

**Wastewater - Application for Approval of Courses
for Continuing Education Credit - Attachment**

**Kentucky Water and Wastewater Operators Association
62nd Annual KWWOA Conference**

February 25, 2019

**B-X
DW-OM
WW-OM
B-OM**

III. Required Items

A. Course Learning Objectives

This program will provide a variety of training topics of value to wastewater and drinking water system operators to assist with their professional development and the enhancement of system operations under their control. Operators will be able to attend training sessions that will seek to convey new material relevant to their industry/operation, increase the depth of their knowledge relevant to basic operations of their facility, and/or provide a refresher to ensure full protection of human health and the waters of the Commonwealth.

B. Criteria For Successful Completion

Exams will not be given at the conclusion of each training session. However, operators must attend the full session and will receive a sheet that must be stamped by a KWWOA official at the conclusion of each one hour of training. Failure to obtain a stamp will negate the operator receiving credit for a particular session. These stamp sheets will be turned in to KWWOA prior to the operator leaving the Conference and be maintained by the organization. The hours earned by each operator will be documented on a Continuing Education Activity Report and submitted via electronic submittal to the Division of Compliance Assistance.

C. & D. Agenda and Credentials for All Instructors – A timed agenda is provided below, along with a brief description of each session and the instructor's credentials.

Monday, April 15, 2019

General Technical Sessions

8:30 to 9:30 AM

General Technical –Operator Certification Update (1 hour)

Speaker: Amanda LaFevre, Director, Kentucky Division of Compliance Assistance

Amanda LeFevre has been with the Division of Compliance Assistance and the Department for Environmental Protection since 2006. She served in the Environmental Assistance Branch in the Kentucky Brownfield Redevelopment Program and as Assistant Director for the division before becoming Director in 2018. Amanda specialized in enhancing the educational offerings of the division and its programs which include compliance assistance, operator certification, brownfields and the state's environmental leadership program, KY EXCEL. She serves as the Chair of the Association of State and Territorial Solid Waste Management Officials' (ASTSWMO) Brownfield Focus Group. She earned a bachelor's degree from Brescia University and a Master's Degree in Public Administration from the University of Kentucky. Amanda is a Kentucky native originally from Falls of Rough, Ky. She resides in Lexington with her husband, John.

Session Summary: With the continuing retirement of many Baby Boomers and changes in workplace preferences of our younger generation, the water and wastewater industries face some staffing challenges. While regulations can't fix everything, the Kentucky Department for Environmental Protection is seeking ways to create some flexibility where needed and provide better avenues for those entering the profession with skills and education. This session will cover proposed changes in drinking water and wastewater operator certification and ways the department is working with partner organizations to help address workforce development and staffing challenges.

9:40 to 10:40 AM

General Technical – Division of Water: Organizational, Legislative, Regulatory & Programmatic Priorities (1 hour)

Speaker: Peter Goodman, Director, Kentucky Division of Water

Peter Goodman serves as the Director of the Kentucky Division of Water. Mr. Goodman has worked for the Department for Environmental Protection since 1993, as a manager and as Assistant Director. Mr. Goodman was appointed the Director of the Division of Water in February 2014. He is responsible for overseeing Kentucky's water regulatory programs, including the Clean Water Act, the Safe Drinking Water Act, the Kentucky Agriculture Water Quality Act and other Water Resources Management programs, including Dam Safety, Floodplain Permitting, the National Flood Insurance Program, Risk Map, and Drought Management and Mitigation.

Director Goodman is a Commissioner on the Ohio River Sanitation Commission (ORSANCO). He is also a board member of the Association of Clean Water Administrators (ACWA), the Ground Water Protection Council (GWPC) and FEMA's National Dam Safety Review Board. Director Goodman is also serves on the Kentucky Agriculture Water Quality Authority and the Hypoxia Task Force.

Summary: The Division of Water has reorganized its structure to better carry out its mission. The division has re-created the Drinking Water Branch and the Water Resources Branch. The Drinking Water Branch will include the Compliance Section, which conducts compliance review on SDWA rules, the Technical Assistance Section, which works with PWSs to improve technical capacity and help systems address noncompliance issues with reporting, treatment and distribution, the Laboratory Certification Section which implements the Drinking Water and Wastewater Laboratory Certification programs. Engineering reviews will still be conducted by the Water Infrastructure Branch. The Capacity Development program will be implemented jointly by the Water Infrastructure Branch, the Field Operations Branch and the Drinking Water Branch. The Water Resources Branch (WRB) includes the

Dam Safety Section, which implements the dam safety program and the State-Owned Dam Repair program, the Floodplain Management Section which issues permits and conducts compliance of floodplain permits, the Water Quality Certification Section, which issues certification that federal permits comply with state water quality standards. The WRB also implements the National Flood Insurance Program, and the Risk MAP program.

The Division of Water has a number of priorities, most important of which, is to focus on addressing infrastructure needs, and the operational needs of public water systems. Legislatively, the division is seeking authorization via a Joint Resolution to convene a stakeholder group to identify alternate state and local sources of water infrastructure funding, to update the Water Resources statute (KRS 151) to allow the division to charge fees for actions taken under the statute and require Emergency Action Plans for high- and moderate hazard dams. The division has worked with a sponsor to provide for a Water Well Drillers Assistant authorization.

On the regulation front, the division is working to modernize the Operator Certification regulations, complete the Triennial Review of Water Quality Standards, make changes in 401 KAR Chapter 4 to provide for the issuance of floodplain Permits by Rule (PBR) and Registered Permits by Rule (RPBR) for negligible and minor impact projects. The Division will be proposing to increase the KPDES permit fees to reflect the cost of issuing permits, and amending a regulation to address small, privately owned package WWTPs, as directed by legislation.

Programmatically, the division is working toward updating the Sanitary Survey process to make the survey more valuable to the division and water systems, improve the electronic submittal of compliance reports, MORs, etc., improve the electronic submittal on construction permit applications and plans, and develop a technology-based approach to addressing nutrients in permits. The division is updating its Capacity Development Strategy, which will identify developing tools to address chronic issues, such as operational permits for PWSs and improved operational permits for wastewater systems, that will address issues such as asset management, staffing, and succession planning.

