



Pennsylvania Water  
Environment Association

Annual Technical  
Conference & Exhibition

PennTec 2023  
**CONFERENCE  
PROGRAM**

June 18-21, 2023

Hershey Lodge & Convention Center  
Hershey, PA

**PennTec**   
**2023** 94<sup>th</sup> Annual Technical  
Conference & Exhibition

**AMT PUMPS**

Small Utility Pumps, Sump Pumps

**AQUA-AEROBIC SYSTEMS**

SBR, MBR, AquaPASS®, Floating Aerators, Mixers, OxyStar® Aerators, AquaABF® Filters, AquaDisk®, AquaPrime™, AquaStorm™, AquaDiamond® Cloth Media Filters, AquaMB Process®, Potable Water Membrane Filtration Systems, Aqua ElectrOzone™ Systems, AquaNereda® Aerobic Granular Sludge

**AQUARIUS**

Fine and Coarse Bubble Aeration Systems, Fixed Biofilm System (FBS)

**C.E. SHEPHERD**

Trickling Filter and Tube Settler Media

**CLINTON CONTROLS**

Control Panels for Pumping and Treatment Applications

**EBARA FLUID HANDLING**

Wet Pit and Dry Pit Submersible Pumps

**ECOVERDE**

Odor Control Systems

**EMERALD COAST**

Wastewater Samplers

**ENVIRONETICS**

Floating Baffles and Covers, Clearwell Baffles

**EVOQUA - ETS**

In Vessel UV Disinfection Systems

**FONTAINE-AQUANOX**

Stainless Steel Slide Gates, Stop Logs

**FRANKLIN ELECTRIC**

Grinder Pumps and Pump Stations, Package Submersible Pump Stations

**G.E.T. INDUSTRIES**

GrindHog™ Comminutors

**GORMAN RUPP**

Wastewater Pumping Stations, Sewage and Sludge Pumps, Water Booster Stations, Submersible Pumps, Engine Driven Pumps, Utility Water Systems

**GREASEZILLA**

Grease Separation Process for FOG and Grease Trap Waste

**GUARDIAN ENVIRONMENTAL**

Rectangular Clarifier Chain, Flights, Baffles, Troughs, Weirs, Scum Pipes

**HIDROSTAL**

Submersible, End Suction Screw Centrifugal, and Axial Flow Tube Pumps

**H-TEC**

Air Release and Vacuum Valves

**LANDIA**

Submersible Mixers, Recycle and Chopper Pumps, Jet Aerators, Digester Mixing Systems

**LONE STAR BLOWER**

Geared and Gearless Turbo Blowers, Multistage Centrifugal Blowers

**OMNISITE**

Wireless Monitoring for Pump Stations, WWTP's and Remote Sites

**PARK PROCESS**

Dewatering Containers for Sludge, Grit, Screenings, Polymer Mixing & Blending Systems

**PRO-AIR**

Wet Well Aeration System to Reduce Grease Buildup, Odors, and Corrosion

**PURAFIL**

Odor Control and Emergency Gas Scrubbers

**PW TECH**

Volute Dewatering Presses and Thickeners, CSO/SSO Products

**RAMPARTS**

Air Operated Diaphragm Pumps

**SAVÉCO (ENVIRO-CARE)**

Headworks Screens, MBR Pre-Treatment Screens, Septage Receiving Units, Grit Handling Equipment, Screw Conveyors

**SHELTER WORKS**

FRP Enclosures

**SPS ENGINEERING**

Circular Clarifiers, Thickeners, Flocculators, Rotary Distributors

**TRIPLEPOINT**

Advanced Lagoon Aeration and Treatment Systems

**UET MIXERS**

Mixers, Agitators, Static Mixers, Chemical Mixers, Polymer Mixers

**VALMET (FLOWROX)**

Peristaltic Chemical Feed, Hose and Progressive Cavity Pumps, Pinch and Knife Gate Valves

**VEOLIA (KRUGER)**

ACTIFLO® Ballasted Clarifier, Actina™ Pellet Softening, Oxidation Ditch, IFAS and MBBR, ANITA™ Mox Anammox, BioCon Dryer, BIOSTYR® BAF, Ecrusor™ Package Removal, LagoonGuard™ Biofilm Reactor, Fixed Film Package Plants for Onsite Biological Solutions, NEOSEP™ MBR, PFAS Removal and Treatment

**VOGELSANG**

Rotary Lobe Sludge Pumps, In-Line XRipper Grinders, RotaCut Macerators



## WE TAILOR OUR SCREENING EQUIPMENT TO FIT YOUR NEEDS.

**All wastewater treatment plants are not alike.** That's why plant designers prefer our *Raptor*® line of screening products, the innovative all-in-one units that screen, wash, convey and dewater screenings efficiently, capturing more fine solids and long fibers than other available screens. *Raptor*® products are adaptable to a wide range of configurations, giving you more choices for better performance in your unique application. They are preferred among plant operators for their simple operation, ease of use, and minimal maintenance. When performance counts, count on the industry leader for more than 90 years—Lakeside Equipment Corporation.

