Green, was awarded the Professional Wastewater Operator Award. In addition, the Past President's plaque was awarded to John Moytcka.



Doug Borkosky, Elizabeth Wick, and Tom Fishbaugh serve breakfast.

John did an excellent job of leading our section during the 2009-2010 term! Thank you, John, for all of your hard work and dedication! Approximately 107 people attended the Napoleon meeting.



Napoleon WWTP Tour

Northwest Section Past President Frank D'Ambrosia organized the Semiannual Northwest Operator Education Day, held at the OEPA Northwest District Office in Bowling Green on October 29. Frank D'Ambrosia, Doug Brookhart from Jones & Henry Engineers, Jim Scisson from Scisson and Phoenix, and Al Zamora P.E. from Kusmer and Associates Incorporated were the instructors for the training event. There were approximately 27 operators in attendance for the three sessions.

The Northwest YP Committee, chaired by Walter Ariss, awarded the YP paper contest to Joe Tillison from the City of Bowling Green. Joe will receive a free OWEA Annual Conference Registration from the NW Section and a 1-night hotel stay at Kalahari Resort for the conference from the 2011 Conference Committee. Congratulations to Joe! And this is something all of our YP's should be gearing up for next year! What a great way to guarantee you can attend the OWEA State Conference!

Upcoming Northwest Section training events include the section meetings scheduled for March 16 in St. Marys and May 18 in Delphos. Other meetings to watch for this spring and summer that are not scheduled at this time are the Northwest Biosolids Committee meeting and the Operator Education and Safety Day. The dates, times, and locations will be placed on the calendar at www.ohiowea.org as soon as they are scheduled.

Kim Riddell, kim@go-smith.com

SW SECTION

The 9th Annual Plant Operations Seminar and Section Meeting was held on November 18th at the Crowne Plaza Hotel in Blue Ash. The Seminar continues to be well attended, with 118 individuals attending this year and obtaining up to 5.5 of contact hours, in addition to meeting with 15 exhibitors during the breaks and lunch. A big thank you to the exhibitors for helping us keep costs down to the members.

Our Lab Analysts meetings and Operator Education days continue to be well attended events at low/no cost to our members. Our LAC meeting in October had 67 attendees and our Operator Education day had 76 attendees. Our next Operator Education day is April 22nd at Montgomery County. These continue to be a low-cost opportunity for operators preparing to take the OEPA Wastewater Class 1, 2, 3, or Collection exam to work through a sample exam with instructor provided solutions.

The December 10th SWOWEA Past President's Luncheon at Parmizanno's in The Dayton Marriott continues to be well attended. This is an annual event to recognize the great contributions from our past presidents. The event is coordinated with our Executive

Committee in the morning. In addition, OWEA President Dale Kocarek and Executive Administrator Judi Henrich, attended to provide OWEA perspectives and initiatives to the committee.

Jeff Olsen, President, Jeff.Olsen@hdrinc.com



SWOWEA Past Presidents Luncheon - December 2010



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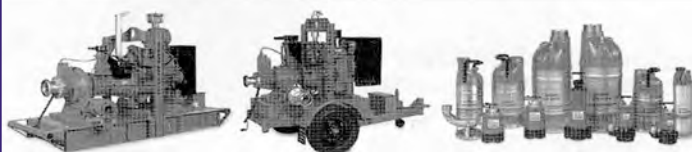
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**Don't Miss Out On Important News
Update Your Membership Profile**

Maintain an accurate mail and email address so you receive timely communications from OWEA regarding upcoming events, important news affecting water environment issues, and your copy of the Buckeye Bulletin.

Please check your member profile at: www.wef.org by clicking on the Membership link. You may also update your OWEA/WEF membership account by contacting WEF at 800.666.0206 / csc@wef.org or OWEA at 614.488.5800 / info@ohioweaa.org.

YOUNG PROFESSIONALS COMMITTEE

by Dan Martin

We received several excellent abstracts for our Young Professional/System Operator Award. Congratulations to our winners:

- ◆ Northwest Section: Joe Tillison, Bowling Green
“Operators Not Just Another Strong Back”
- ◆ Northeast Section: Ashley Elber, CT Consultants
“Two Green ARRA Projects & One WWTP: An Equation for Huge Energy Savings?”
- ◆ Southwest Section: Ting Lu, MSD of Greater Cincinnati
“Evaluating Water Quality at Combined Sewer Overflows by a Novel Approach”
- ◆ Southeast Section: Mel Meng, DLZ Incorporated
“Visualize the History of a Sewer Collection System with Free Tools”

The winner from each section will receive a free night at the hotel and part or all of their conference dues waived (awards varied slightly by section). Special thanks to the Conference Planning Committee for accommodating and supporting this initiative.

Our OWEA YP Summit is scheduled to occur on the weekend of April 30th in Central Ohio. This event will include morning technical sessions followed by a hands-on “green” activity in the field. The event will include contact hour credit as we literally roll up our sleeves and dig in to this seminar. Please contact Kris Ruggles, kris.ruggles@strand.com, for further details.

Notable Happenings

- ◆ Our Northwest Section representative Walter Ariss has been extensively involved in planning for the State Conference this June. YPs in the Northwest Section and from all around the state have opportunities to volunteer. Contact Walter for more information Walter.Ariss@epa.state.oh.us

- ◆ Northeast Section YP’s are planning a joint event with the Northeast Section AWWA YP’s to tour landmark water and wastewater treatment plants in the Cleveland area. Tours of the Baldwin Water Treatment Plant and Southerly Wastewater Treatment Center are being planned for the Spring of 2011. It is expected all attendees will receive contact hours for their participation. Keep your eyes open for event details in the near future.
- ◆ Engineers in the Southwest Section will be participating in a study group for their Principles and Practices of Engineering Exam this spring. The study group helps participants drill on questions in preparation for the exam. We are planning a “green” tour event for the spring.
- ◆ Planning is underway for a May YP event in the Southeast Section.

Contact your Section YP representative to become more involved in the Young Professionals Committee:

SW - Dan Martin dmartin@raconsultantsllc.com SE - Brandon Fox bfox@co.fairfield.oh.us


NW - Walter Ariss Walter.Ariss@epa.state.oh.us NE - Nick Bucurel NBucurel@pirnie.com

OSU Student Chapter - Nick Elmasian nelmasian@gmail.com

Please contact Nick if you or a Student/YP you know is interested in developing a student chapter at a local university.

Special thanks to all the committee volunteers who make the YP committee vibrant! As always, if you have any suggestions or questions, please contact:

Dan Martin dmartin@raconsultantsllc.com Kris Ruggles kris.ruggles@strand.com
513.469.6600 614.835.0460



Young Professionals Summit

April 14, 2011 | 8:00 a.m.–5:00 p.m.
The Seelbach Hilton | Louisville, KY

Hotel Room Reservations

Special rate per night of \$129 single/double occupancy with an additional charge subject to city, state, and hotel tax currently at 15.01%. When making a reservation, please advise the hotel that you are attending the **Kentucky—Tennessee Water Environment Association**.
Call the hotel at 800.333.3399 (Monday—Friday between 9:00 a.m.–4:00 p.m.)

Registration information to come in January.
<http://www.awwa.org/yppsummit>
http://www.wef.org/Members/page_ma_detail.aspx?id=3207

Related Events

April 13, 2011 Optional YP Tour

April 15, 2011 AWWA YP Committee Meeting
(all AWWA attendees are invited)


April 15–16, 2011 WEFMAX Meeting (all WEF attendees are invited)

Questions or comments, please contact:


WEF Staff: Dianne Crilley dcrilley@wef.org | 703.684.2445

AWWA Staff: Nancy Sullivan nsullivan@awwa.org | 303.347.6155

YP Summit Coordinator: Sam Harrison sharrison@ssr-inc.com



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LABORATORY ANALYST COMMITTEE

by Chairs Eva Hatvani and Denise Seman

Hello Everyone! The LAC is gearing up for a busy year. A new contact email address has been created for future communication with the State LAC Committee. The email address is oweastatelac@yahoo.com. Please feel free to send any questions regarding certification or lab questions to this email address.

Save the Date

Remember to save the date for the Plant Operations/LAC Joint Meeting September 21-22, 2011. The lab sessions will be on Thursday, September 22.

Tentative Topics Include: (6.0 contact hours)

- ◆ E. coli from A-Z – Jen Alexander, OEPA
- ◆ Microscopic Evaluation of Mixed Liquor: The Care and Feeding of Your Bugs - Jon VanDommelen OEPA
- ◆ BOD/CBOD from A to Z - Amy Starkey, Stark County
- ◆ An introduction to the State of Ohio general lab criteria audit. - Steve Roberts, OEPA
- ◆ Laboratory Game – Eva Hatvani, Retired, NEORS and Nancy Taylor, City of Newark
- ◆ Training through utilization of On-line courses - Mark Citriglia, NEORS

Congratulations

Congratulations to the following people for having passed the OWEA WW I Analyst Exam. The exam was given on Friday, October 21, 2010.

James Carey	Margo Meyer	Julienne Holscher
Daniel Kuhn	Thomas Fritz	Timothy Okane
Wanda Harney	Cory Smith	Natasha Tramble
Joshua Spinks	Walter Thompson	

EXAMS

The next set of exams will be given on April 29, 2011 and October 22, 2011. Deadlines for the applications are March 28, 2011 and September 23, 2011 respectively.

RENEWAL OF CERTIFICATES FOR 2012-2013

The current certificates are valid until December 31, 2011. Renewals are on a two year cycle. The mailing for the next round of certificate renewals will be in the FALL 2011. If you do not get one, you may not have notified us about a possible move, retirement, or other situation. Download forms from www.ohiowea.org. Please email any changes of information to oweastatelac@yahoo.com. The cost will remain at \$25.00.

NOTE: Print applications from the OWEA website as the mailing address has changed to the OWEA Office.

Northeast LAC- Kathy Richards

The Northeast Section LAC is busy planning for another busy & productive year with lots of opportunities for training, networking

and camaraderie. Our first event is tentatively scheduled for March 18th in Madison and will feature (among other topics) a discussion of ORP and disinfection, so save the date! Other sessions are tentatively scheduled for May, August & October. Specific details will be announced in future Buckeye Bulletin articles, Sparkling Waters newsletters, and online at www.ohiowea.org and www.nesowea.org.

While you are visiting these websites, please consider responding to the NESOWEA LAC Questionnaire. The information we compile will go a long way towards building a networking database that will enable analysts to better connect with each other and share experiences and support.

If you would like to be added to our NES membership directory and receive automatic updates for training events and other news, please send your contact information to me at nesoweaalac@gmail.com.

We are actively seeking venues, topics & speakers for our LAC section meetings! If you have suggestions or would like to volunteer yourself or a “special coworker”, please get in touch with any of the NES committee members:

Kathy Richards	krichards@akronohio.gov
Dale Holmes	daleh@mclw.com
Lisa Feigle	lisaf@gcdwr.org
Amy Starkey	ajstarkey@co.stark.oh.us
Marie Wenzel	marie@northcoastlabs.net
Melanie Rangel	mrangel@lakecountyyohio.org

Southwest LAC - Roger Rardain and Jim Davis

The Southwest LAC continues to be busy. On October 14, 2010, the SW Section Laboratory Analysis Committee held a meeting at the Greene County Media Room in Xenia, OH. Attendance was outstanding, with 67 people from 24 organizations present, including Van Wert OH, Jackson OH, and Northern Kentucky. We also had a number of people from OEPA attending.

Technical sessions included the following presentations:

- ◆ The change to E. Coli and your NPDES permit, Gary Stuhlfauth, Environmental Specialist, NPDES Permit Unit, OEPA
- ◆ Overview of approved methods for E. coli Testing and the required QC, Jen Alexander, Microbiologist, OEPA
- ◆ Demonstration of IDEXX's QuantiTray System for determining E. coli, Gil Dieter, Worldwide Technical Support Manager, IDEXX Laboratories
- ◆ Tours of the Greene County Sanitary Engineering Lab and the Beavercreek Water Resource Reclamation Facility

3.5 contact hours were approved. Lunch was provided by IDEXX Laboratories.

Attendance figures for our 2010 meetings are as follows:

1/21/10 - 52	7/15/10 - 57
4/15/10 - 59	10/14/10 - 67

continued on page 17

The Winter LAC Meeting, held on January 27th, 2011 at YSI, Inc., in Yellow Springs, was full to capacity and a waiting list was added for those hoping to be able to attend.

Save the date for the next SW LAC event:

Spring LAC Meeting

April 7th, 2011 – City of Dayton

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

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

Jim Davis davisji@mcchio.org



Roger Rardain (SWLAC Co-Chair, Fairborn), Theresa Shinkle (Greene County Sanitary Engineering Lab - meeting host), and Jim Davis (SWLAC Co-Chair, Montgomery County)



SW Section Laboratory Analysis Committee meeting at the Greene County Media Room in Xenia, OH

STATE LAC COMMITTEE MEMBERS

State Chairs

Eva Hatvani, 440.846.8220, ehatvani@yahoo.com

Denise Seman, 330.742.8820, dseman@cityofyoungstownoh.com

Northeast Chairs

Kathy Richards, 330.928.1164, NESOWEALAC@gmail.com

Northwest Chair

Kevin Hughes, 419.488.5440, watertreatment@tiffinohio.gov

Southwest Chairs

Roger Rardain, 937.754.3075, roger.rardain@ci.fairborn.oh.us

Jim Davis, davisji@mcchio.org

Southeast Chair

Diana Liston, 614.864.3370, dliston@co.fairfield.oh.us

Register Online for Your Next OWEA Event

Most OWEA Events are listed in the Featured Events Section at www.ohiowea.org. Save time and postage by registering online for upcoming OWEA state, section, or committee workshops, meetings, and training sessions. You will receive immediate confirmation of your registration and can indicate your choice of payment options for each particular event.



Mark Your Calendars

OWEA's 2011 Event Schedule



March 10 **Government Affairs Workshop**

May 5 **Collection Systems Workshop**

May 24 **Ohio Operations Challenge & Hands-On Operator Training Day**

June 21-23 **Annual Conference and Exhibit Expo**

September 21-22 **Plant Operations and Laboratory Analysts Workshop**

December 8..... **Biosolids Workshop**

Visit ohiowea.org for more information and registration

RESIDUALS COMMITTEE

by Jamie Gellner, Chair

The OWEA Residuals Management Committee continues to remain active in the monitoring of issues related to biosolids management and to seek opportunities to serve the membership of OWEA. Since our last update, we have remained active in several main focus areas, including the following:

- ◆ Farm Science Review - The 2011 Farm Science Review will be held September 20th through September 22nd. It's never too early to plan to become involved! The Residuals Committee provides manpower and educational materials on the benefits of biosolids land application at the OWEA sponsored booth. A large number of attendees typically visit the booth. Promotional items are normally given away as an enticement to visit the booth and learn about biosolids. We will definitely continue to use the "wheel of trivia" to spur conversation, curiosity, and hopefully a little "BS" . . . in a good way – HA!
- ◆ Biosolids Workshop - The 2010 workshop was held on December 9th in Columbus. We had a wonderful turnout - 119 attendees. A special thanks to the speakers who shared their time and talents and to Steven Reese for organizing the workshop and for "MCing" the event. The 2011 workshop is scheduled for December 8, 2011. If you have an idea or topic you would like to present, please let me know.

I would also like to take the opportunity to thank Dave Brewer for his years of service to the Residuals Management Committee. Dave retired from Montgomery County last year and because of personal commitments needed to step down as Chair of the committee. As many of you know, Dave served in this position for several years. We will miss Dave's involvement moving forward.

This year, we hope to take on a few additional initiatives, including the following:

- ◆ Exploring new venues for booth / information / PR
- ◆ Verify member list / update contacts
- ◆ Reach out to neighbor associations – opportunities for joint efforts

We would love your involvement in these initiatives and others throughout the year. The Residuals Management Committee is focused on serving the OWEA membership through education, promotion of effective biosolids management, technical information on biosolids, and interface with OEPA on regulatory issues. We always welcome new membership and we would love to have you at our next meeting. If you are interested in becoming involved or if you have any questions about the committee, please contact Jamie Gellner.