10:50 to 11:50 AM

General Technical – Something Old, Something New, Something Borrowed & Something Blew(1 hour)
Speakers: Andrew Melnykovich & Michael Nantz, KY Public Service Commission

Andrew Melnykovich is the Director of Communications for the Kentucky Public Service Commission. He is responsible for the PSC's communications with the public and news media. Prior to joining the PSC in 2002, Melnykovich was an independent communications consultant. Melnykovich was the environmental writer for The (Louisville) Courier-Journal from 1990 to 1999. From 1999 to 2001, he was a senior account manager in public affairs at Doe Anderson, Inc., a Louisville advertising and public relations firm. Melnykovich is a graduate of Yale University, holding a Bachelor of Sciences degree in biology and a Master of Forest Sciences from the Yale School of Forestry and Environmental Studies. He also did graduate work at the University of Wyoming. Before coming to Louisville, Melnykovich was the environmental writer and Washington, D.C., reporter for the Casper (Wyoming) Star-Tribune. His journalism honors include a George Polk Award.

Michael C. Nantz has over 20 years of regulatory experience relating to various areas of utility services. Prior to rejoining the Kentucky Public Service Commission in January of 2018, he was a member of the Georgia Public Service Commission staff serving for two years as the State's Program Manager

responsible for administration of Georgia's Pipeline Safety Program through a federal grant program for the Pipeline and Hazardous Materials Safety Administration (PHMSA). Mr. Nantz's experience also includes positions in the private utility natural gas and electric sectors. His current responsibilities include the management of the KY Commission's enforcement program relating Kentucky's Dig Law.

Session Summary: Although the basic requirements of Kentucky's Underground Facility Protection Act have remained the same for more than 20 years, a change this year has led to greatly stepped-up enforcement of the statute as it pertains to natural gas lines. This presentation reviews the statute and explains the Public Service Commission's new enforcement role.

1:15 to 2:15 PM

General Technical –Liquid Chemical Feed for Municipal Water & Wastewater (1 Hour)

Speaker: Brian Gatewood, JAGS Environmental, Inc.

Brian is retired from the City of Williamstown where he served in various capacities from Operator to Water/Wastewater Director for 26 years. He holds a Class III license in WW Treatment, WW Collection, Surface Water Treatment, and Distribution. Brian is currently employed by JAGS Environmental as a Sales Representative covering owners and end users in Kentucky and Southern Ohio.

Session Summary: The presentation will cover diaphragm and peristaltic metering pumps showing the advantages and disadvantages of each pump as well as what applications are suitable for each pump. It will also cover ancillary equipment that is used with the metering pumps such as calibration columns and pulsation dampeners.

3:15 to 4:15 PM

General Technical – Cyber Security as a Team Sport!(1 hour)

Speaker: Jeff Harlan, United Systems & Software

Jeff Harlan has been with United Systems for the last 5 years. Jeff has over 25 years in the IT and software industry with certifications from Microsoft, Cisco, Citrix and others. Jeff has been responsible for hundreds of network installations including datacenter designs, which include hundreds of servers and thousands of workstations. Jeff was the managing partner at WWL Network Solutions which was purchased in 2006 by WinScribe, a global company in the speech dictation space. He was subsequently added to WinScribe's board of directors and eventually named CEO for U.S. operations. His technical and business management experience are an added benefit for our customers and partners when seeking best in class solutions for the problem resolutions they are working to solve.

Session Summary: In today's world, going it alone when it comes to the security of your network creates extreme risk for your organization. Network security requires all departments to work together to keep your customers and your data secure from outside threats. In this presentation, we identify threats and provide related strategies to help your team become cyber resilient.

4:20 to 5:20 PM

General Technical – Kentucky Infrastructure Authority Updates (1 Hour)

Speaker: Donna McNeil, Kentucky Infrastructure Authority

Donna McNeil was appointed the Executive Director of the Kentucky Infrastructure Authority on February 16, 2017. Donna graduated valedictorian from Lawrence County High School in Louisa, Kentucky and received a Bachelor of Science Degree in Civil Engineering from the University of Kentucky. She holds an Engineer-in-Training certification from the Kentucky Board of Licensure for Professional Engineers and Land Surveyors. In 2008, she retired from state government with over 22 years of service. During her tenure she managed the Kentucky drinking water program. From 2013 to 2017, Donna worked as a compliance specialist with Kentucky Rural Water Association, providing technical assistance to water utilities. She is a member of both the Drinking Water and Wastewater Advisory Councils for the Kentucky Division of Water. She is also a member of the US EPA/State SRF Work Group and the Kentucky Water Resources Research Institute Committee on Research and Policy.

Session Summary: This session will address how to fund equipment through KIA including an overview of how to fund large equipment available from the Kentucky Surplus Property federal program. A list of eligible equipment, applicants, and funding terms will be provided.

She will also provide KIA Updates to include an overview of the funding programs available, the types of projects eligible, and important facts to assist potential borrowers in receiving priority for their infrastructure project.

Wastewater Technical Sessions

10:50 to 11:50 AM

Wastewater Technical – Lift Station Health – Dealing with Fog & H₂S (1 Hour)

Speaker: Chris Shirazy, Reliant Water Technologies

Chris is a graduate from Georgia State with a degree in Human Resources. He has worked for 6 years in the wastewater industry dealing predominately with Air Release and Vacuum Valves and he is now the National Technical Sales Manager for Reliant Water Technologies.

Session Summary: This presentation will be an overview of lift stations and the biological process needed for degradation and flow of F.O.G and H₂S from the lift station/wet well to the wastewater plant.

1. The Municipal Collection System,
2. Problems for Lift Stations,
3. Solutions,
4. Concerns, and
5. Q & A.

1:15 to 2:15 PM

Wastewater Technical – Ammonia Limits & Lagoons: The Options Available for Beating Nutrient Limits(1 Hour)

Speaker: Todd Latchaw, Nexom

Todd Latchaw has more than 20 years of marketing and operational experience in the water and wastewater industry and extensive working knowledge of wastewater treatment systems. As Nexom's Regional Manager for the Eastern U.S., his experience includes introduction of new technologies and market development, wastewater treatment process equipment and systems, and he has been involved in municipal and industrial wastewater projects across North America.

Session Summary: Lowered ammonia limits are becoming common in lagoon-based wastewater treatment facilities, as regulators seek to protect receiving waterways. Research suggests that effluent un-ionized ammonia, needs to be as low as 0.2 mg/L to ensure non-toxicity to fish. This has forced many municipalities and consulting engineers to consider a potentially difficult decision: do we upgrade to a mechanical plant and abandon the lagoons that weren't designed with today's treatment requirements? Or is there a way to save the infrastructure that has served us well?

Through the lens of several lagoon-based WWTP, this presentation will dig into the factors that influence this decision, including relevant local factors that limit lagoon-based nitrification, such as cold winter water temperatures that slow bacterial metabolism and reproduction, lack of dissolved oxygen needed by nitrifying bacteria, too much competition from BOD-consuming bacteria, and a lack of available surface area for bacteria to grow on.

