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Kentucky Lab Analyst Committee Steps In To Fill a Void! By Robin Strader

2015 was a big year for the Kentucky Lab Analyst (KLA) committee of KWWOA. Between January and October 2015, 12 field only wastewater lab certification preparation courses were held from Pikeville to Mayfield. This would not have been possible without the support of volunteers offering help in class, systems graciously offering training facilities and the great partnership developed with proficiency test provider, Advanced Analytical Solutions in Parkersburg, WV.

When the 2015 training schedule was initially published, there were only two field only lab certification preparation classes listed. I must admit, in the beginning it was a struggle to convince operators to attend. The mind set was "I don't need a wastewater lab certification". Not all systems understood that the January 1, 2016 deadline for certification applied to all wastewater plants, water plants with backwash discharge and storm water facilities. After the first few classes, however, word spread like wild fire. The demand for more classes just kept coming in and still is.

participants for the cost of the supplies required to put on the class, \$100-\$200 depending on the parameters needed.

The training assisted approximately 50 storm water facilities and 140 municipalities prepare for implementation of proper lab practices for field measurements, prior to the January 1, 2016 compliance deadline. Over 2,200 continuing education hours were earned and reported to the KY Division of Compliance Assistance through this training series. Everyone who went through this class and submitted packages to the KY Division of Water has received certification.

The training was also well received by industries and administrative staff, who do not normally attend KWWOA events since they are not certified operators. KLA received many compliments on the quality and depth of training offered, but the most reoccurring comment was how much attendees liked the "hands on" aspect of learning how to better use their instruments.

Anyone who attended the class heard it was a "fishing class". The goal was not to help for a day, but to provide attendees with the tools to help themselves from here on out. We provided glassware to use year after year, buffers and standard solutions, introduced basic chemistry techniques many operators had never been exposed to and a little bit of computer assistance. Each person or group did their own proficiency test samples and left with the knowledge and ability to produce legally defensible field measurements. All of this was provided to

With that in mind, KLA is developing a water treatment process control workshop for 2016 which will entail more hands on training for test including pH, alkalinity, hardness, fluoride, etc. Additionally, KLA will offer quarterly training including refreshers on quarterly quality control requirements under the field only wastewater lab certification program. As always the Association of Boards of Certification (ABC) voluntary water and wastewater laboratory analyst certification preparation course and examination will be offered in Leitchfield, KY. Look for all of the KLA training dates to be posted at www.kwwoa.org.



**2016 Membership
Renewals Due
Prior to February 28th**

**Individual Membership
\$30.00**

**Associate Membership
\$100.00**

**Check Inside
For Details**

**59th Annual Water and Wastewater
Operators Conference
March 20—24, 2016**

The History Begins with You!

Check Inside For Registration Details

Message from the Chair

By David Goodrum



Here's hoping everyone had a wonderful holiday season! My wish is for a happy and healthy New Year for all!

Looking back on 2015, I have to say that KWWOA had another great year. I would like to congratulate all the systems and members that were nominated for awards. Kentucky is truly blessed with operators and systems that provide the people of the Commonwealth and its receiving streams, water of the highest quality. I ask that everyone remember the KWWOA members that we have lost from this world and honor their memory by being the best operator and/or system employee you can be. I would also like to thank all the volunteer officers and workers that give their time to the Association. We recognize that more and more is asked of us each day, and the fact that you stepped up to serve the Association's members, is truly appreciated.

For 2016, I would like to thank Julie Roney for volunteering to serve as KWWOA's representative on the Division of Water's Water Advisory Board. We are fortunate to have someone with the knowledge base Julie has to represent the Association on this Board. Our appreciation is also extended to Kevin Shaw who previously served as KWWOA's representative on this Board for several years. I would also like to welcome the new Chapter and State officers (see below and page 17) and thank each of you for your dedication to KWWOA and the operators of the Commonwealth. Remember you will be electing a New State Vice-Chairman in 2017. If you are interested in running for this office, I suggest you check out the "Procedures" page on the KWWOA website, as this will give you a true idea of what is required of the position. The person elected to this position will serve two years in this position and then step up to the position of KWWOA Chairman. As a result, it is important to understand the responsibilities and begin preparation now. If you are interested in the position and/or have any questions regarding the duties, do not hesitate to contact me.

The KWWOA website, www.kwwoa.org, is now accepting 2016 membership dues and registrations for the 59th Annual KWWOA Conference, to be held at the Crowne Plaza in Louisville, March 20 – 24. File your membership application early, so that you can take advantage of the training classes we have listed on page 18. The website has been upgraded, but your login/passwords remain the same. We ask for your patience as the site does have a new look/functions, but we hope that you will find that it is more customer friendly!

On a final note, thanks to all of our sponsors, as we appreciate you soooo much!!!! Your continued support of KWWOA allows us to consistently provide quality training to Kentucky's operators at a price that is hard to beat! Please let us know how we may be of service!

Once again, have a wonderful and prosperous New Year!

Sincerely,

David

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KWWOA State Board Members



Back Row: Brian Bourne (North Central DW Rep.), David Goodrum (Chairman), Alan Todd (Western WW Rep.), Chris Spriggs (Western DW Rep.) & Roy Gray (Eastern DW Rep.)

Front Row: Matt Chancellor (North Central WW Rep.) Lori Simpson (Secretary), Julie Duncan (Treasurer), Robin Strader (Vice-Chairwoman), Lisa Detherage (Member Services Director), Lloyd Keyser (Eastern WW Rep.) & Shaun Youravich (Central DW Rep.). Missing from the picture is Jacob Billingsley, Central WW Rep.

Bacteria and Nutrient Based Products for Grease Removal

Jason McGee, American Development Corporation

Fat, oil, and grease coming into a wastewater plant have been the nemesis of wastewater operators for years. Grease builds up on the walls and floats of lift stations, which causes build up in sewer lines. The buildup causes the flow of the wastewater to be restricted which creates a "rotten egg" odor, and can cause a plethora of issues when it gets into a wastewater plant. Within a wastewater plant, issues due to foaming, poor settling and binding of the belt press are often due to grease that comes in from the collection system.