Jamie Gellner
513.317.0337
jgellner@hazenandsawyer.com



(l) Dr. Lakwinder Hundal, MWRD of Greater Chicago, spoke on the emerging topic of "Microconstituents in Biosolids - What Does It Mean for the Future of Land Application of Biosolids?"

(r) Biosolids Chair Jamie Gellner offers opening remarks at the Biosolids Workshop



SMALL SYSTEMS COMMITTEE

by Roberta Acosta, Chair

The ad-hoc Small Systems Committee held its first meeting on December 18, 2010 at the Ohio Water Development Authority Conference room. Committee members include: Roberta Acosta, Tom Fishbaugh, Adam Voris, Ken Heigel, and Dale Kocarek.

The committee discussed its organizational goals and objectives for this year. The committee intends to prepare training and articles for publication focused on small system needs and coordinate those efforts with various other OWEA functions and committees. We are still looking for members so if you are interested in working with the ad-hoc Small Systems Committee, contact committee Chair Roberta Acosta.

Roberta Acosta
Senior Rural Development Specialist
Ohio RCAP
rjacosta@wsos.org
419.724.4155





2011 Government Affairs Workshop

Thursday, March 10, 2011



Scott J. Nally
Director - Ohio EPA

- 7:30-8:00 Registration**
- 8:00 -8:15 Welcome and Opening Remarks**
- Dale Kocarek, OWEA President
- John Owen, GA Committee Vice Chair
- 8:15-8:45 Ohio EPA Update**
- Scott J. Nally, Director, Ohio EPA
- 8:45-9:15 Division of Surface Water Update**
- George Elmaraghy, P.E. Chief
OEPA/Division of Surface Water
- 9:15-10:00 Ohio EPA Rules Development 101**
- Amanda Payton, OEPA/Directors Office
- 10:00-10:15 Mid Morning Break**
- 10:15-11:00 Ohio EPA & Legal Update: Regulations, Legislation, Cases**
- Ted Boggs, Vorys, Sater Seymour & Pease
- 11:00-11:45 2011 Nutrient Regulations Update**
- Guy Jamesson, P.E., Senior Associate,
Malcolm Pirnie, the Water Division of ARCADIS
- 11:45-1:00 Lunch Buffet**
NorthPointe Conference Dining Room
- 1:00-1:45 An Overview of the Ohio Lake Erie Phosphorus Task Force**
- Gail Hesse, Manager
OEPA/Division of Surface Water
- 1:45-2:30 News and Updates from WEF**
- Jeff Eger, Executive Director
Water Environment Federation
- 2:30-2:45 Afternoon Break**
- 2:45-3:30 Toxicity Reduction Program for City of Columbus Jackson Pike Wastewater Treatment Plant: A Success Story**
- Gary Hickman, City of Columbus
- 3:30-4:15 Arkea®: A Green Technology for Nutrient Reduction**
- Steve Owens, P.E., V.P., Archaea Solutions
- 4:15-5:00 Stormwater Management in 2013: Will There Be an 'App' for That?**
- Mark McCabe, CPESC
- John Aldrich, P.E., D.WRE, CDM, Inc

Closing Remarks

Earn 6+ Contact Hours



Register online
www.ohiowea.org

If unable to register online, a printable registration form is available at ohiowea.org or register by calling 614.488.5800.

	Member	Nonmember
Workshop Fee	\$125	\$175
Workshop + Exhibitor Space	\$300	\$400

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PLANT OPERATIONS COMMITTEE

by Jim Borton and Kim Riddell, Chairs

Hands-On Operator Training Day

Operations Challenge exists to promote professionalism and recognition of Ohio's wastewater professionals. In addition, the contest promotes teamwork and camaraderie, not to mention earning team members up to 12 contact hours per participant. If you are a manager looking for innovative and very inexpensive contact hours, you have to come check this out! Want to give it a try? Contact Kim Riddell or Jim Borton to learn how being a team member can help advance your career. Ready to sign up? The team registration is available on the OWEA website at www.ohiowea.org and a form is provided in this issue. As a reminder, entered teams compete for the opportunity to represent Ohio WEA at WEFTEC '11, and can receive up to \$7000 to cover costs of travel to Los Angeles.

Registered Operations Challenge teams will have practice time on the actual event equipment in the morning of the contest while the Operator Education Day proceeds. Also, OWEA has purchased the WEFTEC Maintenance Event Wilo pump for all of Ohio's teams (new and old) to utilize for practice, competition, and for upcoming training events. If you register as a team you will be scheduled for time to have the equipment at your facility prior to the competition.

For those of you not ready yet to be part of a team, or you need up to 5 contact hours, come to the Operator Education Day to watch and learn. Contact hours, good food at lunch, and the opportunity to network with other operations professionals all for the low price of \$50.

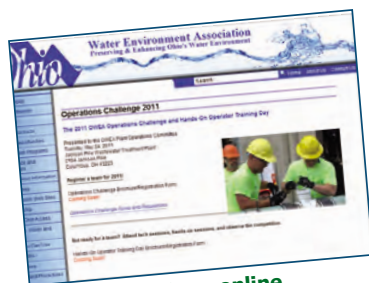


The event will be held at the City of Columbus' Jackson Pike Wastewater Treatment Plant just off of I-71/SR 104 exit south of downtown Columbus.

Hands-On Operator Training Day

Why should I attend the Hands-On Operator Training Day held in conjunction with OWEA's 2011 Operations Challenge?

- ◆ Earn up to 5 Contact Hours
- ◆ Network with other operations professionals
- ◆ Five morning training sessions (2.5 CH)
- ◆ Afternoon hands-on practice sessions (2.5 CH)
- ◆ Includes Lunch and Awards Ceremony
- ◆ All for just \$50.00



Register online
www.ohiowea.org

Plant Operations and Laboratory Analysis Workshop

We know training budgets are tight. That is why the Plant Operations, Lab Analyst, and Safety Committees have put together yet another top flight training event with state and nationally known speakers for September 21st and 22nd. Up to 13 contact hours, two lunches, and a dinner are included in the full workshop registration. You will be hard pressed to find a better deal for training dollars this year. Don't just take our word for it, here are some of the comments from 2010's evaluations:

- ◆ Practical information on a wide-range of subjects. Excellent format with one hour presentations and a short break after each one.
- ◆ It was great that on the first day, all of the speakers were connected. They spoke on the same issue and fed off of each other as if it were planned that way. Great interaction! Also like 1 hr sessions with 15 minutes between each one.
- ◆ I thought the hands-on Pump Maintenance portion was impressive, good speaker who brought enough props to make the topic interesting and informative.
- ◆ The speaker quality was excellent and the topics were very relevant!
- ◆ The format was better than most. Longer sessions and breaks in between.
- ◆ I really liked the BNR workshop concentration. The workshops built on each other, it was informative and I feel that I have retained more knowledge than diverse workshops.
- ◆ Concurrent classes - able to pick what was more for you!
- ◆ Many credits toward renewing my license, and some very practical ideas on how to handle problems.
- ◆ The speakers/presenters were experts from around the country and within Ohio.
- ◆ Knowledgeable speakers, covered subjects that are applicable to my daily tasks (submersible pumps and lift stations operations) but also learned more about plant processes and what else is out there with other plants.

If you have interest in putting an Operations Challenge Team together, judge the contest, join the committee, or present at one of the upcoming Plant Operations sessions, please contact Kim Riddell or Jim Borton.

Kim Riddell
kim@go-smith.com
419.234.4507

Jim Borton
jborton@woosteroh.com
330.263.5293





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PUBLIC EDUCATION COMMITTEE

Nancy Taylor, Chair

Hello fellow OWEA members! I am Nancy Taylor, your new Public Education Chair. Many of you already know me from my work as co-chair of the LAC committee, a position I greatly enjoyed within our organization. When my LAC term expired, I decided to continue my work with OWEA by agreeing to chair the Public Education Committee; so far just a committee of one but I am ALWAYS looking for new volunteers. Generally, I have approached my volunteer work with OWEA as a collaborative effort. If you have an idea for Public Ed, I would be happy to work on developing it together; the more the merrier.

The task of informing the public about the importance of Clean Water Jobs can be as small or as large as we make it. As we begin the New Year, I want to share with you the direction I would like to take our Public Education committee. In the past, OWEA has used science fair awards as one way to “advertise” our organization to the general public. We will continue to give science fair awards, but I also want to add a new task to our mission by developing educational materials to be used in the elementary and middle school classroom. I feel this new direction could serve three purposes:

1. Teach students what goes on at the WWTP and why it is important.
2. Inform teachers and students of environmental careers.
3. Recruit new workers to our industry in the distant future (*that last one is a stretch, but since you never know what efforts will bear fruit later on, I figure it's worth a shot*).

The messages you receive as a child truly set the stage for who you will become as an adult. When I was a kid, I remember the push in the 1970's to develop environmental awareness among Americans was a HUGE deal. The dangers of pollution were drilled into us at school along with our multiplication tables. The drive to make people care about the health of our planet was in every corner of our society at that time; you couldn't even watch TV without seeing a public service announcement with Woodsy Owl or the Crying Indian telling us we shouldn't throw trash on the ground. I know when I was in 5th grade the last thing I wanted to be was a litterbug!

All that environmental education had a lasting impact on me. I knew I wanted a career in a field that would help the planet . . . I just didn't know what fields there were to choose from. So I went to college and double majored in Zoology and Environmental Studies, hoping that would help me figure out what I wanted to be when I



grew up. But no one ever talked to me about the directions I could go with an environmental career after I graduated from college. I had to figure that out on my own. Ironical, isn't it? With all the “save the planet” messages I had been exposed to, I still didn't know what jobs were out there for me.

I ended up working for the City of Newark by answering an ad in the newspaper for a laboratory technician. I didn't really know what went on at a wastewater plant, but I was up for the challenge. I had run mercury for a contract lab so I had some skills for the job. Imagine my surprise when I found out the poop really does go somewhere when you flush. Who knew! In my 21 years in the wastewater industry, I have run across other people working in our field that ended up here by accident; many of us were clueless about what went on at a wastewater plant before we started working for one. Maybe we were all absent from school on the day somebody gave the “this is why we need a wastewater plant” lecture, but I'm guessing the subject never came up.

One of the largest problems facing our industry is the lack of young professionals entering our ranks. We need to recruit new workers to replace those of us who are retiring, and we do not have the benefit of the 1970's “environmental awakening” driving our young people into environmental careers. Over the next several years, the pollution control industry will have stiff competition trying to attract new workers. The medical industry is already hot on our heels in terms of needing to fill jobs, and they have positions that are attractive in terms of salary and stability. As the Baby Boomers age and leave the ranks of the employed, they will place a huge demand on the healthcare system that will probably last for at least 20 years. Our industry needs new workers as well; those that see the intrinsic need for clean water as a way of insuring both our own lives as well as the future of life on our planet.

While environmentalist principles are taught as a part of the required curriculum in Ohio's elementary schools, there is no real connection made between what a child can do at home to conserve water and what a child may choose as a career to maintain clean water for a community. We can provide that link by giving teachers classroom materials that show what we do at our facilities and why it is important. We need to market our profession to the next generation of environmentalists . . . those workers who will fill our jobs when we are ready to retire.

The knowledge people gain when they are children can stay with them for the rest of their lives. If they are taught to care about the planet at a young age and feel it is part of their personal

continued on page 23



responsibility to conserve and protect our natural resources, then perhaps they will choose a career in an environmental field. We have the opportunity to let kids know in a creative and fun way how to be good stewards of the environment by developing and collecting educational materials that promote our industry. Many of the school kids I have worked with have the pre-conceived notion that the water they drink is somehow segregated from the water they flush; they do not realize all water is recycled and reused every day. Kids (as well as adults) are also surprised to learn that the quality of the water leaving Ohio has an impact on the Gulf of Mexico and the animals that live in the ocean.

In an effort to advertise Clean Water Jobs as a career option as well as market OWEA as a whole, I would like to create a web-based Resource Page for teachers. Hopefully I can post several hands-on water quality experiments that teachers can do in the classroom as well as Power Points that show Virtual Tours of the various wastewater treatment facilities around the state. Eventually, I would like to create an OWEA Speaker's Bureau with our members who are willing to be guest speakers in the classroom. The profession we have chosen can be an interesting one and teachers are always looking for a way to introduce their students to real-life professionals. Your speaking engagement can fulfill a state curriculum requirement for science as well as spark interest in a third-grader....a win-win in my book.

In order to accomplish this, I will need A LOT of input from our membership. YOU are the frontline professionals and this is the chance for you to show the public why your job is important. If I can post your projects on a website, then the chance to advertise your work will reach far beyond your town limits. Please email your ideas, power point presentations, videos, etc. to me at ntaylor@newarkohio.net with "Public Ed" listed in the subject line. I already have a few ideas in the works, but I would like to collect many, many more. If you are willing to speak in a classroom or open your facility to tours, let me know that as well. Thanks in advance for your efforts.

Nancy Taylor
ntaylor@newarkohio.net



ROLL CALL



Heading the Northeast Ohio office of Hazen and Sawyer is **Deborah J. Houdeshell, P.E.**, who brings to the firm more than 23 years of experience completing a wide variety of engineering, management, and operations assignments. Ms. Houdeshell is active with the Water Environment Federation (WEF), the Ohio Water Environment Association (OWEA past president), the American Society of Civil Engineers, and Ohio

Northern University. She was also the recipient of the WEF Sidney Bedell Award for Outstanding Service to a Member Association (OWEA) in 2009. Deborah holds a Masters in Civil Engineering from the University of Akron and a Bachelors in Civil Engineering from Ohio Northern University.

The Northeast Ohio office joins Hazen and Sawyer's Cincinnati office as the second in the State of Ohio.



Al Rupp, P.E., Manager of the Division of Surface Water in the Northwest District Office of Ohio EPA, retired on December 31, 2010. He started working for Ohio EPA in 1972 as a district engineer after almost 6 years with the Ohio Department of Health. His career was dedicated to improving the water quality in NW Ohio streams and rivers. Al was a long time member of OWEA and a lifetime member

of AWWA. He was inducted into the 5S group in 1995. In 1998, he received the first L.T. Haggerty Award for his outstanding guidance and technical assistance to wastewater plant personnel, and was awarded the J.W. Elms award in 2006 for his role in promoting conference activities, civic affairs, and leadership. He was a member of the Government Affairs Committee. Al plans to spend more time at his home in Devil's Lake, Michigan and with his grandchildren in his retirement.

OWEA Members may submit brief announcements with photo to info@ohiowea.org for publication in the Buckeye Bulletin. Please include your OWEA/WEF member number. All requests subject to editorial review.

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TAKE CARE OF YOUR BACK

by Ed Nutter

Experts estimate that about one third of all back injuries are the results of excessive mechanical stress on the back and spinal column. In our daily routine we lift, carry, hold, and push objects in many sizes, and shapes – placing stress on the structure of the back. Too often, many of us lift incorrectly.



While trying to become more productive and save time on the job, we often attempt to handle more than we are physically able. In the short term this appears to cause no harm, but over time we are setting for a debilitating injury. Back injuries are caused by repeated stress and

strain throughout a lifetime. The stress and strain creates many tiny “microfractures” that can scar joints and result in a loss of elasticity and an inability to bend.

A back injury can result from poor lifting techniques. A pinched nerve due to a back injury is very painful. The spine, an S-shaped bone structure with stacked bones and cushions (discs), is much like a jelly donut. When a person’s back is injured, some of the “jelly” is displaced. In time, as most of the jelly has exited, the bones rest directly on each other and grind away their substance.