We will then explore the merits and costs common to the various alternatives for beating ammonia limits and introduce the chosen solution, as well as share information on the current results of that solution and how other WWTPs could benefit from these experiences.

3:15 to 4:15 PM

Wastewater Technical – Application of Coagulation & Precipitation in Pretreatment(1 Hour)

Speaker: Pete Shack, Phoenix Environmental Engineers, Inc.

Mr. Shack is a registered professional engineer in over 15 states and is also a Kentucky licensed wastewater treatment operator. He has over 40 years' experience as a process engineer treating all kinds of industrial wastes. He has designed, permitted, started-up, and/or contract operated well over 100 industrial wastewater treatment plants. Mr. Shack received his Master of Science degree from Texas A&M University in Civil Engineering and undergraduate degree in Civil Engineering from the University of Texas at Arlington. He is a life member of WEF, serving on several committees including the industrial committee, as a peer reviewer for Water Environment Research, as an author/reviewer of two WEF Manuals of Practice, and as an author of papers presented at WEFTEC, KY-TN WPC, and many other technical venues. He is a Certified Hazardous Materials Manager, a Certified Professional in Erosion and Sediment Control, and a Certified Professional in Storm Water Quality.

Session Summary: Chemicals such as metal salts and polymers are in widespread use in pretreatment systems whether they employ suspended solids settling, dissolved air flotation (DAF), chemical precipitation of metals, emulsion breaking or filtration. Yet, a good understanding of the theory and application of chemicals is not commonly found. Optimizing performance of these systems provides better treatment and reduced treatment costs. This instructional presentation provides a brief review of fundamental theory of suspended solids settling and the forces influencing the coagulation and flocculation of discrete particles. Then, a practical explanation of the hows and whys of using chemicals and optimizing coagulation and flocculation is provided. Topics such as the principles and benefits of running a jar test, optimal injection points, mixing regimes that produce good flocs, and chemistries for metals removal and emulsion breaking are covered. Real world pretreatment examples and experiences are used to illustrate these topics and bring them home.

4:20 to 5:20 PM

Wastewater Technical – Manhole Rehab (1 Hour)

Speaker: Matt Teranova, AJ Enterprises

Matt has a degree in Engineering from Speed Scientific School of the University of Louisville. He has worked in the industry for the last 30 years, with 20 of those working with rehabilitation of existing sewer manholes and wet wells.

Summary: This presentation will cover a variety of rehab processes for brick and precast manholes including coatings for infiltration as well as corrosion.

Tuesday, April 16, 2019

General Technical Sessions

8:00 to 9:00 AM

General Technical – From High School to Highly Skilled – Akron’s Utilities Intern Program(1 Hour)

Speaker: Brian Gresser, P.E., City of Akron

Brian Gresser has 29 years of experience in wastewater collection and treatment. He is currently the Manager of Water Reclamation Services for the City of Akron, overseeing all sewage collection, treatment, and stormwater activities. He has published numerous articles about how Akron has leveraged technology and revised its work practices to become a recognized leader in providing efficient and effective wastewater treatment services for their customers. He is a registered professional engineer in the State of Ohio and is also a Class IV Operator of Wastewater Works in the State of Ohio. He received his Bachelors of Science in Mechanical Engineering from the University of Akron.

Session Summary: The City of Akron Water Supply and Reclamation Bureaus, like an ever-increasing number of public utilities, are feeling the impact that aging baby-boomers are having on the workforce as they retire from employment. Additionally, the majority of the up and coming workforce targets their career path towards the private sector, being driven by an entirely different set of values as compared to previous generations of utility workers. The result is that public utilities are facing a severe shortage of qualified applicants in their candidate pool.

The City of Akron utility bureaus went through a re-engineering process in the early 2000s. Changes in the organizational structure, work practices and technology were implemented. Staffing reductions realized through natural attrition, coupled with selective hiring city-wide due to a declining tax base, made it very clear that the utility required a succession plan to ensure a continuing flow of young, entry level employees that have the ability and desire to excel in this industry.

The City devised and implemented a high school Utilities Intern program in partnership with the Akron Public Schools (APS). The City of Akron Utilities Intern program is designed to fill a business need and identify talented potential future employees while providing practical work experience that enhances a

student's academic background and professional skills. This presentation will discuss how the program was developed, who was involved, the major components of the program, buy-in, mentoring, challenges, and results over the 12-year history of the program.

9:05 to 10:05 AM

General Technical – You Want To Buy What?!?(1 Hour)

Speaker: JC Spalding, 502 Equipment

My name is JC Spalding and I'm the owner of 502 Equipment based in Louisville. 502 Equipment is a full-service Vacuum Truck & Pipe Inspection Equipment dealership, selling equipment to municipalities and contractors in the Utility industry. Born and raised in New Haven, KY, JC is a 2010 graduate of Centre College and also holds a Master's in Business from the University of Louisville. Don't be mistaken, JC still leads Kentucky Blue. JC is a proud Husband and father of a 4-year-old son. JC has been in the industry for 8 years and started 502 equipment 2 years ago.

Session Summary: Equipment & technology used by utilities today have come a long way. No different than the transition from rotary phones to iPhones, equipment to clean and maintain sewer pipes, to locate and uncover buried utilities etc., have all advanced at an equal pace. Yet for some reason, the adoption of such technologies & equipment hasn't quite happened like the adoption of our smart phones. Why is that? Why are we still doing things the hard way? Or even worse, not doing them at all... This presentation will seek to highlight some of these new advancements and hopefully shine the spotlight on the tools & resources available to Kentucky utilities today.

During this session we will review the following:

- Different functions and uses for a vacuum truck. How a utility justifies the purchase of a truck by spreading its uses across multiple departments,
- where to find new equipment. Who and what is available to Kentucky utilities., and
- different applications and uses of CCTV equipment. How it can help a utility move in to modern times with its water & wastewater management programs.

10:10 AM to 11:10 PM

General Technical – GPS Mapping and Your System (1 hour)

Speakers: Adam Scott, Cann-Tech Engineering, Rusty Anderson, TerraGraphics, LLC & Josh Pedigo, Green-Taylor Water District

Adam Scott has over ten years of experience in the water and wastewater industry, specifically with project development, project administration, and funding. Most recently, Adam worked for the Kentucky Infrastructure Authority, where he served in many roles, including Resource Analyst, Staff Assistant, and Secretary for the Board of Directors. While at KIA, Adam worked to enhance the Water Resource Information System (WRIS) to better serve the water and wastewater utilities of the Commonwealth. Adam has experience working with numerous funding sources, including KIA State Revolving Funds, Appalachia Regional Commission (ARC), Community Development Block Grant (CDBG), USDA Rural Development, State and Federal Appropriations.