To help address grease problems within lift stations, wastewater operators have used many different techniques and products. One of the most common products used is caustic soda, as it is very good at liquefying the grease which has accumulated. The problem with this is that the grease will re-solidify downstream in the wastewater plant. Orange oils and other solvents are similar to the caustic soda; they are very expensive and they just move the grease further downstream to the wastewater plant.

Over the years, various enzyme, bacterial or nutrient based products have come to the market with varying degrees of success. These tactics offer the advantage of digesting the grease and not just pushing it down to the wastewater plant. The best of these products contain all three of these ingredients. Some enzyme products even come in either a pink or blue blocks which allows a slow release of the bacteria over a period of couple months. This is a great idea, however, the blocks use soap and wax as a binder held together in netting. The soap and wax lack the nutrients that the bacteria need to grow and the netting is, unfortunately, great at catching toilet paper. When the operator retrieves the block remains two months later, the netting has ten pounds of toilet paper attached.

The challenge for our industry is how can we combine enzymes, bacteria, and nutrients all together **without** using netting. A solid block without netting would be the best in grease control as well as ease of use for the operator. The result is American Development Corporation's "Bug On A Rope". It provides the benefits of all three ingredients, and results in less grease, cleaner lines and less odors during the summer. The "Bug On A Rope" can be used in lift stations as well as in wastewater plants. For smaller jobs, such as sewer lines and grease traps, a smaller version called "Bug On A Rope Junior" is available.



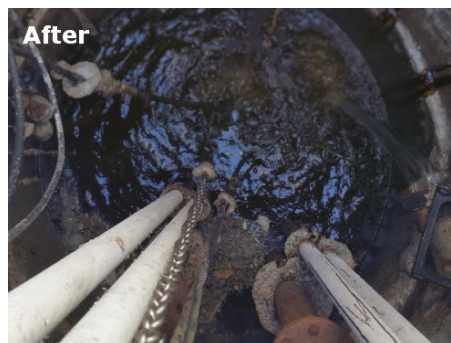
Above : Picture of a "Bug On A Rope" with the block containing the enzymes, bacteria and nutrients.

Right: Remaining structure that the operator retrieves once the product has entirely dissolved.



Our innovative method of combining the nutrients and bacteria, not only allows the bacteria and enzymes to be much more active as they are released by the slowly dissolving brick, but removes the netting found to create additional operational headaches.

Right & Below: Before and after pictures of a lift station that utilized "Bug On a Rope" to help eliminate grease build up within the structure.



Hot Off the Presses!

Right before going to print with this edition of the newsletter, we learned that we have a change in the Western and State KWWOA Boards. Elections held during the Western KWWOA Holiday event, resulted in the election of the following:

Jimmy Grimm	President
Chris Spriggs	Vice President
Darran Rankin	Secretary/Treasurer
Leslie Rogers	Water Representative
Alan Todd	Wastewater Representative

Keith Curneal retired from the Madisonville Water Filtration Department and elected not to run again for KWWOA office (rumor has it he was last seen in a RV headed to Florida!). We would like to thank Keith for his dedicated service as Western's President/Resident Grill Master, for Leslie Rogers stepping up to serve, as well as the other officers, many of whom have served this Chapter for years!

PS Looks like the State Board picture is already out of date!!!

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A New Look for www.kwwoa.org!

Last summer, KWWOA's website had the bad fortune of being hacked. While the intrusion was not of a malicious nature and no personal or financial data was obtained (KWWOA doesn't actually keep any of this type information on our site, it did wreck havoc with our system programming. As a result, the KWWOA State Board took this opportunity to upgrade the site to a more current version as well as working to make it more user friendly.

All users from the old site have been transferred to the new one and your login and password will remain the same. While the site has a new look, you will find many of the same pages and general layout. Previously, most activities on the site required you to first establish a user account for the individual looking to attend a KWWOA event. You also had to make purchases of single products at a time. Now the site allows you to register existing and new users for training, as well as purchase a membership at the same time and on the same page.

The site is slated to go live in mid-December, so hopefully by the time this newsletter reaches you, the entire site will be sailing along smoothly. If you log into the site and have questions on how to maneuver through the various function, do not hesitate to contact us as we will be glad to walk you through the process and/or answer any questions you might have about the system. As always, we are here to serve you, so do not hesitate to contact us!

Before renewing your KWWOA Membership, please check the accuracy of your account information. Without accurate information, we cannot forward the KWWOA information to which you are entitled in the format you request it. Changes in your personal information may be made on the "edit" tab within your account. If you need help accessing your account on the KWWOA website (www.kwwoa.org), contact Lisa Detherage, KWWOA Membership Director, at Lisa@kwwoa.org or by calling 502-352-0510 for your login and password.



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Environmental Assessments Phase I
and Phase II

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DMRs
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Whole Effluent
Toxicity

FES NOW OFFERS DRINKING WATER AND WASTEWATER ANALYSIS AT ITS NEW LOCATION AT THE ADAIR/COLUMBIA WATER PLANT. THE LAB IS A KENTUCKY DIVISION OF WATER CERTIFIED LABORATORY.

KWWOA 2016

The History Begins With You!



**59th Annual Water & Wastewater Operators Conference,
March 20 - 24, 2016, Crowne Plaza, Louisville, KY**

59th ANNUAL WATER AND WASTEWATER OPERATORS CONFERENCE

WHO SHOULD ATTEND THE 59th ANNUAL OPERATORS' CONFERENCE?

- **Drinking Water and Wastewater (Municipal and Industrial) System Operators** requiring up-to-date information for system operations and/or continuing education training hours for license renewal. The Conference will offer 70+ sessions that will convey innovative tools, explore successful operational techniques, provide regulatory updates and share emerging solutions for system operations.
- **Lab Analyst** who must secure training as a part of their lab certification. A six hour series will be provided specifically for lab analyst on Wednesday, March 23.
- **Engineers** who must obtain continuing education for license renewal.
- **Operators** who wish to test for certification with the KY Division of Compliance Assistance (DCA) as a Collection or Surface Water Treatment operator.