Use the following tips to keep your back healthy:

- ◆ Choose a flat, straight, clear route to carry things even if it is longer.
- ◆ Move objects you might trip over.
- ◆ Bend at you knees and keep your back vertical.
- ◆ Grip with your hands not your fingers.
- ◆ Avoid lifting for the first hour after waking up. Your muscles are stiffer in the morning, and there’s more fluid in the spine making your back more vulnerable.
- ◆ Lift slowly. Fast motions are more likely to cause injuries in your back. Slower motions increase blood flow to the muscles you are using.

Back safety is not a question of strength; it is one of sensibility and longevity. To protect your back, you need to do it right all the time. It’s up to you to take care of your back.

WHAT IF?

by Ed Nutter

You know, some people have entirely too much faith in their co-workers. The two gents you see here are driving a grounding rod into the ground. The guy on the bottom got the raw end of the deal.



So let’s play a game. I say “What If” and you answer the question in your mind. Ready? O.K.

- ? What if the guy using the sledgehammer missed and bonked the holder on the head?
- ? What if he lost his balance and fell out of the backhoe bucket?
- ? What if a chip of metal broke off and flew toward the holder’s face?
- ? What if the holder slipped and fell into the trench behind him?
- ? What if the holder sneezed just as hammer was coming down?

That was fun, wasn’t it? Hey folks, here’s a great idea ... play the “What If” game before you start working on a project. You just might be able to eliminate some hazards and prevent an accident.

Ed Nutter
Safety Committee Chair
enutter@newarkohio.net



BACK INJURY STATS

According to the U.S. Bureau of Labor Statistics “musculoskeletal disorders (MSDs), often referred to as ergonomic injuries, accounted for 28 percent of all workplace injuries and illnesses requiring time away from work in 2009.” Back injuries accounted for 46.5% of those MSDs. The median number of days away from work for a back injury is 7 days. Consider the pain and life disruption to the injured worker and the disruption to the employer, and one can see why back injuries had a billion dollar plus effect on U.S. businesses in 2009.

The good news is with better education and training, the number of back injuries has been decreasing steadily over the past several years. The bad news is some of this decrease may have been caused by the declining job market.



REGISTER NOW!

THE OHIO WATER ENVIRONMENT ASSOCIATION
PRESENTS

SOMEWHERE BETWEEN SURVIVAL & SUSTAINABILITY JUNE 21 - 23, 2011

OWEA Awards Brunch - Tuesday

Facility Tour - Tuesday, Kalahari Treatment & Pumping Systems

Exhibit Expo - Tuesday, 70+ Exhibitors

Technical Sessions - Wednesday & Thursday

Wednesday: 48 Technical Sessions/4 Concurrent Tracks

Thursday: 9 Technical Sessions/3 Concurrent Tracks

plus the latest **Ohio EPA Updates**

Annual Banquet - Wednesday Night

WEF Awards, Passing of the Gavel, and more . . .

Golf Outing - Monday at Thunderbird Hills Golf Club

Meet & Greet - Tuesday Night

Networking on the wild side at Kalahari

Earn up to
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Hours**

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at Kalahari Resort and Convention Center - Sandusky

7000 Kalahari Drive ■ Sandusky, Ohio 44870 ■ 877.525.2427



Hosted by OWEA's Northwest Section. For information contact:

Doug Borkosky
614.361.3673
doug@hlbaker.com

Dave Sprague
419.394.4114
dsprague@cityofstmarys.net

Ohio Water Environment Association
614.488.5800
info@ohiowea.org

Top Ten Reasons

You Should Attend the 2011 OWEA State Conference

Reason #10: Location

You're in for a new conference experience. Kalahari Resort includes a spacious, modern conference center, and over 800 guest rooms. All conference activities except golf, one facility tour, and the spouse/guest program will take place on-site. Parking and internet access are complimentary!

Reason #9: Relaxation

Evenings are for rest, relaxation, and networking. The Meet & Greet on Tuesday night offers a traditional pig roast, complete with food, drinks, music, dancing, and much more. Conference rooms include water park passes, another opportunity for networking. In addition, the resort offers a spa, an animal park, arcade, pottery barn, restaurants, candy shop, gift shops, and more.

Reason #8: Peer Planning

The conference planning committee members are experienced and enthusiastic representatives of municipalities, consultants, Ohio EPA, vendors, and manufacturers...conference planning for water quality professionals by water quality professionals.

Reason #7: Meals

The Kalahari offers superb culinary capabilities. Continental breakfasts, the Awards Brunch, and the Annual Reception and Banquet are included with full registration.

Reason #6: People

You will meet and connect with colleagues who are passionate about their work and like to have fun.

Reason #5: Tours

Two tours will be provided: an on-site tour of the Kalahari water treatment and support areas and a tour of the Sandusky WWTP.

Reason #4: Exhibits

See, touch, and learn about the latest and greatest technology. Meet representatives from large and small companies in the wastewater field. Ask the questions you really want to know and gather the facts to make informed decisions.

Reason #3: Education

Learn from fellow water quality professionals, hear the latest trends, discover new solutions, and more. Attendees can choose from over 50 technical sessions and easily earn up to 12 contact hours.

Reason #2: Networking

Networking is perhaps the most important benefit from the conference. Discuss problems and solutions with like-minded professionals. You'll be hard pressed to find a better way to meet and develop a network of water quality professionals. Relationships and contact from three days in June can provide support throughout your career!

Reason #1: Value

This year's State Conference is more than the sum of its parts. You'll take away so much more than the handouts and business cards – you'll walk out with peer connections and access to knowledge that will impact your bottom line and day to day work for years to come. Gain new skills and knowledge to enhance your expertise as a water quality professional. Registration fees include banquets, technical sessions, exhibits, meals, special events, and more. The basic room rate is only \$114 per night, an unbelievably affordable rate. With the economic challenges facing municipalities today, there has never been a better time to attend a value-driven conference.

Dear Colleagues,

Dumela! Tjike! Sawubona! Molo! Hallo!....or just Hello! As you'll see, we're getting ready for the 2011 OWEA Annual Conference! This is our chance to escape to another world and yet experience the hospitality of northern Ohio as we gather at the African themed Kalahari Nia Convention Center in Sandusky Ohio.

Somewhere Between Survival and Sustainability.

In selecting the theme for the 2011 conference, we were influenced greatly by the conflict many municipalities are facing....namely the decreasing availability of water and sewer revenues and project funding that complicates the need to address failing infrastructure and increasing regulatory requirements. There is a general desire to do what is right—to find ways to take care of infrastructure and be good stewards of the environment—to look for sustainable programs and technology. Yet it is increasingly obvious that the economy is pushing decision makers into survival mode...

These goals—survival and sustainability—are exemplified by the Kalahari region in southern Africa. The Kalahari has a large desert component—where life is tough and survival difficult. However, there are parts of the Kalahari that are rich with life and water. Some regions have water year round, and others take advantage of seasonal water availability...surviving on what is available. Life in the Kalahari is truly somewhere between survival and sustainability.

Closer to home, the conference technical program is going to include the traditional types of topics covering technology and regulations, but it is also going to include a special emphasis on sustainable practices like asset management and green technology. OWEA President-Elect Doug Clark and his team have worked hard to organize the technical program—and it looks great!

So, as we gather this June to conduct business, network, celebrate exceptional professionalism, and learn about technology, we look forward to exploring both "survival" and "sustainability". We may discover that these two concepts are not so far apart that they require choosing one or the other. Hopefully we will discover that many things we do for survival can be easily adapted for sustainability, and that many sustainable practices will eventually lead to easier survival.

The 2011 Annual Conference Committee is looking forward to welcoming you this June. Mark your calendars, submit your travel requests, reserve your rooms...and join us at Kalahari!

Sincerely,

2011 Annual Conference Committee Chairs
Doug Borkosky, doug@hnbaker.com
Dave Sprague, dsprague@cityofstmarys.net



Somewhere Between Survival & Sustainability

Where are you on that spectrum?

The decisions that operators, engineers, managers, and regulators have to make are motivated by a need for preservation (survival) but also a desire to improve the environment. Sometimes, our solutions include a mix of survival and sustainability. In the end, truly "sustainable" options should lead to survival . . . right?

President-Elect Doug Clark has designed the 2011 Technical Program to explore this relationship between survival and sustainability.

See the program offerings on page 30.

SCHEDULE | Monday, June 20 - Thursday, June 23

MONDAY, JUNE 20

8:30 a - 5:30 p	Golf Outing - Thunderbird Hills Golf Club
4:00 p - 6:00 p	Registration - Kalahari Nia Convention Center
5:00 p - 9:00 p	Exhibitor Setup
7:30 p - 9:00 p	Executive Committee Meeting

TUESDAY, JUNE 21

7:00 a - 5:00 p	Registration - Kalahari Nia Convention Center
TBA - TBA	Onsite Tours of Kalahari's Water Treatment/Support Areas <i>Sign Up at Registration Desk</i>
7:00 a - 8:30 a	Exhibitor Setup
7:00 a - 9:30 a	Continental Breakfast
8:30 a - 10:30 a	Exhibit Expo Open
10:30 a - 1:00 p	Awards Brunch
1:00 p - 4:30 p	Spouse/Guest Program
1:30 p - 2:30 p	OWEA Annual Business Meeting
1:00 p - 5:00 p	Exhibit Expo Open
4:00 p - 5:00 p	Afternoon Social in the Exhibit Expo Area
5:00 p - 6:00 p	Exhibit Tear Down
6:00 p - 10:00 p	Meet & Greet at Kalahari's Zanzibar

WEDNESDAY, JUNE 22

7:30 a - 5:00 p	Registration - Kalahari Nia Convention Center
7:30 a - 9:00 a	Continental Breakfast
8:00 a - 10:00 a	Exhibit Tear Down
8:30 a - 11:45 a	Technical Sessions (4 Concurrent Sessions)
9:00 a - 4:30 p	Spouse/Guest Program
11:45 a - 1:15 p	Lunch - Kalahari's Pavillion
11:45 a - 1:15 p	President's Luncheon (by invitation)
1:15 p - 4:30 p	Technical Sessions (4 Concurrent Sessions)
6:00 p - 7:00 p	Social Reception - 5S Induction
7:00 p - 10:00 p	Annual Banquet
10:00 p - 12:00 a	After Banquet Gathering - Live Music in Kalahari's Reserve

THURSDAY, JUNE 23

7:00 a - 11:00 a	Registration - Kalahari Nia Convention Center
7:30 a - 9:00 a	Continental Breakfast
7:30 a - 8:30 a	5S Breakfast
8:30 a - 10:00 a	Technical Sessions (3 Concurrent Sessions)
10:30 a - 12:00 p	Technical Session (Ohio EPA Updates)

Did you know?

- Over 500 individuals have attended and/or participated in each of the past three Ohio Water Environment Association's annual conferences held in 2008, 2009, and 2010.
- The exhibit expo booths have been sold to capacity in each of the past three years.
- An army of OWEA volunteers provides the planning, coordinating, moderating, monitoring, ticket taking, sign wrangling, and many other tasks to provide this educational experience for Ohio's water quality professionals.

2011 Tariffs

Early Registration - by May 27th:

Full Conference Member	\$275
Full Conference Nonmember	\$375
Retired Member Full Conference	\$120
Tuesday Only Member	\$145
Tuesday Only Nonmember	\$195
Wednesday Only Member	\$145
Wednesday Only Nonmember	\$195
Student	\$50
Spouse/Guest Program	\$160

Late Registration - after May 27th:

Full Conference Member	\$325
Full Conference Nonmember	\$425
Retired Member Full Conference	\$170
Tuesday Only Member	\$170
Tuesday Only Nonmember	\$220
Wednesday Only Member	\$170
Wednesday Only Nonmember	\$220
Student	\$75
Spouse/Guest Program	\$210

Exhibitor Registration:

Includes Full Conference Registration for Primary Exhibitor

Member Exhibitor	\$700
Nonmember Exhibitor	\$850
Extra Booth Attendant	\$40

Golf Registration:

Foursome	\$300
Individual Golfer	\$75



Register online
www.ohiowea.org

AWARDS BRUNCH | Tuesday, June 21, 10:30 am to 1:00 pm

Bring your appetite and your appreciation for the 2011 award winners to the Ohio Water Environment Association Awards Brunch. The brunch will be held on Tuesday, June 21 at 10:30AM in the ballroom of the Kalahari Convention Center. After an awesome meal of carved New York strip loin, wild mushroom chicken sauté, smoked salmon, fresh scrambled eggs, classic Eggs Benedict, buttermilk pancakes, sausage, bacon, assorted salads, fresh fruit and vegetables, bagels, and desserts (basically, something for everyone!) we will present the OWEA state awards, the 5S nominees, and the Crystal Crucible and Golden Manhole award winners.

If you know someone who is a candidate for a future award, please give their name to your section award committee representative (available online at www.ohiowea.org).



OWEA ANNUAL BUSINESS MEETING | Tuesday, June 21, 1:30 to 2:30 pm

Participate in the election of OWEA's officers, hear OWEA's financial report, catch up on organizational news, committee news, and learn about the activities of the NW, NE, SW, and SE Sections.

KALAHARI TOUR | Tuesday, June 21 - Sign-up at Registration Desk

No bus needed!

This year OWEA is pleased to offer a facility tour without leaving the site of the meeting! Kalahari Resort Sandusky has an indoor water park that covers 173,000 SF and an outdoor waterpark covering 77,000 SF. Underneath the waterpark and the nearly 900 hotel rooms lies a service area that manages not only housekeeping and laundry but also water treatment and reuse.

As part of the tour, attendees will see:

- Several banks of pressure filters
- Inline UV disinfection units
- Chlorine storage and dosing
- Chlorine monitoring equipment
- Boilers and heat exchangers
- Centrifugal blower room for wave generation

In addition, the tour will also explore other pollution prevention, energy saving, and green initiatives in the waterpark, laundry and kitchen areas of the resort. Examples include:

- Installation of Texlon transparent roof system which allows natural light in to help heat America's largest indoor waterpark.
- Installation of ozone laundry system which allows for faster washing and drying using less chemicals and less energy.
- Partnering with a local landscaping company to implement a food waste composting system.
- Installation of low-flow showerheads in guest rooms, reducing water consumption by more than two million gallons per year.
- Installation of massive fans in the waterpark to lower heating costs by pushing warm air near the ceiling to floor level.
- Installation of HVAC energy management system.
- Installation of 200 indoor waterpark lighting with fluorescent fixtures, LED exit signs, and motion-sensored lights in public areas.
- Installation of 15-watt compact fluorescent bulbs in 5,500 fixtures, saving 294,000 kWh per year.
- Installation of low-flow dishwasher sprayheads.
- Reducing oven pre-heating and combining underused coolers.

Sign-up for Facility Tours onsite at the OWEA registration desk. Contact hours pending for this one hour tour! For more info: visit www.ohiowea.org.