### REPRESENTED LOCALLY BY:



754 Kittanning Hollow Road  
East Brady PA 16028  
T: 724.526.5714 | F: 724.526.5277  
jcurran@damansuperior.com  
[www.damansuperior.com](http://www.damansuperior.com)



P.O. Box 107  
Harleysville, PA 19438  
T: 215.256.8430 | F: 215.256.8567  
dave@pyrzwater.com  
[www.pyrzwater.com](http://www.pyrzwater.com)



### Cleaner Water for a Brighter Future®

Speak to one of our experts at **630.837.5640**, email us at [sales@lakeside-equipment.com](mailto:sales@lakeside-equipment.com) or visit [lakeside-equipment.com](http://lakeside-equipment.com) for more product information.



### Raptor® Screening Products

- Fine Screen
- Micro Strainer
- Rotating Drum Screen
- Septage Acceptance Plant
- Septage Complete Plant
- Complete Plant
- Multi-Rake Bar Screen
- FalconRake® Bar Screen
- Rotary Strainer Screen
- Wash Press

HD WW pumps & controls IN STOCK



# REINER

## PUMP SYSTEMS



Engineered Water and Wastewater Equipment



SULZER



Franklin  
Electric

SEEPEX.



PIONEER PUMP



973-347-9000  
[reinerpump.com](http://reinerpump.com)

[ccreiner@reinerpump.com](mailto:ccreiner@reinerpump.com)  
[gsermarini@reinerpump.com](mailto:gsermarini@reinerpump.com)

COSTARS™ ★★★★★

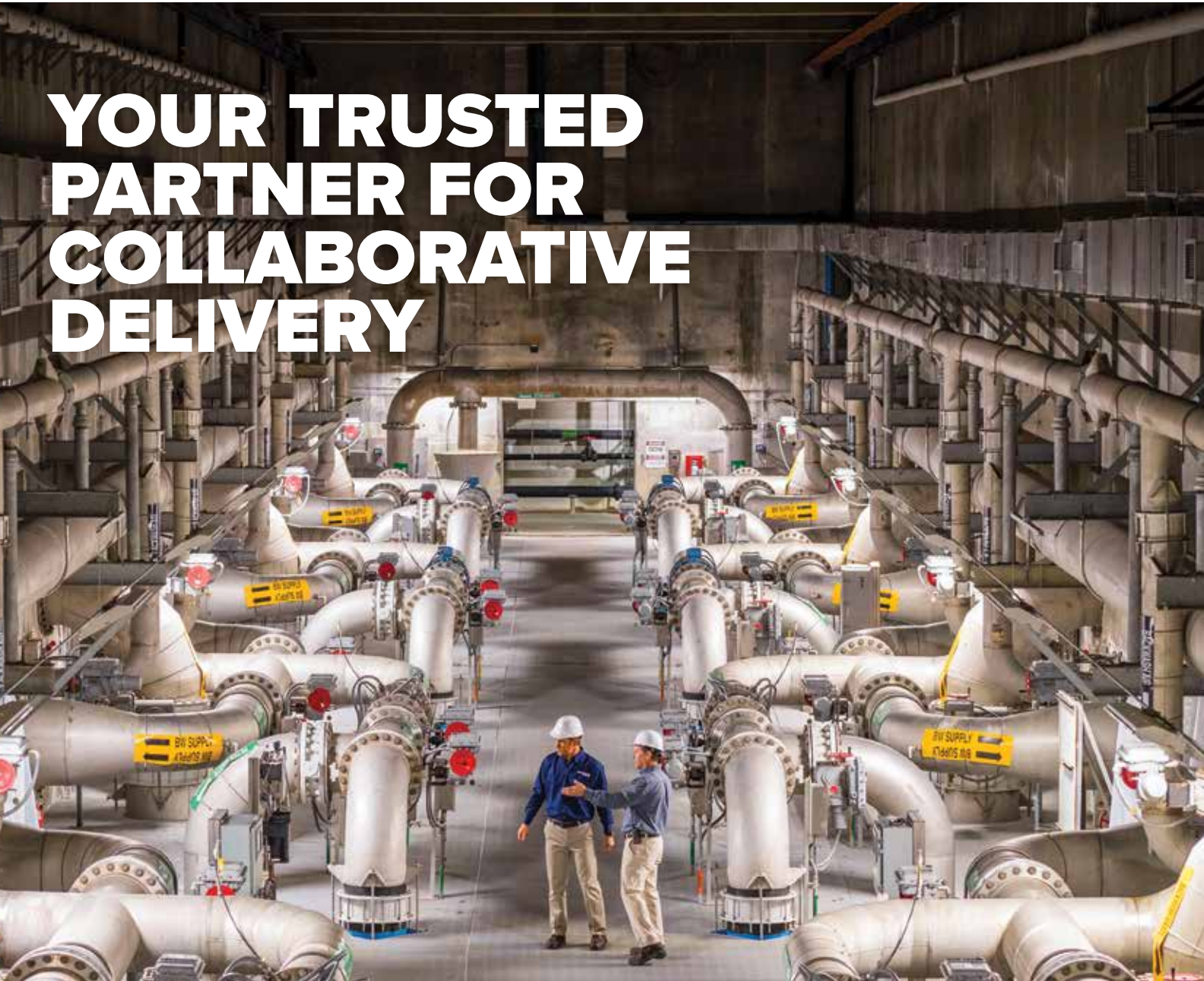
Pennsylvania Department of General Services