Continuing education attendees may earn up to **18 hours** by attending each six-hour day of classes. All technical presentations will be submitted for approval to the certifying authorities in Kentucky, Indiana and Ohio and the Division of Water's Lab Certification Program. Once approved by the certifying authorities, notice will be posted on the KWWOA website.

HOW DO I REGISTER TO ATTEND THE CONFERENCE?

Operators who plan to attend for continuing education purposes may complete the registration form on page 9 or online at www.kwwoa.org. One check may be submitted for multiple registrations. If registering online, you have the option of paying by check, credit or debit card through PayPal for multiple registrants. You do not have to have a PayPal account to utilize this method of payment. No refunds will be granted for registrations cancelled after **February 15, 2016**.

Operators who wish to attend the Collection or Surface Water Treatment certification review/testing sponsored by the Division of Compliance Assistance, must follow the registration procedures outlined on the DCA website (dca.ky.gov/certification). Certification applications and registration forms are also available by contacting the Certification and Licensing Branch at (502) 564-0323. Applicants must apply and be approved in advance for testing and will be notified in writing by the Certification and Licensing Branch of their acceptance into the review/exam session.

Approved Certification attendees are automatically registered for the Conference and granted a partial registration which entitles them to attend all Conference events with the exception of the Monday breakfast. If you wish to attend the Monday breakfast, you may pay for this event (\$30.00) onsite at the Conference Registration Desk.

WHAT IS INCLUDED IN THE CONFERENCE REGISTRATION FEE?

- Six hours of continuing education training each day, for a total of 18 hours
- Access to 90+ vendors within the Exhibit Hall
- Conference Social Events
- Ability to network with speakers, exhibitors & peers.
- 2 Meals (Monday breakfast & Tuesday lunch)
- Submittal of training hours earned to the appropriate regulatory authority.
- If not a member, a 2016 KWWOA Membership, providing access to KWWOA training events throughout the year, most of which are free.

CONFERENCE HEADQUARTERS AND LODGING RESERVATIONS

Crowne Plaza
830 Phillips Lane
Louisville, Kentucky

\$125.00 for all standard rooms sizes
(Check In—3:00 PM, Check Out—11:00 AM)

A block of rooms is being held through March 1, 2016, so make your reservation early to ensure availability and access to the quoted rate. Reservations can be made by visiting the KWWOA website at www.kwwoa.org, clicking on the "State Conference Information" tab and selecting the "Crowne Plaza Room Reservations" link or by calling 1-888-233-9527 (reference the KWWOA Conference to receive the rate quoted). Parking is free and internet access is included within the sleeping rooms at the rate quoted.

Tentative Conference Agenda

(Final Times May Vary Slightly)

Sunday, March 20, 2016

4:00 PM — 6:00 PM Registration Open

Monday, March 21, 2016

6:30 AM — 5:45 PM	Registration Open
7:00 — 8:30 AM	Breakfast, Opening Session, KWWOA Meeting & Awards Ceremony
8:50 — 9:50 AM	Keynote Address/Technical Session 1
9:00 AM - 12:00 PM	Vendor Set-up
9:55 AM — 12:00 PM	Technical Sessions 2 & 3
12:00 — 1:30 PM	Lunch On Your Own
1:30 PM—5:45 PM	Exhibit Hall Open—Crowne Ballroom
1:30—2:30 PM	Technical Session 4
2:30 PM - 3:30 PM	Ice Cream Social-Exhibit Hall—Crowne Ballroom
3:30 PM - 5:35 PM	Technical Sessions 5 & 6
7:30—8:30 PM	KWWOA Reception
8:30 PM	Cornhole Tournament & DJ

Tuesday, March 22, 2016

7:00 AM — 4:30 PM	Registration Open
8:00 AM—2:00 PM	Exhibit Hall Open—Crowne Ballroom
8:00 AM — 12:15 PM	Technical Sessions 1—4
12:15 - 2:00 PM	Lunch in the Exhibit Hall
2:00 — 4:05 PM	Technical Sessions 5 & 6

Wednesday, March 23, 2016

8:00 AM — 4:30 PM	Registration Open
8:00—9:00 AM	Coffee Available—Across from the Registration Desk
8:30 AM—11:40 PM	Technical Sessions 1—3
11:40 AM—1:00 PM	Lunch on Your Own
1:00 PM—4:10 PM	Technical Sessions 4—6

Thursday, March 24, 2016

8:00 AM	Certification Testing— Collection and Surface Water Treatment
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59th ANNUAL WATER AND WASTEWATER OPERATORS CONFERENCE

CONTINUING EDUCATION

REGISTRATION FORM

Crowne Plaza, Louisville, Kentucky

March 20—24, 2016

(Please Print Clearly)

Name: _____ **AI No. or KWWOA ID No.:** _____

Home Address: _____

City: _____ **State:** _____ **Zip Code:** _____

Employer: _____

Work Address: _____

City: _____ **State:** _____ **Zip Code:** _____

Title: _____ **Work Phone:** _____

County: _____ **Email Address (Home or Business):** _____

Are You A 2016 Member? ____ Yes ____ No **Prefer to receive KWWOA information at:** ____ Home ____ Work

IMPORTANT NOTE: THIS FORM MUST BE COMPLETED IN ITS ENTIRETY

Registration includes: Technical Sessions, Exhibit Hall admittance, Monday breakfast, Tuesday Lunch and all Social Events.

Pre-Registration

(Postmarked by February 15, 2016)

- ☐ **\$140—2016 Member**
- ☐ **\$170—Non-Member Registration**
(Includes a 2016 KWWOA Membership)

Registration

(Postmarked after February 15, 2016)

- ☐ **\$190—2016 Member**
- ☐ **\$220—Non-Member Registration**
(Includes a 2016 KWWOA Membership)

TOTAL REGISTRATION FEE INCLUDED (One check may be submitted for multiple registration forms): \$ _____

Name of Payee if different from the Registrant above: _____

Submit the Registration Form(s) and the appropriate payment, made out to KWWOA, to the following address:

KWWOA, P. O. Box 700, Lawrenceburg, KY 40342

No Refunds Issued after February 15, 2016.