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WEDNESDAY, JUNE 22 - A.M. TECHNICAL SESSIONS*

Spending More to Save More	Green Technology / Energy	Asset Mangement	CSO - SSO
Bulk or On-Site Generation: What's Your Hypochlorite Sol <i>Kyle Novak</i>	An Econ & Green Alternative for Diss Nutrient Recovery <i>Katya Bilyk</i>	Managing Your Assets <i>Tom Fishbaugh</i>	Evaluating Water Quality at CSO by a Novel Approach <i>Ting Lu (YP)</i>
Development of a Method for the Eval of WAS Reduction <i>Julian Sandino</i>	Developing Bioplastics From Wastewater Treatment <i>Mike Maringer</i>	Managing Your Assets <i>Tom Fishbaugh</i>	High Rate Treatment as Part of the Sol for Wet Weather Flows <i>Tom Bulcher</i>
Development of a Method for the Eval of WAS Reduction <i>Julian Sandino</i>	Achieving Econ & Environ Sustainability Objectives <i>Michael Bullard</i>	Managing Your Assets <i>Tom Fishbaugh</i>	Integrated Approach to Handle Growth & Wet Weather Flows <i>Tom Bulcher</i>
Replacing Old Sand Filters with Modern Disc Filters <i>Tom Kutcher</i>	Energy Efficiency Evaluation for Process Aeration Blowers <i>Scott D. Phipps</i>	Managing Your Assets <i>Tom Fishbaugh</i>	Visualize the History of a Sewer Collection System with Free Tools <i>Mel Yuanhang Meng</i>
2 Green ARRA Proj & 1 WWTP: An Equat for Energy Savings <i>Ashley G. Elber</i>	Energy Optimization in Membrane Bioreactors <i>Brian Codianne</i>	I Think, Therefore I AM (Asset Management) <i>Kevin Camapanella</i>	Establishing a Benchmark for CSO Mitigation <i>C. Gibson Chen</i>
Best Value Pre-Selection and Procurement <i>Terry Gellner</i>	Dissecting your Electric Bill: Energy Efficient Operations of WWTP's <i>Kevin T. Krejny</i>	I Think, Therefore I AM (Asset Management) <i>Kevin Camapanella</i>	Interim Interconnector Sewer Operational Plan Update <i>Gary Hickman</i>

WEDNESDAY, JUNE 22 - P.M. TECHNICAL SESSIONS*

MBR / Emergency Planning	Dewatering / Potpourri	Collections	CSO - SSO
Efficiently Managing Peak Flows in MBR <i>Dennis Livingston</i>	Press or Spin? Dewatering Case Studies <i>Steven C. Reese</i>	Large Diameter Sewer Inspection Finds More than Expected <i>Stuart Browns</i>	Real Time Savings: Trans RT Hydraulic Data <i>Luis Montestruque</i>
MBR vs Conventional Treatment Disinfection Study <i>Ashley G. Elber</i>	Rotary Drum Sludge Thickening: Maximizing Process Proform <i>Marty Davidson</i>	Corrosion Condition Assessment of Force Mains <i>James T. Lary</i>	Plan to Save Money, Afford Eliminating Basement Backups <i>Curtis D. Courter</i>
MBR vs Conventional Treatment Disinfection Study <i>Ashley G. Elber</i>	Saving a Gravity Belt Thickener: Maximize Belt Longevity <i>Shawna Gill</i>	Applying Common Sense to PACP Sewer Grading Systems <i>Elizabeth Ehret</i>	Louisville & Jefferson Co MSD Downspout Disconn Pilot Prog <i>Timothy Kraus</i>
When Diaster Strikes <i>Dan Miklos</i>	It's a Volatiles Issue: Sampling for Organic Analysis <i>Kathleen Richards</i>	Odor Control In Collections <i>Bill Hyland</i>	Maywood Ave CSO Vol Reduct with Green Infrastructure <i>Patekka Bannister</i>
Will you be ready for your next power outage? <i>Ed Dunn</i>	Operators: Not Just Another Strong Back <i>Joe Tillison</i>	Del Quality Customer Serv during Sewer Imp Projects <i>Pat Esposito</i>	Urban Green Street Design to Target CSO Reduction <i>Christopher J. Rust</i>
Benefits of a Backup System Control Center <i>Greg Betz</i>	You Are In The Healthcare Business <i>Doug Brookhart</i>	Del Quality Customer Serv during Sewer Imp Projects <i>Pat Esposito</i>	Evaluating Green Alternatives for Inflow Redirection <i>Heather Seitz</i>

THURSDAY, JUNE 23 - A.M. TECHNICAL SESSIONS*

BNR	Potpourri / EPA	Small Communities
Sustainable Approaches to Meeting Potential Future Nutrient Limits <i>Sam Jeyanayagam</i>	Using Energy Savings Performance Contracts <i>David Wrightsman</i>	Small Community Wastewater Challenges <i>Bill Zawiski</i>
Carbon & Oxygen Engineer to Achieve Afford Nutrient Rem <i>Mark Greene</i>	Evaluating the Environ Impacts of WW Treat using Life Cycle <i>Joe Rohrbacher</i>	Small Community Wastewater Challenges <i>Adam Voris</i>
Enhanced N Comp Rem in Cold Climate Dom WW Treat Lag <i>Kraig Johnson</i>	What is a TSD & why should I care <i>Bill Zawiski</i>	Valiant Efforts in Versailles: How One Comm Bal Growth <i>Jim Gagnon</i>
Ohio EPA Director - Scott J. Nally		
Ohio EPA Chief Division of Surface Water - George Elmaraghy		
Ohio EPA Operator Certification - Andy Barienbrock		

*Technical Schedule subject to final revision

MEET & GREET | Tuesday, June 21, 6:00 pm to 10:00 pm**“NETWORKING ON THE WILD SIDE AT KALAHARI”**

at ZanziBar in Kalahari's Safari Outdoor Adventure Park

Pack your safari khakis for the 2011 OWEA Meet & Greet. Located in Kalahari's outdoor waterpark, the tiki-hut styled **ZanziBar** will play host to a private Vark Braai (hog roast) just for conference attendees. Network with your fellow water quality professionals and enjoy a traditional hog roast, complete with food, drinks, music, dancing, and much more.

The theme for this year's conference is **“Somewhere Between Survival and Sustainability”**, but what does the Meet & Greet have to do with survival and sustainability?

Networking is a business habit that benefits everyone - regardless of your stage in work and life. Taking advantage of knowledge and wisdom gained and shared by others makes survival easier! Learning from the experience of others can help in understanding sustainability - how do others keep on keeping on with less?

Can you survive? Explore your wild side on a thrilling zip line, ropes course, climbing walls, and more. Join us at an oasis of food and drink!

Can we sustain the fun? Dance to the music of **Free Rider**, one of west-central Ohio's best bands. They play music that makes people feel good and have a great time. Have a special request? They'll play it...even if they don't know it!

Networking on the Wild Side begins Tuesday evening at 6:00 pm!

RECEPTION AND ANNUAL BANQUET | Wednesday, June 22nd, 6:00 pm to 10:00 pm

The Annual Banquet will be held on Wednesday, June 22, 2011. The activities will include a Social Reception at 6:00 p.m. The ceremonious 5S Induction will take place during the Social Reception.

The banquet will start at 7:00 p.m. This year's banquet program will honor those receiving WEF Awards, presented by a representative of WEF. Next will be the passing of the Ohio Water Environment Association gavel from outgoing President Dale Kocarek to the incoming President Doug Clark.

Enjoy a delectable dinner prepared by the excellent Kalahari chefs and help celebrate the work of OWEA and its long tradition of dedicated and talented leaders.



Trek over to Kalahari's African themed Restaurant & Bar, **The Reserve**, for the OWEA post-banquet social. As the sun sets on the village, the Reserve offers an opportunity to gather at the watering hole. With more live music and room to relax, there is no reason to go to bed when you can continue to network with your peers in the water quality industry.



THUNDERBIRD HILLS GOLF CLUB | Monday, June 20 - 10 a.m. Shotgun Start

Where: Thunderbird Hills Golf Club
1316 Mudbrook Road
Huron, OH 44839
419.433.4552

Format: 240 Golfers
(30 Teams Per Course)
Four Person Scramble

Times: 8:30 a.m. Registration
8:30 a.m. Driving Range Open
10:00 a.m. Shotgun Start

Prizes: Prizes for Long Drive,
Pin Shots. Cash Prizes
for Winners from Each Course

\$300 per Foursome includes: Golf Cart, Range, Lunch, Dinner, Beverages, Prizes, and Events.

Thunderbird Hills Golf Club is a gorgeous, 36-hole, public golf facility located in quaint Huron, Ohio, less than 45 miles west of Cleveland and less than ten minutes East of Cedar Point. Thunderbird Hills Golf Club offers golfers of all levels the opportunity to combine golf with nature. It is literally minutes from the best roller coaster park in the world, the largest indoor water park in the country, some of the nicest beaches in Ohio, and the Lake Erie Islands.

The North Course opened in 1959 and it is characterized by its mature trees and rolling fairways. The course is 6,347 yards in length with par at 72.

The South Course is a more modern layout with larger greens and lush bent grass fairways and tees. It opened in 1995, and was designed and built by Bruce Palmer. This course shares the rolling hills of the North, but it incorporates breathtaking elevated views of the Huron River through the middle holes of the front nine. The course is 6,368 yards in length with par at 72. Take a virtual tour of Thunderbird Hills Golf Club at www.thunderbirdhills.com.



SANDUSKY AREA | Local Attractions

The Sandusky area is usually solely identified with Cedar Point, the park so grand that for the last eight years, it has been honored by Amusement Today with the Golden Ticket Award, which is presented to the best amusement park in the world. But this area is not just the home of Cedar Point.

In Sandusky you can also enjoy shopping, museums, boating, cruises, water parks, golfing, fishing, camping, spelunking, dining, wineries, and much more. For more information on attractions listed below and other nearby activities, visit www.shoresandislands.com or call 800.255.ERIE.

- Boating & Fishing
- Cedar Point
- Cruises & Ferries
- Historical Attractions
- Lake Erie Coastal Ohio Trail
- Merry Go Round Museum
- Outdoor Recreation, Hiking, Water Trails
- Sandusky Maritime Museum
- Sandusky State Theatre
- Shopping



CONFERENCE VENUE | Tuesday, June 21 - Thursday, June 23

Experience "A World Away" right here in Ohio! Join OWEA at the Kalahari Resort and Convention Center in Sandusky, Ohio. Kalahari has over 100,000 SF of convention space, modern audio/visual resources, elegant meeting rooms, superb culinary capabilities, and over 800 rooms. All conference activities except golf, one facility tour, and the spouse/guest program will take place on-site. With free parking, free wi-fi, convenient highway access, and close proximity to Sandusky and Lake Erie, there is a low stress stay waiting for conference attendees!

With so many rooms, there are options for attendees, including multi-family suites and hospitality suites. The basic room rate is only \$114 per night for four persons (Hut Room), so attendees get resort lodging at an unbelievably affordable rate!

Family friendly - attendees and their guests can also enjoy the indoor and outdoor waterparks, including over 3½ football fields of waterpark, rides, and facility under roof. (OWEA conference room rates include waterpark passes.) In addition, the resort offers a full service spa, animal park, arcade, pottery barn, restaurants, candy shop, and gift shops.

If you have questions about the rooms, resort, convention center, or conference in general, feel free to check out Kalahari's website (www.kalahariresorts.com/oh/) or contact OWEA directly for assistance.

OWEA room rates available from Sun June 19 thru Wed June 22.
Make your reservations via the link at www.ohioweaa.org
or by calling Kalahari Resort Sandusky at 877.525.2427.
Cutoff date for reservations is Friday, May 27th.

Room Options:

Hut Room (4 waterpark passes)	\$114
Lodge Suite (1 bedroom, 4 waterpark passes*)	\$164
Combination Suite (2-Bedroom, 8 waterpark passes*)	\$274
Village Suite (3- Bedroom, 12 waterpark passes*)	\$374
Hospitality Suite (4 waterpark passes**)	\$204

*Assumes use of sleeper sofa. If additional children sharing beds, can add additional water park passes at \$20 per night per person.

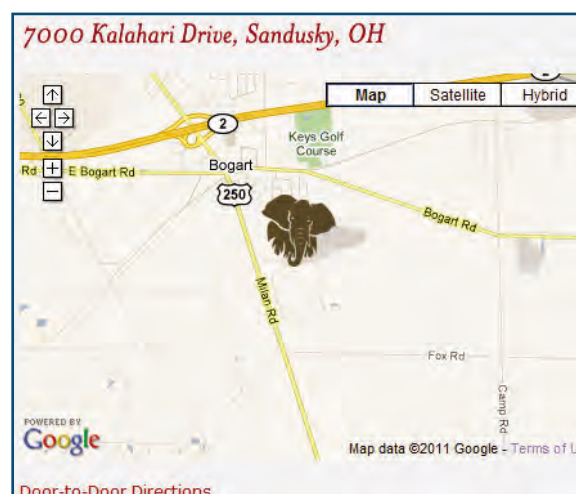
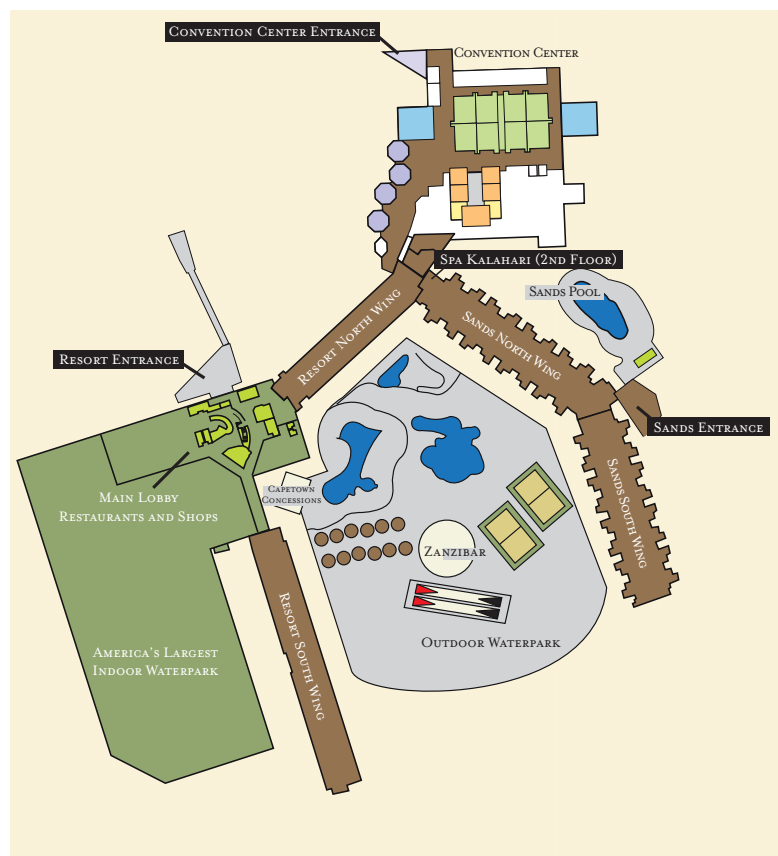
**Can add one or two people to Hospitality Suite for \$20 per night per person (assumes use of sleeper sofa).



Hut Room



Combination Room



OWEA APPRECIATES ITS SPONSORS!

Many of the events and activities that distinguish OWEA as a premiere association are only possible because of sponsorship. These events include the Annual Conference, Operators Challenge, the Ohio Mixer, as well as section and committee events. Sponsors also help support worthy causes such as Water for People, Stockholm Junior Water Prize, Science Fair awards, and scholarships.

Because we appreciate our sponsors, OWEA is changing the way we ask for support. You may be contacted soon by Sponsorship Committee Chairs Ted Baker or Dan Sullivan. In the meantime, if you already know that you want to help sponsor OWEA and our 2011 Annual Conference, please contact us at info@ohiowea.org or **614.488.5800**.

Thank you for your continued support!

And **thanks again** to OWEA's sponsors from the **2010 Annual Conference**:

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OWEA NEEDS YOUR HELP

A Successful Conference is absolutely dependent on the contributions of time and effort from volunteers. From planning to executing, there are so many tasks to be undertaken. If interested in helping out, contact OWEA at info@ohiowea.org or 614.488.5800, Conference Co-chairs Doug Borkosky or Dave Sprague, or use the online form at www.ohiowea.org/2011_annual_conference.php.

Volunteer Opportunities for the 2011 Conference include:

Registration Assistant – Responsible for helping to staff registration desk. Time Commitment: 1 hour or longer. Tasks: Greet attendees and help distribute registration packets. Time slots available: Monday Noon – 6p; Tuesday 7a – 6p; Wednesday 7a – 6p; Thursday 7a – 1 p. (Many needed.)