Prior to joining KIA, he worked four years as the Water Management Coordinator for the Purchase Area Development District. Adam has a Bachelor of Science in Public Administration and a Master of Public Administration, both from Murray State University.

Rusty Anderson is the owner and operator of TerraGraphics, LLC. Created in 2017, TerraGraphics focuses on providing GPS field work and ArcGIS Online consulting to its water, sewer, and gas clients. Prior to starting TerraGraphics, Rusty worked 12 years as manager of the GIS portion of the Kentucky Water Resource Information System (WRIS) at Kentucky Infrastructure Authority (KIA). Rusty was integral in providing GPS services to a large number of water and wastewater utilities throughout Kentucky as KIA expanded their GIS data. Rusty has a BA in Geography from the University of Kentucky (UK) and has completed numerous levels of training for a wide variety of ESRI GIS and Trimble GPS Products.

Josh Pedigo is a graduate of Lindsey Wilson College. Josh has worked as a Drinking Water and Wastewater Operator at the City of Elizabethtown, earning his drinking water treatment class IIIA certification. He has worked for the KY Division of Water as an Environmental Scientist and recently became the General Manager of the Green-Taylor Water District.

Session Summary: Many water and wastewater systems have benefited from the GPS efforts of the Kentucky Infrastructure Authority and other nonprofit organizations. Now that the data has been collected, what are you supposed to do with it? With a little assistance and a willingness to learn, systems can effectively take a big step to utilizing the information to cut cost and provide better service. During this presentation, you will see how communities are incorporating GPS and GIS into their daily operating procedures at a minimal cost.

11:15 AM to 12:15 PM

General Technical – Pumping Systems – Hydraulics and Design (1 hour)

Speaker: Mike Rudisell, P.E., HDR

Mike has 20 years of experience in the design and construction administration of water/wastewater treatment, storage, and conveyance systems. Mike has specialized in project management of multi-disciplinary projects where coordination of civil/site, process, architectural, HVAC, plumbing, electrical, and instrumentation was paramount for efficient project delivery. Mike serves as a Senior Project Manager and Section Manager for HDR's Water Business Group in their Louisville, Kentucky office. Mike holds Bachelor and Master of Science degrees in Civil Engineering from Ohio University in Athens, Ohio.

Summary: The presenter will review the various pump types typically utilized in our industry and provide an overview of pump hydraulics and associated calculations including a pump selection approach. The application of variable frequency drives; multiple pumps in operation (both parallel and series arrangement); and calculations to estimate pump operation costs will also be discussed. In closing, three (3) applicable design examples will be presented to demonstrate to the audience the principles that were discussed.

2:00 to 3:00 PM

General Technical – Building the Utility of the Future(1 hour)

Speaker: Jeff Eger, HDR

Jeff Eger is the Director of HDR's Stormwater Business Class and Senior Management Consultant for the Water & Natural Resources business group. He is a nationally recognized leader in utility management who has been on the forefront of innovative practices throughout his 22-year career in the industry. Jeff served as Executive Director of the Water Environment Federation, developing a new strategic direction for WEF, focusing on raising awareness of the value of water. Mr. Eger spent 17 years as the Executive Director of Sanitation District No.1 of Northern Kentucky. In that role, he led the successful merger and consolidation of 34 local governments sanitary and storm sewer systems. He holds a Bachelor of Arts, Communications from Northern Kentucky University.

Session Summary: In 2013 the Water Environment Federation (WEF), the Water Environment Research Foundation (WERF), and the National Association of Clean Water Agencies (NACWA) released "*The Water Resources Utility of the Future: A blueprint for Action.*" This presentation will discuss the findings, conclusions and recommendations from that report. Every utility faces its share of challenges. Some of these can vary by region and geographical location; too little water in some areas of the country, and too much water in others. All utilities are facing mounting pressure to reduce costs, yet still need revenue to maintain and replace their aging infrastructure. Many of the utility's assets are reaching their useful life.

However, some utilities have found ways to reengineer themselves:

- * Reclaiming and reusing water
- * Extracting and finding commercial uses for nutrients and other constituents
- * Capturing waste heat and latent energy in biosolids and liquid streams
- * Generating renewable energy using its land and other horizontal assets
- * Using Green Infrastructure to manage Stormwater to reduce overflows, runoff pollution and improve quality of life more broadly

The presenter will discuss and share examples of how utilities can reinvent themselves starting with developing the worker of the future. Untapping the innovation and creativity from within allows the utility to create their preferred future. While many utilities are rebranding themselves, the secret is in possessing good "brand Behavior." Start the rebranding internally by renaming many of our class of worker and processes. How do you walk the talk, and have your employees become raving fans of their own utility? Unlock the synergies that might exist within your own community by creating collaborative partners. Finally embrace transparency and disclosure to gain the trust and respect of the community you serve.

3:05 to 4:05 PM

General Technical – Area Development Districts – What You Need to Know About Your Regional Planning Agency (1 Hour)

Speakers: Joshua Farrow, Gateway Area Development District & Jennifer McIntosh, Kentucky River Area Development District

Joshua Farrow is the Executive Director at Gateway Area Development District (ADD) in Morehead, Kentucky. Gateway ADD serves Bath, Menifee, Montgomery, Morgan, and Rowan Counties. Hired in March 2010 as the Planning/Geographic Information System (GIS) Coordinator at Gateway ADD, he was

promoted to Associate Director for Project Development and GIS in March 2016. He has served as Executive Director since June 2018. Josh has earned a Bachelor degree in Geography from Morehead State University and a Master's degree in Geospatial Science and Technology from North Carolina State University. During his tenure, Josh has worked on and overseen numerous infrastructure and GIS related projects for local governments and water and wastewater entities in all five counties that Gateway ADD serves. Josh currently resides in Montgomery County with his wife Sarah and their two dogs.

Jennifer McIntosh is the Water & Wastewater Planner for the Kentucky River Area Development District in Hazard, Kentucky. She began her tenure at KRADD in 2008 and currently serves on the KAMP Board of Directors. In addition to water and waste water planning, Jennifer has written a plethora of federal grants and secured funding for a number of infrastructure and economic development projects, among others, for local government entities throughout Eastern Kentucky. She also launched a training program in the KRADD region to assist local water and waste water utilities and officials in obtaining their required Continuing Education Credits. Jennifer holds an Associate of Arts Degree from Hazard Community & Technical College and a B.B.A. in Human Resource Management from American Intercontinental University. She has a 13-year old son, a 10-year-old daughter, a dog, and more indoor and outdoor cats than she can count.