Anyone registering online will receive an email confirmation. Those registering via regular mail will not receive a confirmation, but may log into their KWWOA account to confirm receipt of the order.

FOR INFORMATION, contact Lisa Detherage at (502) 352-0510 or via email at Lisa@kwwoa.org

***Do not submit this application if applying to attend the Division of Compliance Assistance, Operator Certification Review & Exam.**



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Once the product has been designed, installed and operational there will come a time the equipment will need to be replaced. Our aftermarket sales team can help the **UTILITY CUSTOMER** identify equipment problems and recommend equipment with a newer design or equipment just better suited for the application. By replacing aging mechanical equipment, the utility customer will be able to reduce the overall system operation and maintenance cost.

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Who is DCA and What Can They Do For You?

By Jessica Willhoite

Most of you interact with the Division of Compliance Assistance (DCA) routinely to obtain and maintain your operator certification licenses and certification training. However, DCA also administers Kentucky's Environmental Compliance Assistance Program (ECAP) whose primary objective is to help regulated entities understand and comply with the environmental programs administered by the Department for Environmental Protection. ECAP staff members have the ability to work with you to resolve permitting and operational problems. ECAP staff members have expertise in air, water and waste topics. If they aren't able to immediately provide you with an answer, they can quickly get you in touch with someone that can respond with the help you need. Every drinking water or wastewater operator should take advantage of this free service. It will help you become a better operator and keep your facility compliant. You can contact DCA through their toll-free compliance assistance hotline at 800-926-8111 or you can reach them at envhelp@ky.gov.

Operator Certification Program

The Division of Compliance Assistance's Operator Certification Program (OCP) has published its 2016 Drinking Water and Wastewater Operator Training Schedule. The schedule contains a list of the certification schools offered throughout 2016 and the continuing education courses offered January through June. The schedule may be viewed on our Operator Training web page at dca.ky.gov/certification.

Reminder: The renewal cycle for certified drinking water treatment, distribution and bottled water system operators begins on January 1 and ends on June 30, 2016. Earn your continuing education hours and renew your license(s) beginning January 1.

If you have any questions related to your certification or certification training, OCP staff can be reached at 502-564-0323. The following OCP contact list should help you get the right person to address your specific certification needs:

- **Jessica Willhoite** – Manager
- **Veronica Roland** – Solid Waste Applications (application and check processing) and Approval for Continuing Education Applications (applications and board preparation)
- **Amanda Starks** – Drinking Water Applications (application/check processing and renewals)
- **Katie Mauer** – Wastewater Applications (application/check processing and renewals)
- **Tim Ricketts, Clayton Getz, George Haynes & Dennis Minch** - Drinking Water and Wastewater Applications (technical questions/qualifications)

Meet the Drinking Water and Wastewater Certification Board Members!

Serving in an advisory capacity, the Kentucky Board of Certification of Water Treatment and Distribution System Operators and the Kentucky Board of Certification of Wastewater System Operators assist the agency in the implementation of the operator certification program. The boards meet on a monthly basis to review applications, reciprocity requests, proposed regulation revisions, third-party training submittals and operator disciplinary action requests.

The Kentucky Board of Certification of Water Treatment and Distribution System Operators consists of five (5) board members:

- **Chris Spriggs**, Chairman – Public Works Director

- **Lonnie Banks** – Certified Operator Representative
- **Tom Gabbard** – Energy and Environment Cabinet Representative
- **Ruth Lancaster** – University Representative

The Kentucky Board of Certification of Wastewater System Operators consists of eight (8) board members:

- **Larry Grubbs**, Chairman – Management Representative
- **Robin Strader**, Vice Chairwoman – Certified Operator Rep.
- **David Pedigo** – Industrial Operator Representative
- **Jerry McClary** – Certified Operator Representative
- **Calvin Smith** – Certified Operator Representative
- **Joe Baxter** – Certified Operator Representative
- **Tom Gabbard** – Energy and Environment Cabinet Representative
- **Ruth Lancaster** – University Representative

Operator Ethics

The Department for Environmental Protection has been placing a stronger emphasis on certified operator performance and ethics, which mean operators are being held more accountable for their actions at their facilities through regulatory changes, Notice of Violations (NOVs) and Operator Disciplinary Actions.

What are Ethics? Ethics establishes how we see right and wrong (good and bad) in our society. Ethical behavior is synonymous with moral behavior and professionalism. Ethical codes of conduct vary from profession to profession but the rules are almost always the same. Establishing and maintaining our professionalism develops integrity with our stakeholders. Unethical behavior erodes the public's trust and confidence in how or if we can do our jobs.

Before partaking in an event or situation ask yourself some basic questions. Is it ethical? What are the consequences of my action or lack of action? What do I have to lose? Is it legal? How will my actions affect customers, my employer and reputation? Never assume you won't get caught or no one will be harmed. Make sure your actions are defensible in order to maintain your integrity and remember the right way isn't always the easiest way.

So what can you do in controversial circumstances? Get away from the situation and ask yourself the basic ethics questions. If you don't feel comfortable with the answers then **don't do it!** Find other avenues that maintain your professionalism.

Develop an ethical decision-making strategy:

- Know the facts of the situation being considered;
- Know the stakeholders affected by your decision and what their desired outcome would be;
- Know who should be involved in making decisions regarding the situation;
- Make a list of alternative action plans to prevent or minimize harm to stakeholders; maintain your integrity; provide a good working solution for the problem at hand;
- Think through the worse-case scenarios for the alternative solutions you develop.
- What are the consequences?
- Does the solution I've developed uphold my own and my employer's priorities and values?
- Would I want my solution to become the "norm" for similar situations?
- How would I feel if details of my decision are disclosed for everyone to know?