# REINER

## PUMP SYSTEMS



# YOUR TRUSTED PARTNER FOR COLLABORATIVE DELIVERY



We know no two projects are the same, so we don't treat them as such. Whether you're building a potable water or wastewater plant, our DBIA-certified professionals put together a customized plan to meet your unique specifications. From pre-bid of a new plant contract to the final product delivery, we'll provide expert support and streamlined access to the materials you need, every step of the way. **Visit us at [ferguson.com/waterworks](https://www.ferguson.com/waterworks) to learn more.**

# Pump & Blower Controls

## VARIABLE FREQUENCY DRIVES

- Field repair of all **Variable Frequency Drives** and new VFD upgrades.
- 24/7 **Emergency PLC & Motor Control Service** & replacement by factory trained technicians.
- **Mobile VFD's** available for critical applications that can't afford to be down during repairs.
- **Power Quality** monitoring/solutions, harmonic mitigation & motor protection.
- The most in depth **Preventative Maintenance** service in the industry for low & medium voltage VFDs.

## SERVICES

- Quick Response Time
- Preventive Maintenance (All Low & Medium - Voltage VFDs)
- All Models Repaired
- Remote Access & Monitoring
- Emergency VFD Replacements
- Drive & PLC Retrofits
- Emergency Mobile VFDs

### CONTACT US!

**PITTSBURGH: (412) 247-4816**

**CLEVELAND: (440) 345-6378**

**ERIE: (814) 414-0644**



**Your Drive and Control Experts!**

6 Commerce Drive, Pittsburgh, PA 15239  
(412) 247-4816 • [www.drv-inc.com](http://www.drv-inc.com)



## A Message From the Conference Planning Committee



**Linda Leopold**  
Chair, PennTec 2023  
Conference Committee

On behalf of the PWEA Board of Directors and the 2023 Conference Committee, we welcome you to PWEA's 94th Annual Technical Conference and Exhibition (PennTec 2023) at the Hershey Lodge & Convention Center in Hershey, PA.

This year's Conference Program includes a wide range of topics related to water quality. In addition to the Conference technical sessions, we are also presenting workshops which have been approved by the PA DEP for additional contact hours for water and/or wastewater operator licenses. By attending these workshops, you could earn **up to 19.0 DEP Contact Hours, or up to 19.0 Continuing Education Hours**, in just a few days!



**Kara Humes**  
PWEA President

A very important part of the Conference is the vendor exhibition. By visiting the exhibits, you will gain insight into new and innovative solutions and discover new products and equipment that will help you do your job in a more efficient and safer manner. We encourage you to talk to the vendors about what is most important to you.

The Conference includes many networking opportunities for you to meet and interact with your colleagues. The Students & Young Professionals (SYP) Committee is organizing a **Community Service Project** for Sunday.



**Jeff Cantwell**  
Chair, PennTec 2023  
Program Committee

On Monday, the Professional Operators Committee and the SYP Committee are hosting a Plant Tour. Also on Monday is **the President's Reception, the Annual PWEA Awards Ceremony & Reception, and the Tailgate Dinner & Cornhole Tournament.**

On Tuesday, the Stormwater Committee is hosting the **Stormwater Tour**. Also on Tuesday is the **Women in Water Luncheon**; the **Operations Challenge** event, the **Beer & Pretzels Reception**, and **Operator Olympics**. The **Annual PWEA Golf Tournament** will be on Wednesday this year.

We believe the PennTec Conference will provide everything you need under one roof—education, vendor contacts, and networking.

### Table of Contents

Advertiser Product & Service Center .....	82
Certification.....	69
Committees .....	66
Conference at a Glance .....	9
Conference Dates & Location for 2024 .....	73
Exhibit Hall Floor Plan .....	27
Exhibit Hall Highlights.....	24-26
Exhibitor Listings .....	29-33
Keynote Presentation.....	11
Raffle Schedule.....	39
Special Events.....	13-23
Sponsors.....	37
Student Research Presentations .....	65
Technical Program Details.....	41-63
Upcoming Events .....	75
Workshop Details.....	34-35

### NEED CONTACT HOURS OR PDH CREDIT?

Pick up your tracking sheet in the PWEA Registration Area

### PWEA Annual Business Meeting

**Monday, 12:30-1:00pm**

**Cocoa Terrace & Cocoa 1**



Conference attendees are invited to attend and participate in the Annual Business Meeting. The Board of Directors welcomes input from everyone. PWEA members will vote on Officer positions.