Monday:

Golf Volunteer – Responsible for assisting with golf outing activities. Time commitment: 7:00 am to 3:00pm (+/-), less possible. Tasks: Help with registration, help direct golfers to carts, charity hole (collect money & handle tickets), etc. (12 Needed)

Tuesday:

On-site Plant Tour Monitor—Responsible for tracking participation on plant tour. Time Commitment: 90 minutes. Tasks: Sign-in participants and walk with tour group. Sign-out participants at conclusion. (4 needed)

Exhibit Tour Monitor—Responsible for leading and tracking participation as group visits four exhibits. Time Commitment: 90 minutes. Tasks: Sign-in participants and walk with tour group. Sign-out participants at conclusion. (4 Needed)

Sign Wrangler – Responsible for switching, moving and positioning directional and event signs. Time Commitment: Sporadic but minimal. Tasks: Move signs prior to events according to predetermined schedule. (2 Needed)

Ticket Taker – Responsible for taking tickets at Awards Brunch. Time Commitment: 1 hour or less. Task: Stand at buffet line and take tickets. (3 Needed)

Wednesday and Thursday:

Moderator – Responsible for the timing and flow of a block of tech sessions. Time commitment: Half Day. Tasks: Introduce and assist speakers for one block of tech sessions. Requested to dress in business casual (or better) attire. (12 Needed)

Monitor – Responsible for managing traffic in and out of technical session room. Time commitment: Half Day. Tasks: Serve as door monitor and help with contact hour sign-in/sign-out. (12 Needed)

Sign Wrangler – Description same as Tuesday. (2 Needed)

Ticket Taker – Responsible for taking tickets at lunch. Time Commitment: 1 hour or less. Task: Stand at serving line and take tickets. (2 Needed)



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A SUSTAINABLE WATERSHED-BASED APPROACH TO CSO CONTROL

by Kelly Kuhbander, LEED® AP, Strand Associates, Inc.®

Combined sewer systems convey both stormwater and sanitary flows and are prevalent throughout hundreds of communities, serving nearly 40 million people across the nation. During dry weather, combined sewers transport wastewater to a treatment plant, but during rain storms the pipes are overloaded with both storm water and sanitary flows. As a result the excess water can overflow into the streams and is referred to as a Combined Sewer Overflow (CSO). Today communities are being impacted by national EPA regulations to address CSOs. Expenditures totaling an estimated \$140-billion nationwide will be required for mitigation measures. Each community will develop a site-specific approach to CSO compliance, but regardless of their unique solutions most communities face large capital expenditures on CSO controls.

The question is: After your money has been spent to implement these CSO control solutions, what will your community have to show for it?

In response to this question, Strand Associates, Inc.® and Human Nature, Inc. ® have developed an innovative watershed-based approach to CSO control similar to a comprehensive planning process. Consideration is given to the unique attributes and opportunities specific to each community and even to each watershed within a community. This approach considers a broad range of information far beyond the basic data evaluated for traditional sewer projects. Specifically, the watershed approach identifies and analyzes the important relationships among the environment, infrastructure, the economy, natural systems, communities and neighborhoods. While this approach would certainly not be considered a traditional “gray” solution, it is neither comprised of only “green” infrastructure. Rather this holistic approach considers all possible solutions within a larger context than just CSO control. The objective is to identify cost effective solutions for CSO compliance while integrating the controls into a larger vision for the community as a whole.

A key element of the watershed approach that has made it so successful is the effort to consider all available information at the beginning of the process. This approach provides a detailed understanding of an area and allows for a comprehensive evaluation of alternative CSO controls. The data considered includes traditional information such as existing infrastructure, soil characteristics and natural drainage. Also considered are many items often neglected, such as demographics, historical mapping, economic trends, community visions, social variables, etc. By considering this type of watershed information from a more holistic perspective, the process creates a stronger foundation on which to build CSO solutions.



A Concept Plan for Lick Run Urban Channel Near Cincinnati, Ohio, Image Source: Human Nature, Inc.

As one might imagine, there are many benefits of using the watershed-based approach for CSO control versus more traditional approaches:

- ◆ Resulting solutions are tailored to each specific community, and promote public and private partnerships.
- ◆ The process also helps garner political and public support for CSO projects by engaging stakeholders early, and incorporating community visions into the planned solutions.
- ◆ The solutions emphasize the use of natural systems and sustainable infrastructure with clear environmental considerations.
- ◆ A business case evaluation provides cost/benefit comparisons to more traditional solutions.
- ◆ The process delivers tangible, visible assets for the community.

One of the more high profile examples of this process has gained a lot of attention in the Lick Run Watershed near Cincinnati, Ohio. Lick Run is a 2,700 acre watershed located on the west side of Greater Cincinnati in an economically challenged neighborhood. The Lick Run watershed is the location of Metropolitan Sewer District of Greater Cincinnati's (MSDGC's) largest combined sewer overflow (CSO #5). This CSO discharges approximately 1.7 billion gallons of combined sewage annually to the Mill Creek (a direct tributary to the Ohio River), accounting for approximately 12 percent of MSDGC's total annual CSO volume. The original solution proposed for this CSO was a \$245-million deep tunnel to store and convey for treatment 1.7 billion gallons of CSO to the Mill Creek wastewater treatment plant.

Using the watershed-based approach to CSO planning, a more sustainable alternative solution was developed for the Lick Run Watershed. This alternative proposes the restoration of the historic Lick Run stream into a new open channel stormwater system as the foundation of a targeted sewer separation program and as a catalyst for a community redevelopment initiative. This alternative solution proposes enhancement of natural drainage systems, and implementation of green stormwater features throughout the watershed to provide both water

quality and volume reduction benefits. The creation of this urban stormwater channel will allow clean stormwater flows to be conveyed to Mill Creek rather than being stored in a deep tunnel and treated at the wastewater treatment plant. This alternative addresses the CSO issue while creating a community vision focused on significant urban revitalization.

The benefits of this sustainable solution extend far beyond just CSO control. Modeling indicates this watershed-based solution in the Lick Run watershed will keep approximately 1.26 billion gallons of clean stormwater from being conveyed and treated at the wastewater treatment plant each year. The alternative design will also reduce the annual overflow volume of CSO #5 by more than one billion gallons annually. Additional projected benefits of this solution include an annual energy savings of four billion megawatts and 2.4 metric tons of CO2 emissions at the Mill Creek wastewater treatment plant. Water quality benefits for Mill Creek will also be realized as the proposed green stormwater features cleanse the urban stormwater runoff before it is discharged to the creek.

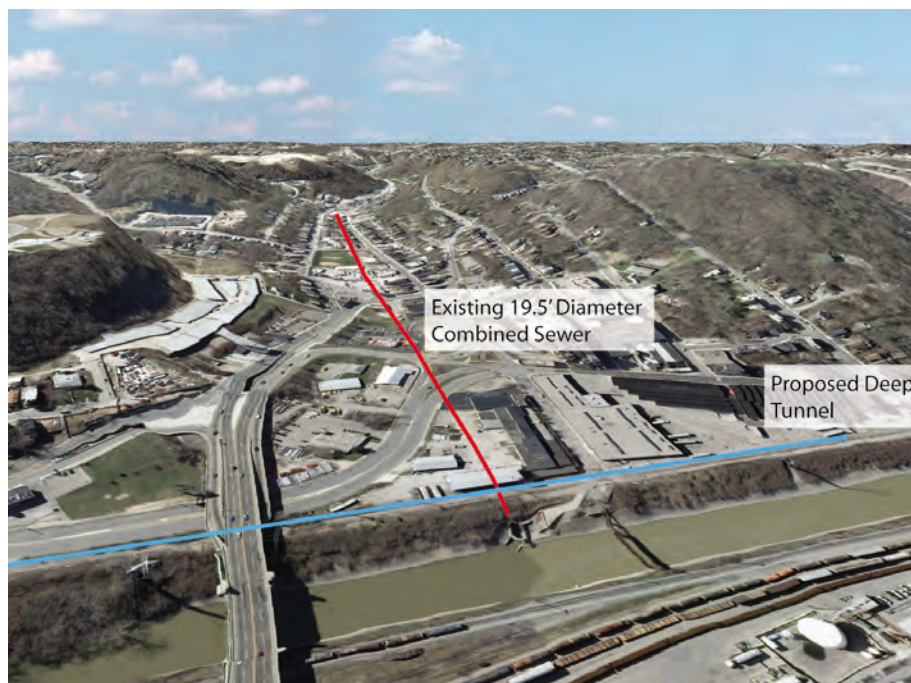
In addition, many of the benefits of the sustainable solution cannot easily be quantified, such as the anticipated social and economic revitalization that a new urban channel feature could provide to this declining area. This project also opens the door to other community benefits such as area partnerships that could provide improvements to transportation, housing, and other community features.

Although the details of this Lick Run sustainable solution are still being evaluated and modified, the sustainable concepts developed by the watershed-based approach are currently the foundation of MSDGC's vision for the final Lick Run CSO solution. The estimated costs for the sustainable alternative compare favorably with the estimated costs for the tunnel solution, but the auxiliary benefits of the sustainable solution far exceed the basic CSO benefits the tunnel would provide. As a result MSDGC's Lick Run project has been receiving a great deal of positive attention and feedback. EPA has referred to this project as an ambitious and innovative national pilot for the future of CSO control.

The Lick Run project is just one example of how the watershed-based approach to CSO control can provide various community benefits beyond just CSO control. Every watershed is unique and different outcomes will result from each application of the watershed approach,



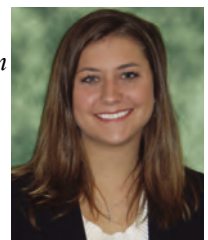
Proposed Sustainable Solution, Image Source: Human Nature, Inc.



Concept of Lick Run Proposed Deep Tunnel Solution

but the concepts can be applied to nearly any CSO problem. When determining the solution to an existing sewer issue, looking at all aspects of the watershed, and not just at the sewers, can result in incredible opportunities that would have otherwise not been realized. These sustainable opportunities have the potential to leave behind so much more than just a pipe in the ground and can make many positive impacts on the lives of future generations. So when your community is evaluating CSO control options resulting in major capital expenditures, you may want to consider what you will have to show for it.

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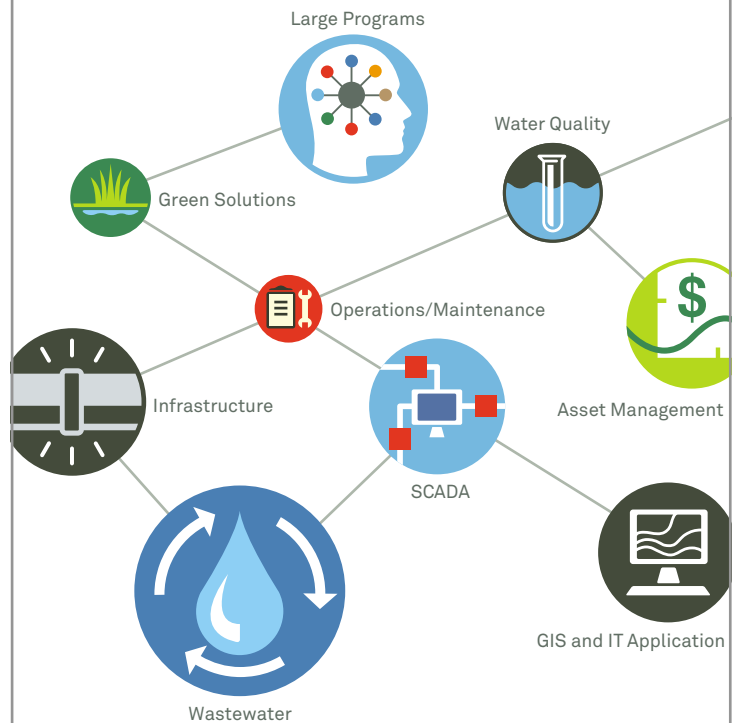
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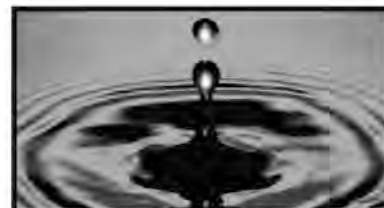


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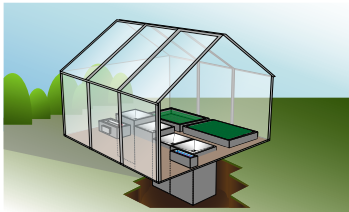


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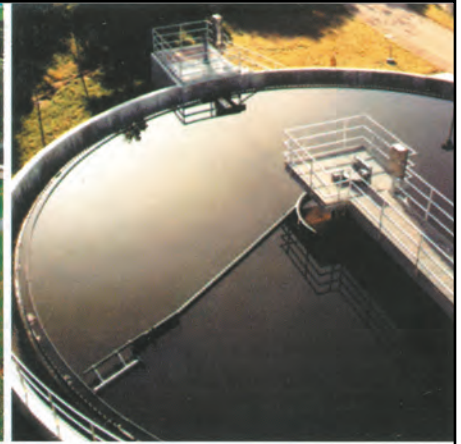
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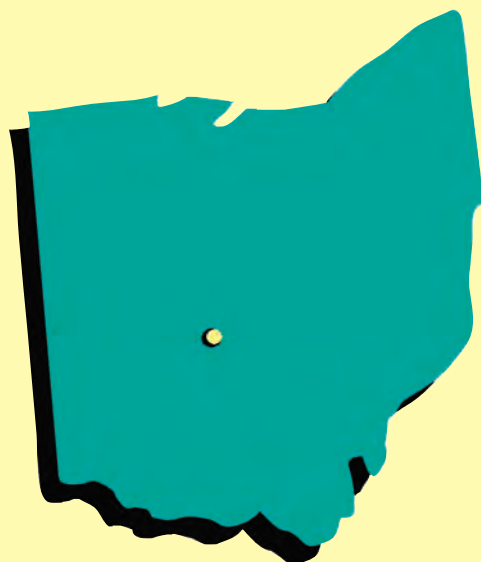
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OHIO POPULATION INFORMATION



The U.S. Census Bureau projects
that Ohio population growth will
be stagnant through 2030.

Date of Statehood: March 1, 1803

Population 1800:	45,365
Population 1850:	1,980,329
Population 1900:	4,157,545
Population 1950:	7,946,627
Population 2009:	11,542,645
Population 2030 (projected):	11,550,528

In 2009:

Persons per square mile	277
State rank in size	7th
Persons under 18 years of age	23.9%
Persons 65 and older	13.9%
Female Persons	51.2%
High School Graduates (25 + yrs of age)	83%
Bachelors Degree or Higher (25+ yrs of age)	21.1%
Housing Units	5,094,126

CITY OF FINDLAY WATER POLLUTION CONTROL CENTER

by Randy Greeno, Superintendent

HISTORY

The City of Findlay is located in northwest Ohio on the Blanchard River, which was known as “The Old Mill Stream” at the turn of the century, through a song written by Tell Taylor of Findlay. Because of the increasingly polluted conditions of the river, the title of the song was parodied to the tune of “The Old Grey Mare” substituting: “The Old Mill Stream just ain’t what it used to be”, which was more factual than humorous.

In the early 1900’s the City of Findlay had about 1800 connections discharging raw sewage into the Blanchard River. The State Health Board ordered the City of Findlay to install a facility to treat sewage in 1915. But due to World War I and the following Great Depression, the City was granted many postponements until 1933 when the first sewage treatment works was put into operation (1.6 MGD of primary treatment at a cost of \$350,000). Secondary treatment was added in 1937 which increased the flow capacity to 3.0 MGD. Several small improvements were done over the years until the State Health Department in 1952 deemed the treatment works were not adequate for the size of the city. A project was completed in 1954 and that raised the plant capacity to 2.7 MGD. Another expansion followed in 1970 which added an additional primary and final clarifier to the facility and increased the flow to 7.5 MGD.

The plant remained the same until 1988 when the existing facility was reduced in capacity to a 5.0 MGD plant and a new 6.0 MGD Oxidation Ditch plant was constructed at the current site of the Water Pollution Control Center. The old treatment plant could not meet permit limits by itself so the effluents from the two plants were combined before disinfection and discharge in the Blanchard River. This practice was continued until the original sewage treatment works was decommissioned in 2001 and the existing Oxidation Ditch plant was expanded into the current treatment facility. The cost in 2001 for the current facility and collection system upgrades was 34 million dollars. The current facility is designed for 15MGD with a peak flow of 40 MGD.