Talk it through with someone you respect and trust. Be honest and remember that you are a professional. And always remember, your friends at DCA are here to help guide you in the right direction.

Who Are Those New Faces at Eastern KWWOA?

By Katie Avera

Hello Everyone! With a new year beginning, I am excited about what the future holds for the Eastern Chapter of KWWOA. Since there have been some leadership changes within the Chapter, I would like to share information about the new officers as well as the results from our recent membership survey. While some of you know me, I am Katie Avera the new EKWWOA President. First of all, I am proud to say that I am a Kentucky girl! I grew up in Oldham County and graduated from Oldham County High school. After high school, I ventured down to Richmond and graduated from ECU. After graduation I started my career in wastewater sales with the Ford Hall Company. I worked there for 6 years covering 6 states. During that time, my husband and I had a son and I decided to take a break from travelling for a little while. After leaving Ford Hall, I began working for United Rentals, selling and renting construction equipment.

Three years ago, I was offered a position with Eco-Tech as a manufacturers' sales representative for Kentucky. My heart has always been with the water/wastewater industry, so I was excited to begin my new career! I have to say I have truly enjoyed these past 3 years! I look forward to many more years in this industry getting to know all of you!

For the past 10 years, my husband, son, and I have lived in London, Kentucky. During my free time, I enjoy doing outdoor activities, cooking, and spending time with my family. My husband is an elementary music teacher. I graduated with a music degree, and my son plays trumpet, so music is something that we all enjoy doing together. I look forward to serving as the Eastern KWWOA chapter president. If at any time you have any questions or concerns, please do not hesitate to contact me at [606-682-0887](tel:606-682-0887) or via email at kavera@eco-tech.net.

The Chapter also has a new Vice-President, Brad Reed. Brad began work with Mt. Sterling Water and Sewer in December of 2009 at the Hinkston Creek Waste Water Treatment Plant (HCWWTP). After a year working at HCWWTP, he obtained his Class II Waste Water Treatment Operator license then quickly went on to obtain his Class III license in January of 2012. He was asked to work in the waste water plant laboratory in August of 2013 where he has acquired the Lab Certification for the HCWWTP Laboratory. He has since been promoted to Lab Manager and still assumes waste water treatment operator duties as well.

When not working, Brad enjoys camping, canoeing, watching movies, video editing and most of all, spending time with his family. He also is an Assistant Scoutmaster with Troop 53 Boy Scouts in Mt. Sterling, where he resides with his beautiful wife (Kim) and two wonderful kids (Adam and Kalissa). He has been a member of the KWWOA since 2009 and is honored to serve as Vice President which he enjoys and will work diligently to make it a wonderful and successful Chapter. Brad can be reached at hcwwtplab@mswatersewer.com, if you have any questions, concerns or just want to drop a line to say hello.

Rounding out this group are Joe Dunaway, Jr. as Treasurer, Lloyd Keyser as the Acting Secretary and Wastewater Representative and Roy Gray as the Drinking Water Representative to the KWWOA State Board.

When the new officers were appointed, we surveyed our Chapter members on ways to improve, ideas for training, and how you felt about the pricing of KWWOA's training events. The general consensus was that the pricing of the training for both members and non-members was reasonable. As far as events, the ideas presented include:

- Fishing tournament
- Golf Scramble
- Clay shoot
- Chili cook off

As for trainings, the most common suggestions were:

1. More hands on training,
2. Collections training,
3. Process equipment training, and
4. Computer training.

We will be trying our best to incorporate these ideas into our 2016 schedule of events. Once again, we greatly appreciate your time and value your suggestions! Please feel free to contact any of the officers (see contact information on page 17), should you have any suggestions and/or questions.



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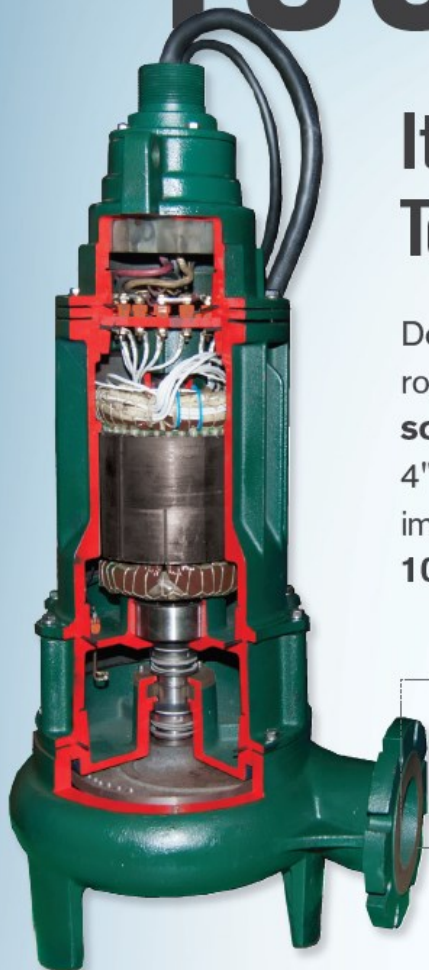
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Online Courses for Water & Wastewater Operators

Do you want to 'try out' college?

Could you use 30+ hours in water or wastewater CEUs?



If those questions spark your interest, check out the Water Technology courses currently being offered by Western Kentucky University. These courses are 100% online – you can take these college classes in your pajamas! Available 24/7, the courses require you to read material and watch videos about water or wastewater issues, answer questions and participate in online discussions. You can expect to devote several hours per week to an online course – but you can choose when those hours will be. Finish a chapter in two lunch hours, or work on classes at 11 PM after the children are in bed.

Registration is open now for the following spring semester courses (classes begin in January):

COURSE NUMBER	TITLE	TYPE
WTTI 200	Water Supply Wastewater Control	100% online
WTTI 211	Intro to Wastewater	100% online
WTTI 226	Water Chemistry	100% online

If you are a first-time college student, you will have to rustle up your high school diploma and fill out a couple of forms to register. You don't have to enroll for a specific degree – you can simply take a class to see if online college is right for you. (However, if you are pursuing a degree, you may be eligible for financial aid).