**Coffee and dessert will be available during the Annual Business Meeting.**



# BMP Makes your Stormwater Quality goals easier to reach and afford.

With BMP's advanced products—like the SNOUT®, Bio-Skirt® and our Turbo Plate®, reducing pollutants in stormwater runoff has never been easier. The SNOUT + Turbo Plate showed 80% sediment reduction in 3rd party testing\*. ***Take advantage of more than 20 years of experience with our cost-saving designs and flexible solutions.***

\*Alden Labs, Holden, MA, Feb. 2020, 50-1000 micron PSD at 226.5 gpm.

# SNOUT



Made in the USA, with over 100,000 SNOUTs installed world-wide.

For more information on how our system can solve your stormwater quality issues, contact us at (800) 504-8008 or visit us at [bmpinc.com](http://bmpinc.com).

# Conference at a Glance

## Sunday, June 18

11:00am-3:00pm Community Service Project  
3:00-5:00pm Registration Open

## Monday, June 19

7:00am-5:00pm Registration Open  
7:00-8:00am Continental Breakfast – **Hallway**  
7:30-8:30am Keynote Presentation – **Nigerian**  
8:35-8:40am 5-Minute Vendor Presentations  
8:40am-12:00pm **Morning Technical Programs**  
*Biosolids – Magnolia CD*  
*Collection Systems – Crystal A*  
*Engineering & Construction – Magnolia AB*  
*Stormwater – Wild Rose B*  
*Utility Management & Government Affairs – Wild Rose A*  
9:45-10:15am Exhibit Hall Open with Break Refreshments  
12:00-1:00pm Exhibit Hall Open with Complimentary Lunch  
12:30-1:00pm PWEA Annual Business Meeting with Dessert & Coffee – **Cocoa 1 & Terrace**  
12:55-1:00pm 5-Minute Vendor Presentations  
1:00-3:30pm PO/SYP Plant Tour – **meet at Convention Center entrance**  
1:00-4:45pm **Afternoon Technical Programs**  
*Biosolids – Magnolia CD*  
*Collection Systems – Crystal A*  
*Engineering & Construction – Magnolia AB*  
*Stormwater – Wild Rose B*  
*Utility Management & Government Affairs – Wild Rose A*  
2:40-3:40pm Exhibit Hall Open with Break Refreshments  
3:40-4:45pm Collection Systems Mobile Sessions – **Exhibit Hall**  
4:45-5:45pm President's Reception – **Exhibit Hall**  
5:45-7:00pm Annual PWEA Awards Ceremony Reception – **Aztec/Nigerian**  
7:15-9:30pm Tailgate Dinner and Cornhole Tournament – **Cocoa 1 & Cocoa Ballroom**

## Tuesday, June 20

7:00am-5:00pm Registration Open  
7:30-8:30am Exhibit Hall Open with Continental Breakfast  
7:55-8:00am 5-Minute Vendor Presentations  
8:00-11:45am **Morning Technical Programs**  
*Collection Systems – Crystal A*  
*Engineering & Construction – Magnolia AB*  
*Industrial Waste Pretreatment – Magnolia CD*  
*Privatization – Empire A*  
*Professional Operators – Wild Rose B*  
*Utility Management & Government Affairs – Wild Rose A*  
9:00-11:30am Stormwater Tour – **meet at Convention Center entrance**  
9:40-10:40am Exhibit Hall Open with Break Refreshments  
9:40-10:40am Operations Challenge – **Exhibit Hall**  
11:15-11:45am Biosolids Mobile Sessions – **Exhibit Hall**  
11:45am-1:00pm Exhibit Hall Break with Complimentary Lunch  
11:45am-1:00pm Student Research Poster Presentations  
11:45am-1:00pm Women in Water Luncheon – **Cocoa 1 & Terrace**  
12:55-1:00pm 5-Minute Vendor Presentations  
1:00-4:45pm **Afternoon Technical Programs**  
*Collection Systems – Crystal A*  
*Engineering & Construction – Magnolia AB*  
*Industrial Waste Pretreatment – Magnolia CD*  
*Laboratory Practices – Empire D*  
*Privatization – Empire A*  
*Professional Operators – Wild Rose B*  
*Student Research – Wild Rose A*  
2:40-3:40pm Exhibit Hall Open with Break Refreshments  
4:45-5:45pm Beer & Pretzels Reception – **Exhibit Hall**  
4:45-5:45pm Operator Olympics – **Exhibit Hall**

## Wednesday, June 21

7:00-8:00am Continental Breakfast – **Hallway**  
7:00am-12:00pm Registration Open  
7:55-8:00am 5-Minute Vendor Presentations  
8:00-11:15am **Morning Technical Programs**  
*Engineering & Construction – Magnolia AB*  
*PFAS – Magnolia CD*  
8:30am Golf Tournament – **Deer Valley Golf Course**  
9:40-10:10am Break Refreshments – **Hallway**  
11:30am Conference Concludes

## Workshops

These workshops are approved for additional PA DEP contact hours. **You must have a ticket to attend.** Limited tickets are available onsite.