PERSONNEL

The Operations at the City of Findlay WPCC are accomplished with the team work of 20 full time employees. Positions include: Superintendent, Assistant Superintendent, Administrative Assistant, 2 Lab Technicians, 9 Operators (6 Class III, 1 Class II, and 2 Class I), 3 Maintenance Mechanics, 2 Assistant Operators, and 1 Truck Driver.

PROCESS DESCRIPTION

The City of Findlay Water Pollution Control Center receives flow from three major trunk lines (48”, 42”, and 36”) which enter the influent pumping station after the flow has gone through a channel grinder. The flow is pumped with six submersible pumps rated at 6 MGD each to a splitter box, where two 24” force mains from the Bright Road Pumping Station (on the east side of town) and the influent flow combine before being divided into the oxidation ditches. Since the



Oxidation ditches

Blanchard River is part of the Lake Erie Basin, the WPCC has a current phosphorus limit of 1 mg/l. Ferrous chloride is added in this splitter box to assist in phosphorous removal.

The wastewater then flows to the oxidation ditches which contain about 3.6 MG each. The oxidation ditches act as aeration basins where biologically active sludge is continuously mixed with the wastewater in the presence of oxygen. Microorganisms break down the organic matter in the wastewater for food for growth and reproduction, and then convert the matter into settleable material. Vertical aerators supplied with 150 hp motors and 12 ft wide impellers are used to provide oxygen and mixing for the microorganisms. Mixing is required to maintain solids in suspension and to insure intimate contact between the sludge particles and the incoming wastewater. Average detention time in the ditches is around 24 hours. Average MLSS operating range is from 1500 to 2000 mg/l and average dissolved oxygen levels vary from 1.0 mg/l to 4.0 mg/l.

Flow from the ditches then enters into a second splitter box and is divided into five 100 ft diameter Eimco final clarifiers (2 clarifiers have 14ft side walls and 3 clarifiers have 16ft side walls). Each clarifier contains about 0.9 MG. The clarifiers allow for the heavier



Splitter box and final clarifiers

continued on page 46

solids in the mixed liquor to settle while the clear effluent flows over the weirs. The solids are directed by collection arms, with sludge collection piping and steel raking blades with stainless steel squeegees which sweep the floor of the clarifier, directing sludge to the suction piping. Each rake mechanism has PVC draw-off pipes to remove settled solids. The sludge collection box is located inside the feed well. Total RAS flow control is accomplished by the operation of the adjustable draw-off pipes and the RAS pumps. The RAS lines from the clarifiers transport sludge to the RAS/WAS wet well. RAS is withdrawn and returned to the oxidation ditches and waste to the Solids Processing holding tanks. The clarifiers are equipped with full width skimming mechanisms which continually skim floatable material from the surface of the clarifier and remove it into the scum beach. Scum from the clarifiers is then pumped to the sludge holding tanks at the Solids Processing facility and treated with the sludge. The skimmers are also equipped with a weir cleaning brush system which helps keep the v-notch weirs clear of algae, thus eliminating the manual cleaning of the weirs by the operators.

Effluent from the clarifiers then flows to a small re-aeration basin in which a blower with coarse bubble diffusers is available if needed to boost the dissolved oxygen levels to required levels. Flow then enters the Ultraviolet (UV) chamber for disinfection. The UV system is a Trojan 4000 with 2 banks of 48 bulbs each. The UV system consists of closely spaced mercury vapor lamps that are horizontally mounted on racks and positioned parallel to the direction of the flow in the effluent channel. The UV system monitors effluent transmittance and flow, and adjusts power to the lamps accordingly. An automatic wiper control system periodically cleans the bulbs to remove any slime or algae growth which would prohibit the proper operation of the bulbs. The UV light alters the DNA of the bacteria's cell at a radiating level of 253.7 nanometers.

The effluent from the UV chamber then cascades over several



Cascade aeration of the final effluent



Belt filter press gravity zone

steps for additional aeration before the effluent is then discharged into the Blanchard River. Located prior to the effluent entering the step aeration are the dissolved oxygen, pH, and temperature probes which monitor these parameters constantly.

The WAS from the clarifier units is pumped to three aerated holding tanks, which is where the process of conditioning the sludge for disposal starts. The sludge enters these holding tanks at about 0.5%. The aeration is turned off and the tank is gravity settled with the clear supernatant being drained off and sent back to the head of plant for treatment. This procedure will increase the solids content to about 1.0% before the sludge is pumped to the belt filter presses. Sludge drawn off of these tanks is then mixed with a cationic polymer before being pumped onto the belt filter presses. The Solids Processing facility is equipped with four 2 meter Ashbrook belt filter presses. The presses dewater sludge using several zones of operation. In the first zone, sludge enters the gravity drainage zone and discharges onto the porous belt which allows the water to release from the sludge and drain through the belt. This filtrate water is then discharged back to the head of the plant for additional treatment. The pressure zone is where the sludge is wedged between the upper and lower belts. As the belts travel through several rollers the water is squeezed from the sludge until, at the last roller, the belts separate and the cake breaks off and onto the cake conveyor and then is transferred into a dump truck which disposes of the cake at the Hancock County landfill. The solids content of the cake at disposal time is from 15% to 17%. Disposal of this Class B sludge cake averages around 150 dry tons per month. Required wasting of sludge results in the belt filter presses being operated an average of 3 to 4 days a week for 10 to 12 hours per day.



Belt filter presses

The WPCC receives septage from licensed haulers from an eight county area. All septage received is discharged into a grinder before being discharged into a 7000 gallon holding tank where it is stored until it is released to the head of the plant for treatment. The WPCC receives landfill leachate from the Hancock County Landfill which is currently hauling approximately 200,000 gallons per month for disposal.

In the event of power outages, the WPCC has dual feeds from separate power sub-stations. In case of a wide spread power outage, a 1500 kW Cummins generator is available to power the entire facility at normal operating levels. This was an important upgrade in 2009. Before this upgrade, the WPC had to depend on the outside power supply solely.

COMMUNITY INVOLVEMENT

The WPC partners with the City of Findlay Health Department, Hancock County Board of Alcohol, Drug Addiction and Mental Health Services, The University of Findlay, Findlay Police Department, and Rader Environment Services for prescription drug/mercury collection days. These days allowed the citizens of Findlay

and Hancock County to dispose of their unwanted prescription drugs properly instead of flushing them down their toilets. It also provides a safe place to dispose of products containing mercury. Two collections are scheduled yearly and all collections have been highly successful. The publicity that has grown out of these collections has brought awareness to the community of the hazards of not disposing of unwanted medications and mercury properly.

The WPC also partners with the local Blanchard River Watershed Partnership, the University of Findlay, and several citizen volunteer groups in assisting with multiple river clean ups throughout the year. The clean-ups have removed hundred of used tires and tons of trash from the Blanchard River and have been so highly successful that several are scheduled each year to continue the cleaning up of our river.

Randy Greeno
Superintendent
City of Findlay WPCC
rgreeno@findlayohio.com

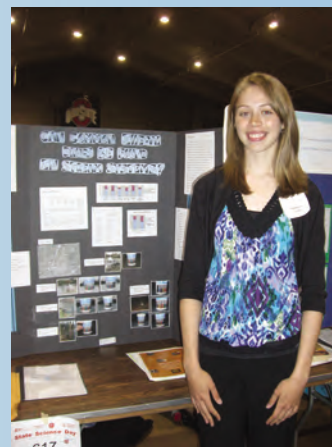
STOCKHOLM JUNIOR WATER PRIZE REGIONAL SCIENCE FAIRS AND THE OHIO SJWP REPRESENTATIVE

The Stockholm Junior Water Prize (SJWP) is the world's most prestigious youth award for a water-related science project. The prize taps into the unlimited potential of today's high school students as they seek to address current and future water challenges.

Dedicated OWEA members give of their time to judge students' projects at regional and state science days. Deserving students should be encouraged to also apply for the Stockholm Junior Water Prize. The student selected as the Ohio winner will attend the National Stockholm Junior Water Prize Competition in Chicago. The National winner competes at the prestigious International Stockholm Junior Water Prize Competition in Stockholm, Sweden.

Submissions are due for the Ohio SJWP competition by April 15, 2011. If you would be interested in assisting with regional science fair judging, Ohio State Science Day judging, or reviewing Stockholm Junior Water Prize submissions, please contact OWEA at info@ohiowea.org or one of the Science Fair and/or SJWP judging members below. Students can submit papers at http://www.wefnet.org/onlineform/SJWP_form.asp.

State John Rogers	john.rogers2@ch2m.com
State David Stewart	dstewart@wilbursmith.com
NW Brad Lowery	blowery@jheng.com
NE Randy Bruback	rbruback@painesville.com
SW Barb Browne	barb.browne@cincinnati-oh.gov
SE Brandon Fox	bfox@co.fairfield.oh.us
SE Fred Smith	fsmith@msconsultants.com



2010 Science Day Winners Alison Tune and Amy Johnson

WATER FOR PEOPLE

by Keith Riley, OWEA Water For People Chair

Water For People 2011 Fundraising

I would encourage each of OWEA's Sections to sit down and schedule your planned Water For People fund-raising events for 2011. For a sustainable level of support of this important cause, it is essential for Section Executive Committees to plan ahead to include Water For People in planning your annual budgets and your wonderful training event fund raisers.

The drawing for the Ohio State vs. Michigan football tickets and preferred parking package was held on Friday, November 5th at the Ohio AWWA Board Meeting. Congratulations go to John Rogers from Worthington who works for CH2MHill. Thanks to all of you for participating in supporting Water For People. The raffle raised \$3,250 that was doubled by the Rosenthal Foundation Fall Challenge!

Water For People 2010 Fundraising

by Ned Breslin, Chief Executive Office, Water For People

Your support of transformative change is truly inspiring! For the third year in a row, our supporters have not only stepped up to the challenge but exceeded our expectations by surpassing the goal of raising \$500,000 during the 2010 Rosenthal Million Dollar Challenge.

Combined with Stephen and Sandy Rosenthal's generous donation of \$500,000, you've raised more than \$1 million to help put an end to global water poverty during our IMPACT2 campaign.

We're still getting checks in that were postmarked prior to the deadline of October 31, and we'll be updating the barometer here so you can be updated on the campaign's success.

We're honored by your trust in us to use your contributions toward smart investments in sustainable water and sanitation solutions. As you know, every dollar is further magnified through contributions from communities, governments, and partners on the ground so that we can have long-lasting impact in Africa, Asia, Central America, and South America.

With your support, you're empowering communities and building capacity so that one day, they're fixing and replacing their own water and sanitation systems with little memory that Water For People, and our outstanding supporters, helped them along the way. Nothing would make us more proud than to go to a village where we once supported solutions and the residents have no recollection of Water For People because the flowing water and well-maintained latrines are THEIRS.

We truly appreciate every person, family, foundation, company, and volunteer committee that has stepped up to the challenge this year.

An enormous "Thank you" from all of us at Water For People and our communities around the world.



Thanks to OWEA's Water For People Guardians:

2010 Fund Raisers:

SW Section (<i>in Memory of Danny Smith</i>)	\$150
Northwest Section Event	\$144
2010 Conference and Golf Fundraising	\$1500
5S Donation	\$500
New York WEA	\$20
NE Section Golf Event	\$875
NE OEHA Fall Conference	\$200
NW Section Breakfast Event	\$395
MSD Tri City Event	\$17,508
2010 Total	\$21,292

Flow Mapping

by Nick Breslin

Truly transforming lives means taking transparency, accountability and sustainability seriously. To attain this goal, Water For People launched a visual technology in Fall 2010 called FLOW, Field Level Operations Watch.

FLOW is a dynamic new Water For People baseline and monitoring tool that allows us to get a clear view of what's working, what's on the verge of disrepair, and what's broken. Not only will Water For People use the data to make better programming decisions, but governments, partners, donors and the public can also easily monitor projects and take action when necessary. Plus, the data is easy to gather, share and understand allowing us to build better solutions for a lasting impact.

It's a wide spectrum view into our work that will allow Water For People to be flexible and quickly responsive when problems arise.

How It Works

Utilizing cutting edge technology, including Android cell phone technology and Google Earth software, FLOW provides anyone on the Internet access to crucial data for projects supported by Water For People. Community members, entrepreneurs, industry professionals, partners, staff and volunteers gather data with an Android phone. At the touch of a button, data flows to the Internet and updates the status of a water point or sanitation solution on Google Maps and Google Earth. Check how it works at www.waterforpeople.org by selecting PROGRAMS/FLOW.

Making Better Programming Decisions

At the start of a potential project, it's essential to know a community's needs. The tool allows us to easily complete and publish a baseline assessment, so that we're making data-driven decisions based on all of the factors.

In accordance with our Strategic Plan which promises to monitor projects for at least 10 years, FLOW will dramatically improve, simplify and hasten post-project monitoring and reporting. Once a project is completed, community members, entrepreneurs, industry professionals, partners, staff, and volunteers will regularly gather data so that we have a full picture of our successes, and failures, in all areas where we work. If there is a problem, the tool will help us to track and ensure immediate response.

We Cannot Just Say Work Is Sustainable, We Must Prove It

FLOW enables Water For People to demonstrate real data and real



results. It allows Water For People to build on its programmatic strengths and identify areas of weakness that need to improve. As data is uploaded to the database, Water For People staff have access to comprehensive information enabling us to respond quickly, in a trackable manner to ensure accountability.

The people we serve deserve it, as do our donors, sponsors, and volunteers.

Keith Riley
Assistant Chief, Ohio EPA NEDO
keith.riley@epa.state.oh.us



Screen shot from Water For People's FLOW application

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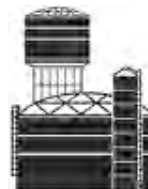
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CHIPPING AWAY THE PAINT: LESSONS ON BECOMING AN AUTHENTIC LEADER

by Dr. Steven F. Schulze, Deputy Director, Montgomery County Environmental Services

The Problem

Given the reality we face of having to do more with less these days, the question becomes: how can water and wastewater utility leaders effectively transform their organizations to meet current and future demands?

On a global scale, one can easily become discouraged hearing the negative news of the day; home foreclosures, bank bailouts, corporate buy-outs, two wars, mismanagement, political scandals, environmental disasters - the list goes on and on. In the midst of these events and the challenging economic conditions, it is easy to get caught up in the distress and see no way out.

On the local workplace level, these national and global problems will impact utilities for years to come. In fact, we are feeling some of the aftershocks in the form of layoffs, furloughs, reductions in force, buy-outs, budget cuts, early retirements, no pay increases, etc., so that even the strongest in the water industry can become disheartened and even cynical.

These uncertain times can also lead to dramatic operational changes resulting in overworked, underappreciated employees and negative attitudes. As a result, we can no longer afford to remain status quo and run water and wastewater facilities as in the past. A 2009 Gallup poll found that nearly 70% of the workforce is not fully engaged in their work and almost 20% of these folks are actively disengaged. In other words, nearly 1 in 5 employees simply don't care and are more of a detriment than a help to the organization costing the U.S. \$300 billion annually in lost productivity. With the vast majority of Americans believing public leaders don't care, it's no wonder public confidence and trust in institutions is at an all-time low.

Surveys show that employees today get limited or no feedback, are not challenged to try new things, and don't get proper information or recognition. Only a small percentage of managers ask their employees what motivates them or how they can help them achieve their goals. And, very few managers invest time in building relationships yet the manager/employee relationship is often considered to be the largest factor in employee engagement and retention.