Many employers provide tuition assistance for employees. For recent high school grads, KEES money may even pay for your WKU water technology course. KEES (Kentucky Educational Excellence) pays money toward college for each semester in which a high school student maintains a 2.5 GPA. If your son or daughter is interested in environmental or water quality work these courses are a good introduction to the field. There are other financial incentives including possible tax credits and the potential to deduct the cost of classes which improve your skills in your present field of employment (find out more at <https://www.irs.gov/uac/Tax-Benefits-for-Education:-Information-Center>).

WKU has specific resources for adults starting or returning to college. See the notice below for face to face admissions meetings or find more information at <http://www.wku.edu/adultservices/>.

For information for prospective adult, transfer, military, online students, call (270) 745-3575 or email "finish@wku.edu".



Register at:

wku.edu/finish

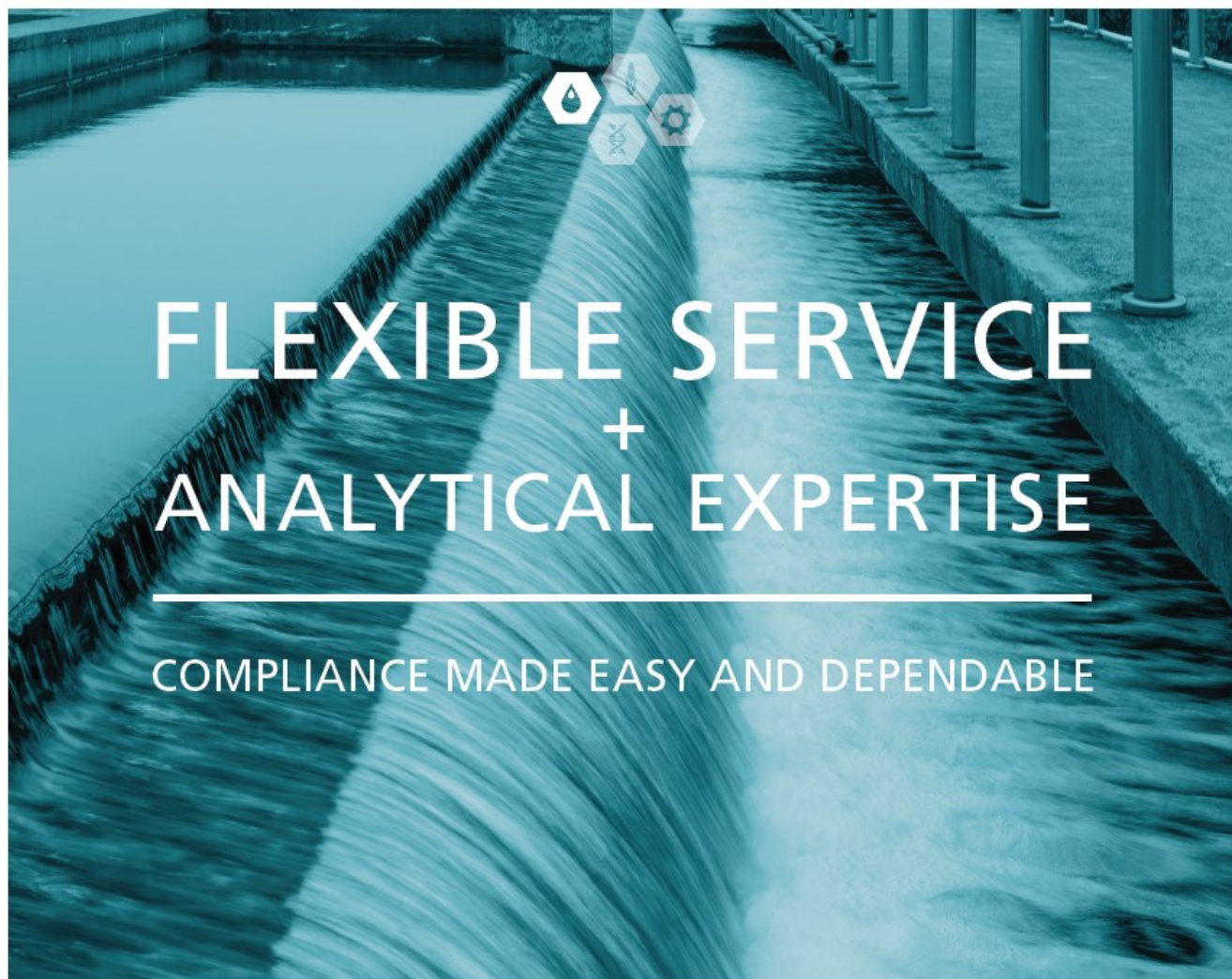


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Rotor Aerator Flexibility Maximizes Energy Savings

Warren W. Kersten, P.E.

Rotor aeration has been utilized for more than 50 years to provide dissolved oxygen and mixing in more than 2,000 oxidation ditch activated sludge plants. Today's modern horizontal rotors provide the greatest range of oxygen delivery and mixing of any mechanical surface aerator, aspirating aerator, and diffused aeration systems.

The Lakeside Magna Rotor offers a typical oxygen transfer range of 3.3 to 3.6 lb. oxygen per brake horsepower depending upon the rotational speed and blade immersion. The Magna Rotor operates at blade immersions from 5 inches to 15 inches. This blade immersion range provides an average 3.25-to-1 variation in oxygen transfer. The rotational speed of the Magna Rotor can be varied from 36 to 72 rev./min. The combination of rotational speed and immersion range provides an oxygen transfer range of 9.7-to-1. This flexibility allows the plant operations staff to easily match the specific oxygen uptake rate (SOUR) of the process. The flexible oxygen transfer that is provided by the Magna Rotors allows for the mixed liquor dissolved oxygen to be properly maintained during the initial start-up of the plant where the influent BOD₅ and TKN loadings may as low as 20% of the ultimate design of the plant.