### Monday, June 19

**8:00am-5:00pm** Activated Sludge Refresher (Day 1 of 2) – **Empire B**  
**8:45am-4:00pm** Laboratory Supervisor Training – **Empire C**  
**12:45-4:45pm** Responsibilities of Clean Water Professionals – **Empire D**

### Tuesday, June 20

**8:00am-11:45am** Common Pump Station Electrical Issues – **Empire D**  
**8:00am-4:45pm** Nutrient Workshop – **Empire C**  
**8:00am-5:00pm** Activated Sludge Refresher – Day 2 of 2 – **Empire B**

### Wednesday, June 21

**8:00am-11:30am** Introduction Locator Program – **Wild Rose B**  
**8:00am-11:45am** Solids Handling & Disposal – **Wild Rose A**

ZELIENOPE

SOMERSET

HARRISBURG



Open House 8.31.23  
Register Today!



**A&H**  
EQUIPMENT

800.753.7566  
ahequipment.com

We are your leading distributor of municipal, truck body and environmental equipment!

NEW | USED | RENTAL | PARTS | SERVICE

 **ENVIROSIGHT**



Non-CDL Option

Rentals Available!



**100% Financing**  
**NOW AVAILABLE!**



# Keynote Presentation

**Monday, 7:30-8:30am – Nigerian Ballroom**



## **“Engineering Like an Actor”**

Tom Kunetz weaves the story of how he came to combine the disparate fields of environmental engineering and theater which lead him to excel in both fields, becoming a high-ranking engineer at one of the largest wastewater utilities in the U.S., and a distinguished comic actor, director, playwright, and teacher at the famed Second City Theater in Chicago. With a presentation that is highly engaging, Tom will demonstrate using audience participation how he teaches professionals to improve their communication skills and unlock their creativity using concepts from the theater

world. The presentation will be energetic, funny, and inspiring, a perfect way to springboard participants into the PennTec experience.

Tom Kunetz is Past President of the Water Environment Federation, a WEF Fellow, a member of the Board of Directors of the Water Research Foundation, and Assistant Director of Engineering at the Metropolitan Water Reclamation District of Greater Chicago, retired. Tom is also an accomplished actor, comedian, playwright, and director, and served on the faculty of the Second City Training Center comedy school in Chicago for 20 years. He is the recipient of numerous awards and recognitions, including the Charles Walter Nichols Award for Environmental Excellence from the American Public Works Association, and the Ralph Fuhrman Medal from the Water Environment Federation. Tom is a native of Hershey, Pennsylvania, a graduate of Penn State and Villanova Universities, and a former member of the Water Pollution Control Association of Pennsylvania. Now with Mosley I Kunetz Workshops, he travels the country presenting workshops to professionals teaching leadership skills, high-value communication, and creating a culture of innovation.

# WATER

## OUR FOCUS FOR OVER 100 YEARS

To learn more about our capabilities, please stop by **Booth #98.**

[www.wrallp.com](http://www.wrallp.com)



**WATER** | MASTER PLANNING/MODELING • SOURCE WATER DEVELOPMENT • DISTRIBUTION • PUMPING • STORAGE • TREATMENT • RESIDUALS HANDLING  
**WASTEWATER** | BIOSOLIDS AND RESIDUALS HANDLING • COLLECTION/GRAVITY SEWERS • CSOs/SSOs • FORCE MAINS • MASTER PLANNING/MODELING • PUMPING • TREATMENT

# We Have Expanded Our Service Department to Serve You Better



**Together**  
**National Service... *Local Focus.***

## Our Four Key Differences

1. **Experience:** 40-year record of success that's now backed by a national pump service company.
2. **Expertise:** Factory-trained staff with decades of practical knowledge.
3. **Trusted Partner:** An approach to consulting based on our professional experience.
4. **Aftermarket Parts:** Many parts in inventory for pickup or shipping.



Commercial – Industrial – Municipal Pump Systems  
Sales, Service, Parts & Expertise

**Factory Trained & Available 24 Hours a Day/7 Days a Week**

**WEST VIRGINIA OFFICE** P.O. Box 7144 | Charleston, WV 25356 | tel 304.776.5665 | fax 304.776.8171  
**PENNSYLVANIA OFFICE** P.O. Box 199 | Allison Park, PA 15101 | tel 412.487.7140 | fax 412.487.7144  
email [service@wcweil.com](mailto:service@wcweil.com) | web [pumpman.com/Pittsburgh](http://pumpman.com/Pittsburgh)

**Call for  
Emergency Service  
1.866.929.3451**

## Special Events

### Community Service Project

Sunday, 11:00am-3:00pm

This year marks the fifth annual PennTec Community Service Project. We hope you will consider joining the PWEA Students & Young Professionals (SYP) Committee to help with the Project. The event will take place at Hershey Gardens.