Session Summary: For five decades the 15 Area Development Districts (ADDs) have been charged with planning, promoting, and coordinating programs for regional economic and social development. In this session you will learn a brief history of the ADDs and the core services they provide to their citizenry. The session will focus on the ADDs' water and wastewater planning program which includes: Senate Bill 409, partnership with the Kentucky Infrastructure Authority, Water Resource Information System (WRIS), Water Management Councils, infrastructure funding sources, project development and administration, and mapping and GPS services.

Wastewater Technical Sessions

8:00 to 9:00 AM

Wastewater Technical –Ammonia is Basic (1 hour)

Speaker: Eric Link, LabtronX

Eric Link is the Owner/CEO of LabtronX, a company specializing in the maintenance and calibration of utility laboratory equipment. Eric started repairing laboratory equipment for LabtronX over 30 years ago. He was instrumental in developing LabtronX's calibration program, the Accuracy Assurance Program. He later became CEO and in 2012 purchased the company. He has given many lectures on a variety of laboratory equipment subjects and looks forward to sharing his experience and knowledge with you today.

Session Summary: Ammonia has been used by man for thousands of years. But now the world uses 140 million tons of ammonia each year and in the USA 36 million tons are used just as fertilizer. It is no wonder that it ends up in our water and monitoring ammonia has never been more important. How do we measure ammonia correctly, what are the pitfalls we may run into, and how we maintain our equipment? Eric will also go over how ammonia meters actually work.

9:05 to 10:05 AM

Wastewater Technical - Innovative Solutions- Sanitary and Stormwater(1 hour)

Speaker: Bobby Young, Neenah Foundry

Bobby Young has been in the Water and Wastewater business for over 30 years. A Bachelor of Arts in Business Administration and an Associates of Arts in Economics from Thomas More College. A manager of a water and sewer utility for 3 years, Sales Representative for 23 years as well as Manufacturers Representative for 4 years. I am a Certified Municipal Products expert. I cover customers in Kentucky and Southern Indiana.

Session Summary: This session will address sanitary and stormwater modernization of castings to help the Utility maximize labor costs and safety. Lighter castings with stronger load ratings will be discussed to help the utility with everyday maintenance. Updated and modern ways of lifting and accessing castings will also be discussed, as well as new and improved storm castings which help with safety, when overflows and flooding occur.

10:10 to 11:10 AM

Wastewater Technical –Modeling for Success – Taking Lagoon Process Design to the Next Level(1 hour)
Speaker: James Martin, Lemna Environmental Technologies, Inc.

Jim Martin has over 20 years of experience in water and the wastewater industry and is the President of Lemna Environmental Technologies (LET). Jim is a recognized leader and innovator in lagoon-based process technology and has advanced lagoon treatment from simple facultative systems for BOD and TSS treatment to advanced systems capable of nutrient removal. Jim's expertise encompasses all aspects of wastewater project development from conceptual design to final commissioning and ongoing customer support.

Session Summary: Wastewater treatment process design modeling software, which models biological, chemical, and physical treatment processes, can be used to optimize the design, performance and reliability of lagoon-based treatment systems. Lemna Environmental Technologies (LET) employs a dynamic wastewater treatment process simulation model, to analyze performance of existing facilities and the expected performance of proposed facilities. The modelling software is widely used in the wastewater community to investigate the impact of various changes in loadings and temperatures and allows LET to thoroughly verify process design and performance especially with regards to BOD, TSS and nutrient removal.

Using historical DMR data from an installation base of over 200 facilities, LET created a unique software model of its LemTec Biological Treatment Process, which utilizes a combination of aerated and settling lagoon cells for biochemical oxygen demand (BOD) and total suspended solids (TSS) removal, and additional integrated lagoon technologies for ammonia, phosphorus and total nitrogen removal. By calibrating the model through the analysis of historical operating data, the model can be used as an accurate predictor of process performance. The model may be manipulated to reflect the size, configuration, loading, aeration and effluent requirements for current or future facilities and is especially useful in predicting and troubleshooting nutrient removal.

The model enables LET to consider the effects of non-steady state factors such as peak flows, constituent loading, and ambient air and water temperatures on treatment performance, improving upon traditional steady state wastewater treatment process design methodology. The discussion will

provide data and specific case studies demonstrating the predicted performance vs. actual data, using the calibrated model.

11:15 AM to 12:15 PM

Wastewater Technical – An Alternative Solution Brings Collection System Success(1 Hour)

Speaker: Jill Davis, Environment One Corporation

Jill Davis is a Professional Engineer in Tennessee (Registration Number 103024) and Virginia (Registration Number 054682). Jill has twenty-six years of experience in regulatory and utility management. She has joined Environment One to act as a subject matter expert for the company and to articulate the benefits of utilizing E/One's pressure sewer systems to municipalities, engineers, and developers.

Additionally, Jill has been a member of the Tennessee Oil, Water & Gas Board from 2004 through 2018. She is also an active member and co-chair of the management committee of the Kentucky/Tennessee Water Environment Association (KY-TN WEA). Prior to joining E/One, Jill and her team at the Athens Utilities Board won many awards for collection system management, water treatment plant operations and wastewater treatment plant operations.

As a manager of a water and wastewater utility system, she had the responsibility for the overall operations of the water treatment plant, water distribution system, wastewater collection system and wastewater treatment facilities. Her responsibilities also included the tasks of analyzing trends and developing plans to meet the water and wastewater needs of the community, responsibility for the overall cost of operating the Divisions, and preparing budgets and evaluating expenditures and customer rates for future financial needs.

Session Summary: Gravity sewers are typically utilized for collection system rehabilitation and septic tank abandonment projects. This presentation describes the desire for a better rehabilitation method, evaluation of technologies, and final selection of grinder pumps and low-pressure sewers.

All aspects of the project are presented including public engagement, system ownership, operation and maintenance costs, environmental stewardship through regulatory compliance, and overall savings of the project as compared to the gravity system.

Low pressure sewer systems offer a more cost-effective approach to sewer rehabilitation and septic tank abandonment when compared to the cost of gravity sewers. This includes not only the initial capital cost for the installation of the system but also the lower cost to operate and maintain the system. Also discussed is the lower impact to the environment during construction and safer working environment for operators when addressing maintenance issues in a pressure sewer as opposed to a deep gravity sewer.