Magna Rotors are offered in lengths ranging from 5 feet to 30 feet with two blade assembly stars per foot of torque tube length. Each blade assembly star is comprised of 12 J-shaped blades that are connected via two stainless steel bolts. The blades are formed of corrosion-resistant 10 gauge stainless steel that is die-formed. Unlike designs that utilize plastic blades or discs that become brittle in cold weather and can break, the Magna Rotor blades can take a 250 lb. load without deformation or damage. The blade assembly stars are factory assembled to a finish painted 14-inch diameter torque tube with a minimum 3/8-inch thick wall.



Each Magna Rotor is provided with a field-replaceable stub shaft on each end of the torque tube. An expansion-type bearing is provided on the tail end of the torque tube and a fixed bearing on the drive end of the torque tube. A shaft-mounted speed reducer with either a standard V-belt and sheave connection to the drive motor or an optional direct drive speed reducer with a NEMA C-face motor can be provided. Maintenance is minimal with the two bearings requiring grease lubrication every two months and speed reducer oil changes three times per year.



In nearly every installation, the power consumption of the rotors is a function of the required oxygen delivery and not the power required to mix the reactor. The Magna Rotors provide mixing of the oxidation ditch to maintain a minimum 1 ft./sec. bulk liquid velocity throughout the reactor. The Magna Rotor blades operate similar to a series of canoe paddles and provide excellent mixing in reactors with liquid depths ranging from 3 feet to 15 feet. Deeper reactor designs are available with supplemental submersible mixers. Velocity control baffles are often provided. The velocity control baffles operate on a principle similar to the flaps on an airplane by creating more turbulent mixing that limits the maximum velocity in the reactor to less than 2 ft. per second. The more turbulent mixing increases the oxygen transfer efficiency of the rotors.

For applications in cold northern climates or to minimize splash and spray on windy days, fiberglass covers are available. Each cover is provided with hinged sections that allow the cover to be opened up for access to the equipment.

Coupled with dissolved oxygen probes and variable frequency drives (VFDs) the Lakeside Magna Rotors provide precise dissolved oxygen control of the process. Since oxidation ditches provide nearly complete nitrification, modern day designs are set up to also take advantage of denitrification for 1) nutrient removal, 2) energy savings, 3) alkalinity recovery, and 4) a better settling sludge. Nitrification and denitrification can be accomplished in the same reactor using the Magna Rotors for the aerobic nitrification phase and submersible mixers for the anoxic denitrification phase.

Rotor aerator design has been significantly advanced over the past 50 years to provide a low-cost, flexible energy-saving oxygen delivery, mixing, and low-maintenance aerator for the oxidation ditch activated sludge process.

KWWOA Chapter—Do You Know Your Chapter Officers?



Eastern Chapter Counties: Bath, Bell, Boyd, Breathitt, Carter, Clay, Elliott, Fleming, Floyd, Greenup, Harlan, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Magoffin, Martin, Menifee, Montgomery, Morgan, Owsley, Perry, Pike, Powell, Rockcastle, Rowan, Whitley and Wolfe.

Officers: Katie Avera	President	606-682-0887	kavera@eco-tech.net
Brad Reed	Vice President	859-432-5746	hcwwtplab@mswatersewer.com
Lloyd Keyser	Secretary & Wastewater Rep	606-923-3760	lloydkeyseronsite@yahoo.com
Joe Dunaway, Jr.	Treasurer	606-748-8778	joedunaway@altiusbb.com
Roy Gray	State Board Water Rep	606-596-0296	manchesterwtp@yahoo.com

North Central Chapter Counties: Anderson, Boone, Bourbon, Boyle, Bracken, Campbell, Carroll, Clark, Estill, Fayette, Franklin, Gallatin, Garrard, Grant, Harrison, Henry, Jessamine, Kenton, Lincoln, Madison, Marion, Mason, Mercer, Nicholas, Owen, Pendleton, Robertson, Scott, Shelby, Spencer, Trimble, Washington, and Woodford.

Officers: Stewart North	President	859-223-1444	sanorth@sourcetechologiesllc.com
Matt Piccirillo	Interim Vice President & Secretary/Treasurer	859-441-0482	picciril@nkywater.org
Nathan Hodges	State Bd. Wastewater Rep	859-441-0482	nhodges@nkywater.org
Matt Chancellor	Water Rep	859-327-0225	mchancellor@gmwss.com
Brian Bourne		502-229-2396	BBourne@fewpb.com

Central Chapter Counties: Adair, Allen, Barren, Breckinridge, Bullitt, Butler, Casey, Clinton, Cumberland, Edmonson, Grayson, Green, Hardin, Hart, Jefferson, Larue, McCreary, Meade, Metcalfe, Monroe, Nelson, Oldham, Pulaski, Russell, Taylor, Warren, and Wayne.

Officers: Robin Strader	President	270-259-3311	rdstrader@windstream.net
David Huffman	Vice President	270-404-4809	Huffmans@scrtc.com
Mandy Spaulding	Secretary/Treasurer	270-862-4340	aspaulding@hcwd.com
Shaun Youravich	Water Rep	270-737-1056, ext. 304	Youravich@hardincountywater2.org
Jacob Billingsley	Wastewater Rep	270-670-3751	jbillingsley@glasgowh2o.com
Jeremy Woosley	Director of Water	270-879-8632	jwoosley@wrecc.com
Bradley Johnston	Director of Wastewater	270-351-6270	Bradley.johnston@veolia.com

Western Chapter Counties: Ballard, Caldwell, Calloway, Carlisle, Christian, Crittenden, Daviess, Fulton, Graves, Hancock, Henderson, Hickman, Hopkins, Livingston, Logan, Lyon, Marshall, McCracken, McLean, Muhlenberg, Ohio, Simpson, Todd, Trigg, Union, and Webster.