Hershey Gardens opened in 1937 with Milton Hershey's request to "create a nice garden of roses." More than 80 years later, the small rose garden has blossomed into 23 acres of botanical beauty providing visitors with unique experiences and enriching opportunities. Overlooking the town of Hershey, Hershey Gardens features a breathtaking assortment of flowers and shrubs, a stately collection of rare, signature trees, and various programs designed to delight visitors of all ages.

The historical highlight of Hershey Gardens, this is where it all began in 1937. The brilliant assortment of 3,000 roses representing 115 varieties includes an interesting mix of heights, colors and flower forms of Hybrid Tea, floribunda, shrub, and miniature roses, and features the new AARS rose variety winners each year.



Volunteers will be doing basic gardening tasks, such as planting annuals, weeding, mulching, etc.

We would like to acknowledge the Conference attendees who volunteered their time to help PWEA promote environmental stewardship, and to leave a positive imprint on this year's host location.

## Endimal™ Series Odor Control Solutions

### APPLICATIONS

Solids Separations Processes  
Collection Systems/Lift Stations  
Septage Receiving Areas  
Influent / Grit Chambers  
Solids Transport  
Compost Operations

### REACTS WITH

H<sub>2</sub>S  
Mercaptans  
Amines  
Dimethyl Disulfides  
Other Volatile Sulfur Compounds

More Products...  
More Solutions...  
That's Coyne!



### BENEFITS

Reacts Instantaneously on Contact  
No Harmful Byproducts in Effluent  
Reduces H<sub>2</sub>S Based Corrosion  
Improves Dewaterability  
Easy to Feed Liquid  
Selective Reaction - Reduces Demand  
Provides Safer Working Environment  
Cost Effective vs Other Oxidizer  
Chemistries

### PACKAGING

Pails  
Drums  
Totes  
Bulk



Coyne Chemical Environmental Services  
Main: 215-785-3000  
[www.coyneenvironmental.com](http://www.coyneenvironmental.com)

### Plant Tour

**Hosted by the Professional Operators and Students  
& Young Professionals Committees**

### **Derry Township Municipal Authority, Clearwater Wastewater Treatment Facility**

**Monday, 1:00-3:30pm**

The Derry Township Municipal Authority (DMTA), located in Hershey, PA, maintains a forward-thinking approach for its services and has continuously implemented self-sustaining facility improvements over the years at their Clearwater Wastewater Treatment Facility (WWTF). For nearly four decades, the DTMA has operated a hauled-in-waste program (Septage, FOG, Municipal Sludge, and Food Waste) which provides an alternate source of revenue through tipping fees. In 2000, the commissioning of the anaerobic digestion process enabled the DTMA to enhance their on-site energy recovery and solids management by utilizing the biogas for beneficial uses such as the thermal drying process, digester heating, and to fuel a 280-kW combined heat and power (CHP) system. With the excess biogas resulting from the co-digestion of high strength organic waste (HSOW or Food Waste), the DTMA embarked on the completion of the Energy Enhancements project in 2020 to improve upon the plant's capacity for accepting additional HSOW, to utilize the on-site renewable energy, and to approach "Net Zero" energy at their Clearwater WWTF. The project includes biogas storage and mixing improvements to the existing



secondary anaerobic digester, new biogas conditioning system for H<sub>2</sub>S removal and a regenerative siloxane removal system, and two (2) 1-MW CHP engines housed in a new building. The project is anticipated to be completely operational by Spring 2023.

**A limited number of tickets may be available at the PWEA Registration Desk. The cost is \$35 per person. Bus will begin boarding at 12:30pm at the Convention Center entrance, and will depart the hotel at 12:45pm.**

## Alternative Disinfection to Chlorination Processes PERACETIC ACID

### APPLICATIONS

Wastewater Disinfection  
Potable Water Treatment  
CSO Treatment  
Industrial Disinfection Processes

### BENEFITS

Easy to Feed Liquid  
No Harmful DBP's in Effluent  
Low Residual Toxicity  
No Dechlorination Required  
4 to 5 Log Disinfection Efficiency

**More Products...  
More Solutions...  
That's Coyne!**

### EFFECTIVE ON

Bacteria  
Viruses  
Cyanobacteria  
Endocrine Disruptors  
Yeast & Spores




Coyne Chemical Environmental Services  
Main: 215-785-3000  
[www.coyneenvironmental.com](http://www.coyneenvironmental.com)

A close-up photograph of a membrane filtration system, showing multiple cylindrical modules with black piping and a 'MultiBo' label.

**Membrane Systems**

An aerial photograph of a wastewater treatment plant, showing various circular and rectangular tanks, buildings, and surrounding greenery.

**Biological Processes**

A photograph of a large circular aeration tank with a central vertical shaft and horizontal mixing arms, situated in an outdoor industrial setting.

**Aeration and Mixing**

# TOTAL WATER MANAGEMENT SOLUTIONS

An aerial photograph of a wastewater treatment facility featuring several large circular tanks with internal sludge granules, surrounded by greenery and infrastructure.

**Aerobic Granular Sludge**

A photograph of two red industrial ozone generators with black piping and electrical connections, mounted on a metal frame.