These events and statistics have awakened us to the fact that many organizations and individuals are on the wrong track. Herein lies the problem. Numerous researchers have found that leaders rarely fail in technical competence; they fail in human skills, communication, judgment, character, attitude, ethics, and relationships and many of these failings are self-inflicted. Some are so eager to win approval and avoid rejection that they cover their shortcomings to gain acceptance. Others feel they have to appear to be on top of everything and a few are actually not very nice to be around. This self-serving style will not work in the 21st century. Today's employees demand more personal relationships before they give themselves fully to a leader or organization.

Technical vs. Relational

If you are like me, most of us got where we are because of our technical abilities as Biologists, Chemists, Engineers, etc. along with being good at what we do. But as supervisors and managers,

you've probably wished at times that the people or soft-side of doing business would just go away. Increasing responsibility usually brings more difficult decisions and stressful personnel matters that can rob you of time and energy. It's through these events I've learned that the so called "soft stuff" is the hardest part of management. Keeping up with technology and water infrastructure needs are critical to our future but all the engineering we do will fall short if it isn't built on a sure foundation. In our quest for operational efficiency, better treatment techniques or cost saving measures, learning to balance both technical expertise with relational skills is the key to success.

Building good relationships means to act on your dreams, share your life, and surround yourself with high quality people. Don't let others drag you down or make you feel inferior. Self-serving leaders talk about themselves and rarely develop strong relationships. Some are so full of themselves that they devalue others, blame, and make excuses. Steer clear of those with rotten attitudes, they are infectious and can suck the life out of you and the organization. Instead, become a better person by associating with better people, take every opportunity to learn more and develop productive habits. Avoid those who can't control their tongue, who curse, argue and complain as these are signs of weakness, not strength. Guard your relationships and be with winners not whiners. Focus on why a relationship is working and build on it. Be excited about life, family, work, your organization, even our Water Environment Federation and the Ohio Water Environment Association. If you aren't, how will anyone ever become excited or interested in what you do and who you are?

Authentic Relationships

Many believe that to effectively transform an organization you must first close the financial gaps, flatten the organization, restructure or add technological improvements. While these are worthy endeavors, before you can change the business you must change the relationships. One way for water leaders to begin this process is to literally change our attitudes. It's been said that life is 10% what happens to you and 90% how you react to it. I agree. How you relate and react to people and circumstances has a direct impact on your ability to grow professionally. You can choose to be negative, blame others, and be bitter or you can buoy-up others and become better. To create a supportive culture and provide long-term solutions for organizations requires the building of authentic relationships - the cornerstone upon which all other management skills are built.

There is a great need for authenticity and an "other-directed" approach today to create pockets of wellness in our organizations and take our profession to a higher level. Historians have recorded that one of our greatest public servants, Abraham Lincoln spent 75% of his time listening to, visiting with, and encouraging people. So great was his genuineness and impact on others that even his enemies spoke highly of him. Consider those who forged relationships with you or someone who took the time to listen to you, helped shape your career, appreciated you, kept their commitments, even set you straight when needed. These people demonstrated authenticity with you.



www.history.org

Authenticity means being genuine, trustworthy, sincere, a truth-teller. Authentic people are the same at work as at home because there is no separating personal from professional life. The choices you make at work or outside of work do affect your career and life. Authenticity means going beyond the Golden Rule to include compassion, self-sacrifice, humility and brotherly love - the missing element in business today. Think about it, everything we do involves relationships which are essential to our well-being. No matter who you are, each of us has been influenced by others. Our individual achievements are linked to the influence of others in our lives. None of us are self-made or exist as islands unto ourselves. We all rely on others and behind every great organizational success story are people who helped others advance.

Occupation or Vocation

Building authentic relationships begins with a self-assessment by asking; what are my personal goals, my vision, and my core values? Then ask if they match those of your employer. People marry because they are in love and are compatible. So be honest with yourself, do you love what you do, are you in the right position? Do you have the education and qualifications needed to be successful? Do you have the desire and the passion to do more, to live life fully or are you merely in it for a paycheck? Are you doing all you can to make a difference, focused on what you are called to do?

Answering these questions means to first understand the difference between occupation and vocation. Occupation is an activity or task that we occupy ourselves with and are paid for. It's also defined as "a place to take up space." Sadly, many are just doing that. Vocation on the other hand means, "To call." It is an occupation to which one is specifically drawn, suited, and qualified to do. If your vocation matches your occupation, that's great, this is where you need to be. But if not, you need to reassess where you are and why. It's not whether you are in the right seat on the bus but are you even on the right bus? Are you going in the right direction, on the right road? Start with the personal assessment aspect and the rest will follow.

AL's

So you believe you are in the right place. That's great, but how can you be more genuine and authentic toward others? If you are a leader, how can you be an authentic leader? Authentic leaders (AL's) lead from the inside-out, from the heart and demonstrate their leadership in words and actions. They realize leading means

serving and bringing followers along with them. They know it's not about "me" but about "we." AL's encourage, persevere and take time to listen and engage, prepare for the future and never stop learning. They don't burn bridges, but build them.

While companies are cutting staff and benefits, Delta Airlines recently came back from bankruptcy without layoffs by reconnecting with their people, taking care of their own, and admitting mistakes. Chick-Fil-A just completed 42 consecutive years of sales growth because of a very simple philosophy. Know your values, share them, live them, earn trust and shape the culture. SAS Institute Inc. nearly doubled staff, expanded benefits, and more than doubled revenues by creating a supportive, respectful environment that attracts and keeps talent. Authentic leaders put others ahead of self and serve without expecting in return.

As AL's, our role is to be caretakers, stewards of the resources we've been entrusted with, to connect with stakeholders, to educate and inspire. This involves creating an environment of cooperative trust through authentic relationships. As Robert Greenleaf noted in his book, *Servant Leadership*, "service to others is the leaders' primary purpose." *Good to Great* author, Jim Collins found that the primary difference between great and not so great leaders is humility – having a focus on others rather than self. It doesn't take much effort to help people feel important. AL's climb the ladder of success and take people with them while counterfeit leaders knock people off the rungs behind them. Authentic leaders realize that few things pay bigger dividends than the time you take to understand and invest in people. Simply put, authentic leaders love their people more than their position.

My Journey

To create a real relationship involves taking a risk, being willing to reveal who you are, being open and connecting with people. Some of you may be able to relate to my story.

First of all, I am not an engineer, like my grandfather who emigrated from Germany, and who instilled in me a love for the outdoors and taught me how to shoot, fish, and hunt. I am also not a professional athlete like my dad wanted me to be. He was drafted by the Philadelphia Phillies to play baseball. While growing up he pushed me hard to play sports. Though I tried, I just could not grow to his height or live up to his standard. Week after week he would keep me after practice and hit ground balls and line drives to me until my hands hurt and tears ran down my face. I did my best but my heart wasn't in it. I competed but spent most of my time on the bench where my mind would often drift away to a nearby stream, river, or lake. It wasn't until my dad had a life changing heart attack when I was 17 that he told me, "Whatever you do, make sure you really enjoy it." So I heeded his advice and became the only senior in my high school taking biology. I now pass the same advice on to my children. You see, my dad never did what he really wanted to do or was called to do – to be a coach. Shortly before he died I asked him why he didn't become a coach and he said, "Someone in college talked me out of it and said I could make more money in business." He was never happy and died too young at age 41.

Prior to college I was determined not to go down the same path. Unfortunately, my goal was postponed. Being the oldest of three and with a mom who had never worked outside the home, my college courses were pieced together with numerous jobs over a

continued on page 52

ten year period to support the family. Whether you are new to the water or wastewater field or been in it for 30+ years, each of us is unique and has a story to tell of those who helped clear a path in difficult times.

I recall an ODNR manager who gave me a fisheries position, an OSU professor who awarded me a scholarship at Stone Lab, a Monsanto chemist who taught me atomic spectroscopy, others who pushed me to complete my degrees, even our former Senior WEF delegate, Steve Morrison, who actually hired me twice, first as a Lab Technician after I was laid off and then some years later as Lab Manager where I served for 16 years. Numerous friends strengthened my spiritual walk and I would be remiss if I failed to mention my biggest cheerleaders – my family, especially my wife Karen who has been an encourager, teacher and steadfast partner for nearly 25 years.

The latest leg of my journey began in 2002 when I was accepted into a fully accredited doctoral program at the age of 46. With a full-time job, people asked, “Why go back to school? What are you thinking? You’re too old, you have a wife and six kids, it will cost you too much, even, you are crazy!” I realized that all my life I had been pursuing an occupation. Now I had found a vocation, a calling, and there was no going back. So after four of the best yet most difficult years of my life, it’s time to give back to my profession what I’ve been blessed with. Even though there were times when I felt like giving up, when barriers seemed insurmountable, a way was always provided both providentially and through others.

With much help from those who believed in me, I was able to pursue a dream. Three years into my program in 2005, I was promoted to Deputy Director of Montgomery County Environmental Services. I devoted my final research work to help my organization by developing tools to transform organizations internally - from the inside-out, an alternative to standard transactional methods.

Chipping Away

It is said that what you learn is often proportional to what you earn. Well, we would all like to earn more so keep learning, you are never too old. Take the initiative to increase your knowledge, acquire new skills, associate with respected colleagues, engaging hearts and seize the opportunities. Take the risk to chip away the external layers and get to know people. Let me illustrate.

I enjoy collecting antique fishing tackle as a hobby. One cold January day a few years back, my oldest son and I went to an auction that advertised some old tackle. When we got there, all the good lures were gone and the auctioneer was selling choice of what remained for one dollar. I chose one with a bad paint job but it showed some qualities of a collectible lure. I took it home, sat



down by the fireplace and started chipping away the outer layer of paint with a pocket knife only to find a perfectly intact hand painted Pflueger Monarch Minnow valued at nearly \$400.

The same is true of many people we think we know. By taking an interest in others we can find the gems beneath. Don’t underestimate the impact you have on others by simply caring enough to risk getting to know them. Seek out life-long relationships with people who have purpose, who can help you reach your goals.

Make Memories

For the past three years I’ve taken one of my children to the Memorial Golf Tournament in Dublin, Ohio and come away with a memorable story. In 2008 my oldest son met Jim Furyk (the #3 golfer in the world at the time); in 2009, my oldest daughter met Jack’s wife, Barbara Nicklaus. This year, my middle son who was 15 met Ernie Els (the FED EX point leader at the time) who waved him out from behind the gallery ropes onto the 6th fairway while police officers, tournament marshals, and the spectators watched a boy’s dream come true.

There are times when we all need to be reminded of who we are and how we got where we are. Sometimes it means taking the risk to step out from behind the ropes that hold us back. It’s here you find other AL’s modeling the way, encouraging hearts, and making memories that last a lifetime. Our relationships, and especially the close friendships, are the ballast that keeps us at even keel.

You may be at the top of your profession, but don’t forget that the greatest players were once 15-year olds with dreams. I challenge each of you for the sake of our industry to invest in someone around you, reveal your expectations, have a conversation, and forge a relationship because we’re not just government employees, operators, regulators, consultants, researchers or suppliers. Each of us is someone with special gifts and amazing abilities to share.

Be Authentic

Are you living for the 8-5 shift or the 30-year pension? If so, the events of the past couple years should shake you and make you rethink that plan. Our water industry needs people who can create masterpieces, not give half-hearted efforts. We need AL’s who care enough to share the big picture rather than keep information to themselves. The answer to our current problems will not be found in bigger government, but in better government. Not in financial stimulus but in leaders who inspire us. Try sharing your dreams, experiences, instilling trust and demonstrating you care. Having the right attitude and focusing on relationships reenergizes people by unlocking creativity and innovation in some while giving options for others to move on.

So, are you stuck in a rut, counting the days until retirement? Are you regretting that you haven’t lived up to your potential or shown someone else how things work? Are you just going through the motions, blaming others for your situation, disengaged? If so, take inventory of your relationship building and try to follow these simple tips to “Be Authentic.”

- ◆ Be yourself; be open, sincere and humble and consider the effect your life has on others.
- ◆ Enjoy what you do; assess your career, interests, aspirations and pursue your dream.
- ◆ Ask questions; learn about others, peel back the layers, find the gems and build trust.

- ◆ Understand their position; look in their eyes, listen with your heart and follow-up.
- ◆ Take time to give time; care enough to create trophies that will live beyond you.
- ◆ Hone your skills; expand your knowledge, develop productive habits, and polish your attitude.
- ◆ Engage people; give consistent feedback, reward high achievers, and coach low performers.
- ◆ Never band-aid issues; treat the disease without hidden agendas and deal with the hard facts.
- ◆ Tell the story; find common ground and a friend at work to challenge and encourage you.
- ◆ Invest in the lives of others; get to know your team members, believe in them, and serve them.
- ◆ Connect with them; call, write, or personally thank someone who helped you in the past.

We've seen the shortcomings of those who focused on personal power and prestige. So ask yourself, am I on the right path? Am I more focused on people over process, principles over position? If so, enjoy the journey. Don't lose perspective amidst the problems of the day, take time to thank someone who helped you along the way, and strive to leave your names on hearts, not headlines because life is really all about relationships.

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This article was developed from a keynote address given at the OWEA Annual Conference in Columbus, Ohio in June, 2010. For more information or references please contact the author, who is also developing Sure Foundation Strategies LLC, a business consulting company.




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OPERATOR CERTIFICATION FROM AN INSPECTOR'S VIEWPOINT

by Elizabeth Wick, P.E.

Ohio EPA, Division of Surface Water Northwest District Office

We are four years into the “new” Operator Certification Rules contained in OAC 3745-7. This means everyone should be meeting the provisions of the rules and many wastewater treatment plants have minimum staffing time incorporated into their NPDES permit. As part of a compliance inspection, Ohio EPA inspectors are checking for compliance with operator of record information, record keeping requirements, and minimum staffing times. The first step towards meeting these rules is for the Operator of Record (ORC) to read and be familiar with the NPDES permit for their facility.

Beginning in 2006, each facility was required to submit an Operator of Record Notification form to Ohio EPA. This form can be found on Ohio EPA's website at http://www.epa.ohio.gov/portals/35/opcert/Operator_of_Record_Notification_Form.pdf. Submitting this form fulfills the requirements of OAC 3745-7-02. It simply contains the names and certification numbers of each ORC and their signatures. The number of hours that the ORC spends on site at the facility must also be included. According to the rule, if the ORC changes, a facility has three days to notify the director of Ohio EPA. Failure to submit the ORC form is resulting in notice of violation letters being sent to facilities. Escalated enforcement action may be taken against those owners who have not submitted ORC Notification Forms. Lists of operators of record for both water and wastewater facilities can be found on the Ohio EPA's website at <http://epa.ohio.gov/ddagw/opcert.aspx> under the heading “Lists of Certified Operators”.

Each owner and ORC is required to maintain operation and maintenance records for each treatment facility. Some of the formats in which records may be maintained include, but are not limited to:

- ◆ Hard bound books with consecutive page numbering
- ◆ Timecards
- ◆ Separate operation and maintenance records or well organized computer logs

It is required that these records be maintained and accessible on site. They must be kept in such a way that the authenticity and accuracy of the records can be guaranteed. This means that the records must be written in ink and bound if maintained in writing. If the records are computerized, they must be date stamped and password protected to prevent changes from being made.

The records must also be protected from the weather. If the facility is a package treatment plant, the records should be housed in a protected area within the fence of the package treatment plant. A mailbox or control panel box is typically used to fulfill this requirement. On site records must be kept up to date and contain a minimum of the previous three months of data at all times.

According to the rule, at a minimum, the following information shall be recorded:

- ◆ Identification of the treatment works;
- ◆ Date and time of arrival and departure for the operator of record;
- ◆ Date and time of arrival and departure for persons other than the ORC;
- ◆ Specific operation and maintenance activities that affect the quality or quantity of sewage conveyed or effluent produced;
- ◆ Results of tests performed and samples taken unless documented on a lab sheet;
- ◆ Preventative maintenance performed or repairs or requests for repairs of equipment; and
- ◆ Identification of the persons making entries.