Officers: Jimmy Grimm	President	(270) 217-4108	jimmy.grimm@fortiline.com
Chris Spriggs	Vice President	(270) 824-2145	cspriggs@madisonvillegov.com
Darran Rankin	Secretary/Treasurer	(270) 444-5581	drankin@pwwky.com
Leslie Rogers	Water Rep	(270) 887-4232	lrogers@hwea-ky.com
Alan Todd	Wastewater Rep	(270) 824-2170	atodd@madisonvillegov.com

KWWOA 2016 TRAINING & EVENT SCHEDULE

Chapter	Date	Training Cost	Location of Training	Type of Training*	Hours*
North Central	January 11-12	Free—KWWOA Members \$50.00—Non-Members	Berea Folk Center Berea, KY	General & Drinking Water	12
Statewide	March 21-23	\$140.00-KWWOA Mem- bers \$170.00—Non-Members	Crowne Plaza Louisville, KY	Water and Wastewater	18
Central	April 21	Free—KWWOA Members \$50.00—Non-Members	Leitchfield Fire Dept. Training Center Leitchfield, KY	Confined Space	6
North Central	May 3	Free—KWWOA Members \$50.00—Non-Members	VFW Frankfort, KY	Water and Wastewater	6
Western	May 17 & 18	Free—KWWOA Members \$50.00—Non-Members	KY Dam Village State Resort Park Gilbertsville, KY	Water and Wastewater	12
Central	May 19	Free—KWWOA Members \$50.00—Non-Members	Hardin County Water Dist. No. 2 Elizabethtown, KY	Trenching & Shoring	6
Eastern	May 24	Free—KWWOA Members \$50.00—Non-Members	Prestonsburg City's Utilities Comm. Prestonsburg, KY	Water and Wastewater	6
Central	June 2	\$100—All attendees	Fire Training Center Glasgow, KY	Motor Controls Workshop (Multi Meter given to all attendees)	6
Eastern	June 2	Free—KWWOA Members \$50.00—Non-Members	London Wastewater Plant London, KY	Water and Wastewater	6
North Central	July TBD	Free—KWWOA Members \$50.00—Non-Members	Northern Kentucky Water District Fort Thomas, KY	Water and Wastewater	6
KLA	August 1—4	150.00-All attendees Must be preapproved.	Grayson County Water District Leitchfield, KY	Aug. 1-3—Cert. Review Session Aug. 4—Exam**	18
Central	August 11	Free—KWWOA Members \$50.00—Non-Members	Bowling Green Municipal Utilities Bowling Green, KY	Confined Space Entry	6
Central	Sept. 27-28	Free—KWWOA Members \$50.00—Non-Members	Barren River State Resort Park Glasgow, KY	Water and Wastewater	12
Eastern & North Central	Oct. 10—12	Free—KWWOA Members \$75.00—Non-Members	4 Point Sheraton Lexington, KY	Water and Wastewater	18
Eastern	November 17	Free—KWWOA Members \$50.00—Non-Members	Morehead Utility Maintenance Dept. Morehead, KY	Water and Wastewater	6
Central	Dec. TBD	Free-KWWOA Members	TBD	Holiday Awards Banquet	N/A
Western	December 3	Free-KWWOA Members	KY Dam Village State Resort Park Gilbertsville, KY	Holiday Dinner Meeting	N/A

* It is the intent of the KWWOA to solicit approval from the Division of Compliance Assistance and the Kentucky Boards of Certification for approval of the hours and type of training referenced above prior to the class. Once the hours have received Board approval, a notice will be posted on the KWWOA website with information on the particular class. If you need these hours for renewal purpose and/or the specific topic referenced, you should inquire ahead of time as to the agenda and whether approval has been obtained.

** Must be prequalified for this exam.



"Working Together to Preserve the Environment and Future of the Water and Wastewater Operator"



Membership Application/Renewal Form

—Please check the appropriate boxes and print clearly—

Refer to the list of counties on our website at www.kwwoa.org, to determine which Chapter serves your area.

☐ - Western

☐ - Central

☐ - North Central

☐ - Eastern

☐ - New Member

☐ - Membership Renewal

Name: _____ Agency Interest No. _____

Home Address: _____ County: _____

City: _____ State: _____ Zip Code: _____

Employed By: _____

Business Address: _____

City: _____ State: _____ Zip Code: _____

Phone: (Home) (_____) _____ - _____ (Business) (_____) _____ - _____

Email: (Home or Business) _____

Where would you prefer to receive KWWOA information/training announcements ? ☐ - Home ☐ - Business

If a valid email is provided, it will be utilized to ensure that you receive KWWOA information more quickly.

NOTE: Associate Members should not use this form. Associate Membership Applications may be found at www.kwwoa.org.

Active Membership ☐ - By February 29, 2016.....\$30.00 ☐ - Postmarked March 1, 2016 & after 50.00

Active membership is designed for those who actually hold a valid water or wastewater license and/or who are employed in a water or wastewater utility. This includes administrative staff, pretreatment and/or lab technicians as well.

☐ **Honorary Membership**.....Free

Honorary membership is designed for those who are retired from the water or wastewater field and held an active membership in the KWWOA during the previous calendar year. There is no fee for Honorary membership.

☐ **KLA Membership**.....\$10.00

This fee is in addition of the Active Membership fee above.

TOTAL _____

Please forward this application and a check or money order, payable to **KWWOA**, to the address below. You may also elect to renew online, paying through PayPal at www.kwwoa.org.

KWWOA
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Lawrenceburg, KY 40342

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Shaun Youravich, Rep., CKWWOA
youravich@hardincountywater2.org

Alan Todd, Rep., WKWWOA
atodd@madisonvillegov.com

Leslie Rogers, Rep., WKWWOA
lrogers@hwea-ky.com



For information, comments or
questions regarding KWWOA or
this newsletter, contact:

Member Services Director:
Lisa B. Detherage

Mailing Address:

KWWOA
P.O. Box 700
Lawrenceburg, KY 40342

Phone Number: 502-352-0510

Email Address: info@kwwoa.org

Website: www.kwwoa.org

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P. O. Box 700
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- Toxic Release Inventory Reporting
- SPCC Development
- Flowmeter Installation, Monitoring, & Calibration
- Environmental Studies
- Environmental Phase I & II

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