**Ozone Systems**

A photograph of a large-scale cloth media filtration system, showing multiple rows of green filter cloths hanging vertically in a blue frame.

**Cloth Media Filtration**

## ADVANCED TREATMENT FOR CHANGING DEMANDS

Aqua-Aerobic Systems, Inc. provides municipal and industrial customers with advanced water and wastewater treatment technologies that easily adapt to changing demands. From primary filtration to enhanced nutrient removal, stormwater treatment, water reuse and disinfection, Aqua-Aerobic has proven solutions that offer the lowest cost of ownership with life-time customer service.

**New Plant Construction | Existing Plant Upgrades and Retrofits | Plant Expansions**

Proudly Represented By:



**Envirep/TLC Environmental, Inc.** Bill LaPorte (Eastern Pennsylvania)  
p 717.972.0582 | [wlaporte@envirep.com](mailto:wlaporte@envirep.com)

**TLC Environmental, Inc.** Dave Lounsbury, P.E. (Central Pennsylvania)  
p 717.299.3596 | [tlcenvironmental@aol.com](mailto:tlcenvironmental@aol.com)



**AQUA-AEROBIC SYSTEMS, INC.**  
A Metawater Company

[www.aqua-aerobic.com](http://www.aqua-aerobic.com) | 815-654-2501



**W.C. Weil Company** Greg Madia (Western Pennsylvania)  
p 412.487.7140 | [gmadia@wcweil.com](mailto:gmadia@wcweil.com)



**Providing Water & Wastewater Solutions Since 1973**

**SERVICES INCLUDE:**

Water and Wastewater Treatment Plant Design

Biological Nutrient Removal

Arsenic Removal

Iron and Manganese Removal

Distribution and Collection Systems

Pumping Stations

Storage Facilities

Act 537 Plans

Chapter 94 Reports

TMDL Reports

Infiltration / Inflow Studies

Construction Administration & Observation



**Contact Us Today For Your Next Project!**

Corporate Office: 949 Easton Road, Warrington, PA 18976 | 215-343-5700

630 Freedom Business Center, Third Floor, King of Prussia, PA 19406 | 610-572-7093

433 Lancaster Avenue, Suite 200, Malvern, PA 19355 | 610-489-5100

105 Raider Boulevard, Suite 206, Hillsborough, NJ 08844 | 908-874-7500

[info@carrollengineering.com](mailto:info@carrollengineering.com) | [www.carrollengineering.com](http://www.carrollengineering.com)



## Special Events

### PWEA Annual Awards Ceremony & Reception

**Monday, 5:45-7:00pm**  
**Aztec/Nigerian Ballroom**

The Annual Awards Ceremony honoring your colleagues who have won prestigious state and national awards will take place following a short reception. This event is open to all Conference attendees. Pre-registration was required. There is no charge to attend. Includes hors d'oeuvres and a drink ticket.



### Tailgate Dinner & Cornhole Tournament

**Monday, 7:15-9:30pm**  
**Cocoa Terrace & Cocoa 1 – Dinner**  
**Cocoa Ballroom – Cornhole Tournament**

The PWEA Students & Young Professionals Committee will host a fun and friendly evening of networking, cornhole tournament, food, drinks and great prizes. A tailgate themed dinner buffet will begin at 7:15pm and cornhole teams will be randomly formed beginning after dinner. The event is open to all experience levels, professionally and competitively. Attendees are encouraged to don their favorite team's tailgating attire.



**A limited number of tickets may be available at the PWEA Registration Desk. Tickets are \$55 per person. Dinner and a drink ticket are included.**

# GPI

**Together, we create the infrastructure people need most.**

GPI is a nationally recognized engineering firm that has been working to better our communities by providing high-quality engineering and construction services for over 50 years. Learn more at [www.gpinet.com](http://www.gpinet.com).

**Contact: Jim Protin**  
814.725.8659 | [jprotin@gpinet.com](mailto:jprotin@gpinet.com)  
3 Penn Center West, Suite 320, Pittsburgh, PA 15276

Engineering | Design | Planning | Construction Management

### Stormwater Tour Hosted by the Stormwater Committee Derry Township Municipal Authority Bullfrog Valley Stream Restoration

**Tuesday, 9:00am-11:30am**

Derry Township is undertaking the restoration of a waterway extending approximately 1,800 linear feet upstream of Bullfrog Valley Park. The project will serve as a sediment reduction BMP for the Township's Chesapeake Bay Pollutant Reduction Plan, but also provide a number of other benefits. At the bottom of the project area, the stream discharges into a pond at Bullfrog Valley Park. At this location, the stream deposits silt and sediment into the pond which requires periodic dredging. By stabilizing the streambanks, this deposition and need for dredging is reduced, and some of the deposited material from the pond could be reincorporated into the grading for the stream restoration project. Similarly, rock removed from a sanitary sewer extension project located elsewhere in the same geologic formation could be reincorporated into the streambank stabilization measures, and a careful inventory of trees being removed was taken so that their trunks and root wads could be reused as in-stream structures. A highly traveled multi-use trail runs parallel to the stream, providing ample



opportunity for public education and outreach and a portion of the sediment reduction credits from the project were transferred from Derry Township to a neighboring municipality under an inter-municipal agreement.