What specific things are we looking for in the record book? Equipment failures, sewer blockages, process changes, permit violations, and preventative maintenance activities such as scraping clarifier walls, adjusting the skimmer, weeding the sand filter, or adding chlorine tablets should all be documented. These records are also used to document minimum staffing times, so arrival and departure times of the ORC are very important.

Failure to keep accurate records on site will result in a notice of violation being sent to the owner. If the records are not adequately maintained in the time allotted by the district office, escalated enforcement action may be taken against the owner and/or the ORC.

Beginning in December 2008, the classification and staffing requirements of OAC 3745-7-04 were incorporated into all new and renewed NPDES permits. Treatment works classification is now based on design flow of the treatment works and the final effluent limits in the NPDES permit for monthly average concentrations of CBOD5, total suspended solids, and summer ammonia nitrogen. Minimum staffing times are based on the classification of the treatment works. The ORC must be physically present at the facility to perform technical operation and fulfill the time requirements in the table below.

As NPDES permits are renewed, minimum staffing language is being added. If the classification of the facility is changed with the permit renewal, the entity is given 12 months from the effective date of the permit to meet the minimum staffing times. If the classification stays the same, the entity must meet the minimum staffing requirements upon the effective date of the permit. Failure to meet the minimum staffing requirements will result in a notice of violation and may result in escalated enforcement action.



Minimum staffing requirements for the operator of record

System Classification	Staffing Requirement
Class A	2 days per week for a minimum of 1 hour per week
Class I	3 days per week for a minimum of 1.5 hrs per week
Class II	5 days per week for a minimum of 20 hrs per week
Class III and IV	5 days per week for a minimum of 40 hrs per week

Keep in mind that these requirements are minimum requirements. In order to protect public health and welfare and based on specific circumstances at a facility, the director may require a facility to be operated by an ORC with a higher classification than the minimum requirement. The director may also require an ORC to visit a facility more frequently and for more hours per week than the minimums required by OAC 3745-7-04.

As usual, if you have any questions about your situation and the applicability of Ohio EPA rules and policies, contact your district office. Questions can also be directed to Andrew Barienbrock, andrew.barienbrock@epa.state.oh.us for drinking water and Daniel Kopec, daniel.kopec@epa.state.oh.us for wastewater.

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ASK AN EXPERT

QUESTION: I do not always get a reduction from plant influent BOD to CBOD. I was wondering if it was the volume of inhibitor compared to higher nitrogen content in sample or longer incubation. Any thoughts?

If I understand your question correctly, more than likely what you are observing is a lack of a sufficient nitrifying bacterial population and a test duration that is too short to see the “ultimate” biochemical oxygen demand required to completely degrade the organic and inorganic materials in the influent sample.

The Biochemical Oxygen Demand (BOD) test measures the consumption of oxygen by bacteria metabolizing both the organic and inorganic (ammonia) contaminants in the wastewater. Bacteria that metabolize organic materials are called heterotrophs, while those metabolizing the inorganic materials are called autotrophs. In raw wastewater, heterotrophs predominate. Autotrophs are but a small fraction of the total microbial population. Furthermore, the biochemical conversion of ammonia to nitrate is a two-step process typically represented by the bacteria nitrosomonas and nitrobacter in the literature (although other species have been identified as well). The rate limiting step appears to be the first one, (nitrosomonas’s conversion of ammonia to nitrite), as only rarely does one find a buildup of nitrite, in activated sludge plants with nitrification. The nitrite is then metabolized to nitrate by a second group of autotrophs represented by nitrobacter.

If sufficient oxygen is available, organic materials are readily acted upon by heterotrophs breaking down complex organic materials into smaller organic materials and ultimately carbon dioxide, water, creating additional biomass plus respiration. In an activated sludge plant this metabolic process requires on average ~ 1 – 3 pounds of oxygen per pound of organic material stabilized.

The same activated sludge process requires an additional 4 – 5 pounds of oxygen to convert 1 pound of Ammonia Nitrogen to Nitrate Nitrogen.

What might that look like in a comparison of BOD vs cBOD in an Influent sample?

First let us assume that your influent contains 240 mg/l of BOD₅ and 24 mg/l of Ammonia-Nitrogen. This could then mean that the total BOD (including nitrification demand is 240 mg/l) therefore, 90% is carbonaceous and 10% (24 mg/l) is from breakdown of ammonia nitrogen from autotrophs. Adding the inhibitor should yield a carbonaceous BOD or cBOD value of ~ 216 mg/l all things being equal. However, this assumes that there are sufficient bacterial populations naturally occurring in the raw influent (or seed material if added), to breakdown both the organic and inorganic material, and that both materials breakdown to their end products using the same amount of oxygen. But as mentioned above it takes an activated sludge plant almost two times as much oxygen to metabolize ammonia nitrogen to nitrate nitrogen. Why would it be any different in a bottle? If that is the case, then the cBOD is only about 80% of the total BOD, while the BOD from

Ammonia-nitrogen is 20%. So, when the inhibitor is added, there should be an even larger measurable decrease in influent cBOD values (192 mg/l) vs. total BOD (240 mg/l). But the observed results do not appear to reflect this.

The actual answer lies in the details. First, Biochemical Oxygen Demand as the name implies has a biological as well as a chemical component. The metabolic rate (often represented by the letter k) is a measure of how quickly a particular bacteria metabolizes a particular substrate. The higher the k rate the more quickly the bacteria can metabolize that particular substrate. The more complex the substrate the lower the k rate. And of course just to muck it up some more, different bacteria have different k rates for the same substance, not to mention that the k rate can be influenced by; incubation temperature, available oxygen, alkalinity, micronutrients, and inhibitory/toxic compounds or byproducts of bacterial decomposition in the raw wastewater sample. Second, the standard BOD analysis is a 5-day test. This time component is represented with a subscript: BOD₅.

Next look at how the BOD₅ test is run. Typically, an aliquot of sample is placed into a standard 300 ml BOD₅ bottle, and oxygen saturated dilution water containing nutrients is added to the remaining volume of water. An initial dissolved oxygen measurement with a dissolved oxygen probe is taken, and the bottle is capped so that there is no headspace beneath the stopper. The sample is then placed in a darkened incubator at 20° C for 5 days. After 5 days the sample is removed from the incubator and a second dissolved oxygen measurement is taken. The net difference is then used to calculate the sample BOD₅. A second bottle containing only 300 ml of dilution water is run as control to verify that dilution water itself does not contribute any BOD₅.

Keep in mind that oxygen is only slightly soluble in water. Saturation is between 8.5 and 9.0 mg/l at 20 degrees C, depending on elevation and barometric pressure. For a BOD₅ test to be valid, the sample plus dilution water (or in the case of influent samples) the dilution water plus sample, must deplete a minimum of 2.0 mg/l over the five day period, and leave a minimum of 1.0 mg/l in the 300 ml sample bottle. That means to measure a BOD₅ of 240 mg/l we need to select a sample volume that will not consume (deplete) more than 7.5 mg/l of oxygen over the five days. If seeding the sample is required, the sample volume must be reduced further so that the depletion of the sample plus the seed is less than 7.5 mg/l. Assuming no seed is required, the raw influent sample has a dissolved oxygen concentration of 0.0 mg/l, and the dilution water is saturated at 8.7 mg/l, then the bottle should have an initial dissolved oxygen concentration of ~8.5 mg/l if 7.5 ml of influent and 292.5 ml of dilution water are added to a 300 ml BOD bottle.

If a depletion of 6.0 mg/l of oxygen occurred after 5 days, the BOD₅ would be 240 mg/l. The bacteria only metabolized the organic and inorganic material contained within the 7.5 ml of influent sample. Stated another way, 2.5% of the total sample volume (7.5 ml/300ml) utilized 6.0 mg/l of oxygen. The BOD₅ of the sample is then calculated by dividing the oxygen consumed by the percent sample volume as a decimal, $6.0/0.025 = 240$ mg/l.

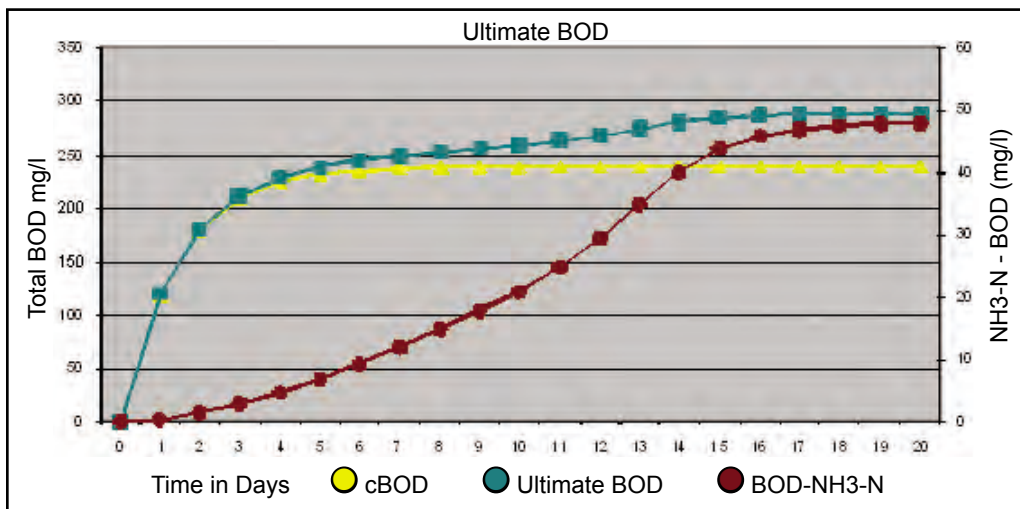
While the cBOD₅ may be about 75 - 90% of the ultimate total Biochemical Oxygen Demand, during the 5-day test, it was closer to 98 % of the measured result. The ultimate BOD test typically lasts 20 or 30 days. It is sometimes represented: BOD₂₀.

By contrast Secondary Effluent samples typically have very little organic material left other than endogenous respiration from biomass so, nitrification inhibitor actually has a more pronounced effect in the result even though there is potentially the same 2-4 mg/l difference in cBOD₅ and total BOD₅. That's why you would see a total BOD₅ value of say 12 mg/l vs. a cBOD₅ value of 8 mg/l for the same effluent sample.

The establishment of sufficient autotrophic bacterial populations and metabolic k rates of both the heterotrophic and autotrophic bacteria can significantly influence what is seen in the five-day test. The attached chart simulates the impacts these two factors could have and may help explain your observations.

By day 5 there is little difference between the cBOD (238 mg/l) and the total BOD (242 mg/l). The ultimate BOD is actually closer to 288 mg/l. 240 mg/l as cBOD and 48 mg/l from metabolizing 24 mg/l of Ammonia nitrogen (2x the amount of oxygen required).

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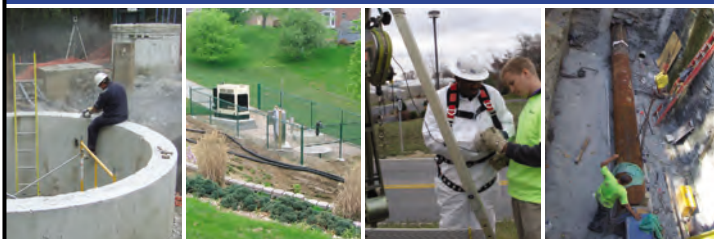
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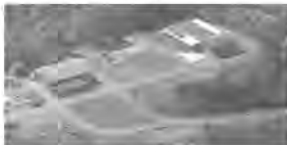
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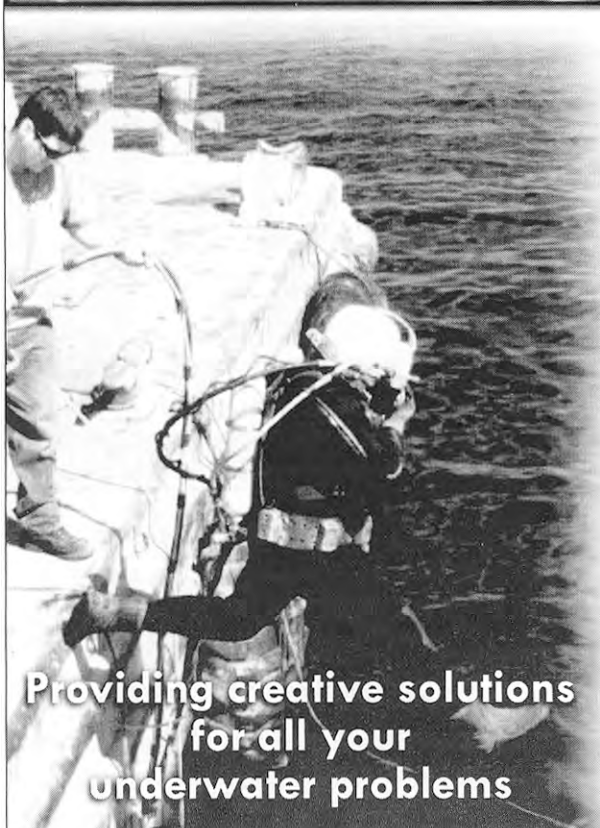
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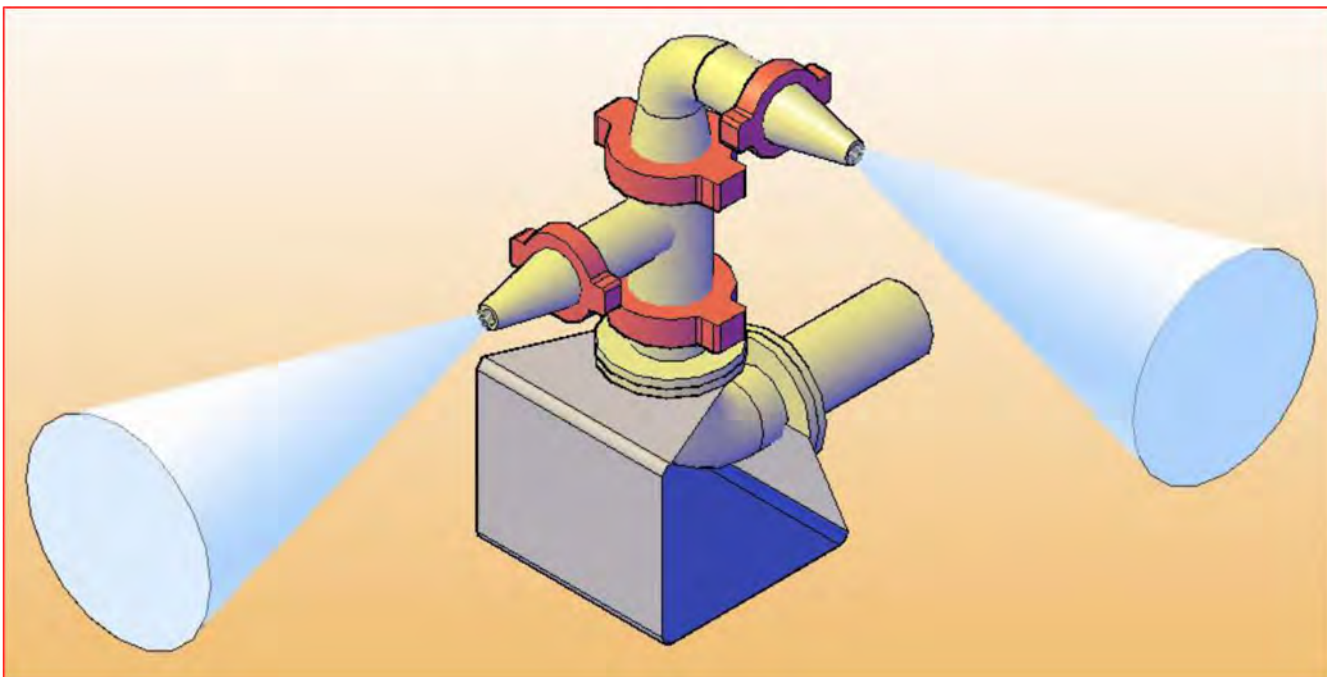
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