Grinder pump and low-pressure sewer collection systems have been proven to play an important role in wastewater systems around the world and this presentation demonstrates the usefulness and success of a specific case study.

2:00 to 3:00 PM

Wastewater Technical – Optimizing the Sludge Dewatering Process(1 Hour)

Speakers: Raj & Kiran Shah, Hexagon Technologies

Kiran Shah is the founder of Hexagon Technologies (Louisville, KY) and started the company 36 years ago. Kiran has a Master of Science degree in Chemical Engineering from Northwestern University where he developed his background in polymerization and synthesis of new polymers.

Raj Shah, Technical Services Manager, has a Bachelor of Science in Chemical Engineering and Environmental Engineering, also from Northwestern University. Raj has been in the municipal and industrial wastewater treatment industry for almost 15 years and has developed expertise in terms of polymer jar testing and running successful plant trials. Over the last 36 years, Hexagon Technologies has made major strides in improving the performance of water and wastewater treatment plants while reducing costs through polymer optimization.

Session Summary: The focus of the presentation will be on polymers for sludge dewatering. Polymer theory and industry trends will be presented. Polymer selection criteria and polymer characteristics (e.g. charge, structure) will be explained with relation to type of dewatering equipment - belt presses, centrifuges, screw presses, and rotary fan presses. Finally, polymer optimization and improving results (e.g. cake solids) for various types of equipment will be discussed. This will be a practical course for wastewater treatment operators to learn more about polymers.

3:05 to 4:05 PM

Wastewater Technical – Fundamentals of Wastewater Treatment (1 Hour)

Speaker: Jim Collins, Brenntag Mid-South

Mr. Collins holds a BS Degree in Marketing and Management from Indiana State University. He is a registered Industrial Waste Water Professional, Certified Electro Finisher currently serves on the Board of Directors for the Indianapolis Branch of the National Association of Surface Finishers, as well as President of the Indiana Industrial Operators Association. He has 40 years of experience in the chemical industry and is an Instructor of advanced wastewater courses in Indiana and Kentucky.

His duties with Brenntag Mid-South include start up and troubleshooting of any industrial process that involves a chemical feed program. Once the process is up and running, he assists the customer make the process run efficiently, trouble free, and at a minimal cost to the customer.

Session Summary: This session will discuss fundamental topics that you need to consider when you design and implement a chemical and physical treatment process for your facility. Compliance with your pre-treatment permit is job one in today's environment. In this session, we will discuss chemistry, physical program and case studies, as to how both industry and municipalities work together towards achieving good water quality for the State of Kentucky.

Laboratory/General Technical Sessions

8:00 to 9:00 AM

Laboratory Technical – Sampling and Preservation Techniques (1 hour)

Speaker: Rhonda Baker, Beckmar Environmental Laboratories

Rhonda Baker works for Beckmar Environmental Laboratory and is a Certified Microbiologist for drinking water. Prior to joining Beckmar in 2002, she worked two years for McCoy & McCoy Laboratories, Inc. Rhonda attended Eastern Kentucky University, Richmond, Kentucky where she earned a Bachelor of Science/Environmental Resources with a minor in Environmental Health Science. She is a member of KWWOA and the Southern Indiana Operators Association.

Session Summary: This session will address sample collection for wastewater and drinking water, including:

- methods of collection and where to collect
- preservatives
- containers
- organics
- secondary's
- hold times
- mercury
- cause of blue baby syndrome

9:05 to 10:05 AM

Laboratory/General Technical – Essentials of pH Measurement (1 hour)

Speaker: Timothy Meirose, Thermo Scientific

Timothy Meirose has 30+ years in the laboratory/process markets, providing training and consulting for electrochemistry applications.

Session Summary: This session will address the Nerst Equation, theory of pH, how to choose the correct electrode, how electrodes measure, calibration and troubleshooting.

10:10 to 11:10 AM

Laboratory/General Technical – KY DOW Laboratory Certification Program Update 2019 (1 hour)

Speaker: Patrick Garrity, KY Division of Water

Mr. Garrity is an Environmental Scientist with the Kentucky Division of Water. He has over 30 years of experience working in the environmental chemistry field. Mr. Garrity holds a bachelor's degree in chemistry and master's degree in computer science. He is EPA certified as a Drinking Water Certification Officer.

Session Summary: A complete update of both drinking water and wastewater programs for 2019 will be presented. The overview will include all applicable revisions to State and Federal regulations that are currently in effect.

11:15 to 12:15 PM

Laboratory/General Technical – Proficiency Testing: A Survival Guide(1 hour)

Speaker: Fred Anderson, Advanced Analytical Solutions, LLC

Mr. Anderson holds a Bachelor of Science degree in chemistry from the University of Pittsburgh and a Master's of Science degree in Bio-analytical Chemistry from the Ohio State University. He has over 35 years of experience in the environmental analysis industry. He is the Managing Partner of Advanced Analytical Solutions, which is an ISO 17043 certified company founded in 1992 and is a world leader in the production of Proficiency Testing and Quality Control Standards. Advanced Analytical Solutions is a customer-driven company that makes customer satisfaction its number one goal before and after the sale. It is a quality-oriented company that provides the highest quality Proficiency Testing and Quality Control samples available worldwide.

Summary: The anxieties lab techs endure during PT testing time will be addressed. Tips and tricks to make life easier for lab analysts. Explain how QA/QC samples are made, and the process involved with the providers testing the samples. Discuss the outstanding client support Advanced Analytical Solutions is known for, and the stringent rules all certified PT providers are governed by.

2:00 to 3:00 PM

Laboratory/General Technical – Proficiency Test (PT) Studies: A Handy Guide (1 hour)

Speaker: Beth Jenkins, KY Division of Water

Mrs. Jenkins is an Environmental Scientist for the Kentucky Division of Water, working in the Laboratory Certification Section. She has almost five years of experience working with environmental laboratories in Kentucky. Last year, she became EPA certified as a Drinking Water Certification Officer.

Session Summary: The presentation will be an overview of the role Proficiency Test (PT) Studies play in wastewater and drinking water laboratory certification, as well as common issues laboratories face concerning PTs, and KYDOW's current and future data management system for PT tracking.

3:05 to 4:05 PM

Laboratory/General Technical –Laboratory Ethics (1 Hour)

Speaker: Archie Fugate, McCoy & McCoy Laboratories

Mr. Fugate earned a BS Degree from Pikeville College in 1980, with a Major in Biology, minor in Chemistry. He attended and earned a Master of Divinity Degree from Louisville Presbyterian Theological Seminary in 2008.

After graduation from Pikeville College, Mr. Fugate taught for a year and served also as a consultant for the CITAC (Coal Industry Technical Assistance Center). After a year, he began working for McCoy & McCoy Laboratories, Inc. as the Water Laboratory Manager for 15 years in Pikeville. During that time, the laboratory capabilities expanded from basic wet chemistry analysis to include metals analysis by atomic absorption, PCB and TTHM by GC, WET analysis and coliform analysis. In 1996, he was promoted to the Quality Assurance Officer for the company and moved to Madisonville and in 2000 became the Safe Drinking Water Manager until 2005.

In 2005 he McCoy & McCoy Laboratories to pursue a degree a Master of Divinity Degree and served as a full-time pastor until 2017. I returned to McCoy & McCoy in April 2017 and currently serve as a project manager for Safe Drinking Water.

Session Summary: This session will address Laboratory ethics including proper procedures and accurate record keeping which is essential. It will include a real-life example of where the speaker was called to testify in a Federal Court Case regarding a local utility's sample data.

Wastewater Mobile Technical Sessions – Exhibit Hall – KWWOA has lined up 4 vendors who will provide 15-minute mini technical sessions at their booths. Outlined below are the vendors that are participating along with their abstracts and bios:

10:10 to 11:10 AM

1. Wastewater Technical – Cured in Place Pipe(15 minutes)
Speaker: Mike Green, Granite Constuction, Inc.

Mike Green is the Director of Business Development for Granite Inliner. He has over 20 years of experience in a Business Development capacity identifying and pursuing Heavy Civil and Inliner work opportunities for Reynolds, Inc., which is now Granite Inliner.

Session Summary: Cured-In-Place Pipe (CIPP) is a trenchless means of extending the life of an existing pipeline – stormwater, sanitary, and process. It eliminates the need for excavation and typically costs less than half of what an open cut line replacement might run for the same pipeline. It involves lining the existing pipeline in place with a structural liner that has a design life of over 50 years. Pipelines are inspected by CCTV cameras to determine extent of damage or infiltration, diameters are confirmed, connecting laterals are accounted for, and then liner can be ordered for installation. Upon delivery to jobsite, liner can be inverted into place from a field platform via hydrostatic head or pulled in place. Impregnated with a polyester resin and catalyst, hot water or steam is then used to cure the liner making it essentially a new pipe within a pipe. Technology now allows Ultra-violet light to be used instead of water or steam to cure the product but not every company can do all three processes since different equipment and products are utilized.

2. Wastewater Technical – Wastewater Equipment to Make your Job Easier(15 minutes)
Speaker: J.C. Spalding, 502 Equipment, Inc.

See bio above.

Session Summary: Equipment & technology used by Utilities today have come a long way. No different than the transition from rotary phones to iPhones, equipment to clean and maintain sewer pipes, to locate and uncover buried utilities etc. have all advanced at an equal pace. Yet for some reason, the adoption of such technologies & equipment hasn't happened quite like the adoption of our smart phones. Why is that? Why are we still doing things the hard way? Or even worse, not doing them at all... My presentation will seek to highlight some of these new advancements and hopefully shine the spotlight on the tools & resources available to Kentucky Utilities today.

3. Wastewater Technical – Sample Preservation(15 minutes)
Speaker: Johnny Osborne, McCoy & McCoy Laboratories, Inc.

Mr. Osborne has worked for McCoy and McCoy Laboratories for 29+ years, first as a Field Services Branch Manager, Eastern Marketing/Client Relations Manager, and currently as the Lab

Manager/Marketing Representative for the Pikeville Office. He also served as the Director of Marketing and Customer Services, from 1998-2002, for Appalachian States Analytical, Pikeville, KY. He holds a Kentucky Wastewater Operator Certification No. 4505, West Virginia Wastewater Operator Certification No. 4459, Associate Member Kentucky Water and Wastewater Operators Assoc., Kentucky / Tennessee AWWA Member, Kentucky / Tennessee WEF Member, Kentucky Water & Wastewater Operators Association State Chair (2005-07), Eastern Kentucky Water and Wastewater Chapter President (1995-2003), Kentucky Rural Water Associate Advisor to Board (1995-2001), Surface Mining Certification for State of Kentucky 1985, and West Virginia DMR Training.

Session Summary: Basic Water and Wastewater sample holding times and preservation for submittal of analysis to a certified laboratory.

4. Wastewater Technical – Trio-Vision's Xplorer HD Manhole Inspection Camera(15 Minutes)
Speaker: Scott Lewis, Lewis Municipal Sales

Scott Lewis joined Lewis Municipal Sales in January 2014. Scott is a certified Microsoft technician with over 10 years of computer hardware and software experience. Many of the products represented by LMS are products that can include computer software and hardware applications for data storage or equipment operation. Scott has spent the last 4 years focusing on these products and demonstrating them to end users. Scott has been trained and is proficient using and instructing our complete product offering which includes: specialty pipe cutting tools, leak detection and line locating equipment, valve exercising equipment, water & sewer line testing equipment, and Dechlorination equipment.

Session Summary: We will be discussing the new options available for manhole inspection cameras in the market today. We will have a hands-on demonstration of the wireless camera from Trio-vision. After the presentation there will be time for a Q&A period.

Wednesday, April 17, 2019

Wastewater Technical Sessions

8:30 to 9:30 AM

Wastewater Technical – Advanced Bio-augmentation Process for Industry in Kentucky (1 Hour)
Speaker: Pat Beamon, Brenntag Mid-South

Pat Beamon from New Harmony, IN is the new Bio-Additives Manager for Brenntag Mid-South, Inc. He specializes in biological treatment of municipal and industrial wastewater treatment.

Session Summary: My talk deals with the importance of micro nutrients and they're importance in the biological wastewater system. We will talk about some of the critical micro nutrients and why systems respond in different ways. We will also talk about sludge reduction and the ability to stabilize a system monitoring the Macro and Micro nutrients.

9:35 to 10:35 AM

Wastewater Technical — Waste Minimization & Pollution Prevention Techniques(1 Hour)

Speaker: John Dailey, Brenntag Mid-South

John Dailey is a Bio-Additives Project Technician for Brenntag Mid-South Inc. Prior to joining Brenntag Mid-South, John was the Facility Coordinator for AQUA Indiana in South Haven and Lake Station, IN. John has over 32 years of experience in testing and treating water. He holds water and wastewater licenses in Indiana, Kentucky, Maryland and Washington. His career in product management includes design and development of water and air filtration equipment and training in product operation. John graduated from the University of Southern Indiana with a Bachelor of Science degree with emphasis on Environmental Science.

Session Summary: This session will address waste minimization & pollution prevention techniques that industry needs to consider in the State of Kentucky. Proven methods for waste minimization will be discussed. Why are they important and what are we doing to reduce waste?

10:40 to 11:40 PM

Wastewater Technical – Nozzle Selection When Cleaning Sewers (1 hour)

Speaker: Dana Hicks, ENZ USA, Inc.

Mr. Hicks has been a Sales Manager with ENZ USA Inc. for over 18 years and has worked in the sewer and pipe cleaning industry for 25 years. He attended Purdue University and is a member of the American Public Works Association (APWA), Water Environment Federation (WEFTEC), NASSCO and the Water Jet Technology Association (WJTA).

Summary: Cleaning sanitary and storm sewers can be easy, difficult or a waste of time. The more efficient you are the more time and money you save in the end. This session will look at the types of nozzles which should be considered based on the situation found in the field.

1:00 to 2:00 PM

Wastewater Technical – How to Manage a Secondary Clarification During Wet Weather(1 Hour)

Speaker: Dan Miklos, Hazen & Sawyer

As a principal of his own firm, Mr. Miklos was responsible for the management and operation of small to large utilities. He routinely provides engineering assistance, management and technical expertise for in-plant troubleshooting, start-up of new facilities, operator training, value engineering, operability reviews, bioassay and treatability studies, distributed control system design, and technical supervision/contract operation of water and wastewater facilities.

His academic credentials include a MA Environmental Systems, University of Waterloo 1977 and a BS Kent State University 1974. He is a Registered Sanitarian and Class III Water and WWTP Operator in OH, Class IV WWTP Operator in KY and IN, and an S-1 WWTP Operator, New Jersey.

He has been employed by Hazen and Sawyer, P.C. since 2010. Previously, he ran his own consulting firm, Advanced Treatment Sciences from 1987 to 2010. In addition to several consulting firms, he has also worked for the City of Fairfield and the Ohio Department of Health and the Ohio Department of Natural Resources.

Session Summary: During this session, attendees:

1. Review the two hydraulically controlled process control calculations: Solids Loading Rate and Surface Overflow Rate.
2. How to apply contact/stabilization or RAS flow equalization to optimize clarifier performance.
3. Use of mixing formulas to evaluate and control solids loading.
4. Provide options with their existing plant if not designed for high flows.
5. Improve operator response and effluent quality during high flows.

Training Session Agenda

1. Capture of first flush
 - The initial time period of a storm event is often accompanied by an initial period of very high influent loading. First flush loading and removal is often focused on screening and grit removal facilities.
2. Protect active biomass and specialized nutrient removal biology from washout during high flows
3. Design options to improve wet weather treatment:
 - Contact Stabilization
 - RAS Flow Equalization
4. How to reduce solids loading to clarification using existing tankage.
5. Summary

2:05 to 3:05 PM

Wastewater Technical – Optimizing Aerobic Digestion(1 hour)

Speaker: Dan Miklos, Hazen & Sawyer

Bio above.

Session Summary: During this session, attendees will:

1. Review process basics for the Aerobic Digestion process.
2. Provide strategies to optimizing the aerobic digestion process.
3. Provide enough process knowledge to assist in troubleshooting.
4. Improve skills in aerobic digester operation.

Training Session Agenda

1. Define Types of Aerobic Digestion
 - Traditional: WEF MOP FD-9
 - Sequencing Facultative Digestion
2. Comparison of Anaerobic/Aerobic Digestion/On-line processes
 - Balancing water chemistry
 - Growth and Decay

3. Modes of Operation using Sequencing Facultative Digestion
4. Provide strategies for optimizing digestion performance.
 - Improve water chemistry
 - Reduce Energy
 - Improve dewatering
5. Provide process control concepts to optimize aerobic digestion.
 - KPIs (Key Performance Indicators).
6. Summary

3:10 to 4:10 PM

Wastewater Technical– Phased Sewer Assessment Strategy(1 Hour)

Speaker: Steve Sebastian, EnviroSight, LLC

Steve has worked in the wastewater industry for over 15 years. Working nationwide with a distribution network to provide the Municipal and Contracting sector, cost effective solutions to inspection and cleaning of wastewater infrastructure.

Session Summary: Given today's municipal budgets, a CCTV-only approach to sewer inspection is often too cumbersome to yield timely, actionable system-wide data. A new approach is needed--one that maintains the goal of comprehensive assessment, but which increases productivity and reduces costs.

This talk aims to introduce PASS (Phased Assessment Strategy for Sewers) to people managing and conducting sewer inspections. PASS is a plan for understanding sewer system conditions quicker with fewer resources. Adopting PASS can allow inspectors to prioritize system-wide which lines need the most attention, as well as have time to inspect more regularly.

While CCTV inspection is an essential tool in any condition assessment program, a blanket approach often means inspecting lines that don't need the level of scrutiny a crawler offers. Rapid assessment tools like zoom cameras and video nozzles are ideal front-line tools for identifying such lines. If municipalities incorporate these tools into a three-stage approach to inspection, they can save significant time and money.

Back-up Speaker:

Wastewater Technical – Peracetic Acid for Wastewater Disinfection (1 Hour)

Speaker: Jim Pelton, Pelton Environmental Products

Jim graduated from Purdue University with a Bachelor of Science in Mechanical Engineering in 2005. He worked as a general contractor specializing in HVAC systems for schools and healthcare facilities as well as a field engineer, conducting energy audits on boiler/steam systems. He began his career in water/wastewater in 2010 with an emphasis on process treatment equipment within the treatment plant.

Summary: Review of what peracetic acid is, why it is an effective disinfectant for WWTPs and why it's becoming more popular. Presentation will include a review of implementation, safety requirements, dosage, and permitting.

General Technical – Greases & Gear Lubes for Drinking Water & Wastewater Facility Uses (1 Hour)

Speaker: Ken Arnold, Schaeffer Oil

Ken Arnold has worked from 1991 to the present with Schaeffer Mfg., St. Louis, MO and from 1981 to 1991 with Lubrication Engineers in Fort Worth, Texas as a Lubrication Specialist which included:

- Sales of specialized lubricants
- Commercial, Industrial, Government, Utilities, and Agricultural accounts
- Cross reference of lubricants for equipment
- Specify the best possible lubricant for the job
- Demonstrate the lubricity and shock load of lubricants
- Pull samples for oil analysis
- Lubrication Seminars at High Schools, Vocational Schools, & Municipal Government Agencies

Session Summary: This session will address how utilities can make equipment last longer and save money. Specifically, it will address the proper grease and gear lube types to use.