**A limited number of tickets may be available at the PWEA Registration Desk. The cost is \$35 per person. Bus will begin boarding at 8:30am at the Convention Center entrance, and will depart at 8:45am.**

## Bridging the gap between idea + achievement



[hdrinc.com](http://hdrinc.com)



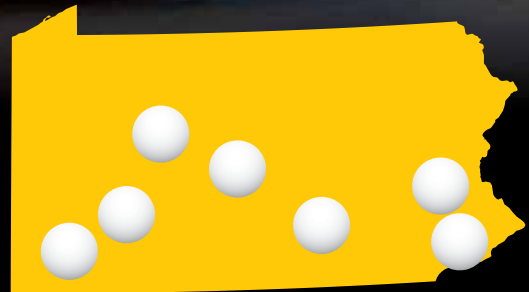
ALCOSAN North End Facilities Upgrades, Project Rendering  
Pittsburgh, PA



coreandmain.com



## WE'RE ALL ABOUT *Pennsylvania*



When you need dependable service in the middle of the night, the eye of the storm or the center of town, you need the waterworks experts at Core & Main.

**A Leading Specialized  
Distributor of Water,  
Wastewater, Storm Drainage  
and Fire Protection Products,  
and Related Services**

**Bentleyville**  
724-239-2063

**Latrobe**  
724-539-2900

**DuBois**  
814-637-5851

**State College**  
814-357-3130

**Harrisburg**  
717-938-8693

**Allentown**  
610-481-9979

**Plymouth Meeting**  
610-275-7400

Local **Knowledge**

Local **Experience**

Local **Service, Nationwide**



# From Pittsburgh to Philadelphia

Clients of Mott MacDonald are strengthening water and wastewater infrastructure, meeting increased demand, protecting waterways, cutting energy use, reducing carbon emissions, and achieving cost-effective solutions.

**For more information, write to [americas@mottmac.com](mailto:americas@mottmac.com) or call 800.832.3272.**

**[mottmac.com](http://mottmac.com)**



## Special Events



### Operations Challenge

Tuesday, 9:40-10:40am

Exhibit Hall

**How do operators and technicians overcome flooding, a sewer collapse, process failure, and other emergencies?** Do you ever wonder what transpires behind the scenes during the operation of a water resource recovery facility? Instead of continuing to take these unsung specialists for granted, watch this year's demo to learn how the wastewater collection and treatment personnel display their skills at the Operations Challenge.

During a competition, teams compete to earn the highest score in five different events. Each team includes four members and often a coach as well. Each event is designed to test the diverse skills required for the operation and maintenance of water resource recovery facilities, collection systems, and laboratories. The five events are collections systems, laboratory, process control, maintenance, and safety.



### Women in Water Luncheon

Tuesday, 11:45am-1:00pm

Cocoa Terrace & Cocoa 1

#### Leadership, Career Paths, and the Future of Water – A Panel Discussion

Panelists include:

- Kara Humes, Entech Engineering, PWEA First Past President
- Autumn Crawford, Western Butler County Authority, Board Member and Professional Operators Committee Chair
- Pamela Penatzer, LB Water

Join your colleagues for the third annual Women in Water Luncheon. This luncheon will feature networking opportunities and a panel discussion with prominent women who are dedicated to water quality.

**This is a ticketed event. A limited number of tickets may be available at the PWEA Registration Desk. There is no charge to attend.**



### PFAS (PFOS, PFOA, GenX) Water Treatment EPA Emerging Contaminant Concern: EPA 505-F-17-001



#### Treating PFAS since 2013

Affected Systems include:

- Ground Water
- Drinking Water
- Leachate
- Wastewater

Jeremiah Stratton  
Business Development Manager  
317.518.4307  
BowenSQP.com



### Consent for Use of Photographic Images

Registration and attendance at, or participation in, the PWEA Annual Technical Conference & Exhibition and related activities constitutes an agreement by

the registrant to permit PWEA's use and distribution (both now and in the future) of his/her image in photographs, promotional materials, electronic reproductions, etc., of these events and activities.

## Special Events

### PWEA Student Research Poster Contest

Tuesday, 11:45am-1:00pm

Exhibit Hall

The PWEA Research Committee reviews student research submissions and invites qualifiers to participate in the Poster Contest. After judging by faculty and practicing engineers, the top three poster presenters in both undergraduate and graduate categories are chosen. Posters will be available for viewing by Conference attendees. Awards will be presented at the Student Research Program.



### WANT TO BECOME A PROGRESSIVE AUTHORITY?

RETTEW will help you optimize your biosolids system and become carbon neutral.

- Evaluate your existing biosolids process.
- Minimize waste disposal costs with sludge thickening and dewatering.
- Convert small systems to cycled aerobic digestion.
- Upgrade biogas to renewable natural gas and green electricity.
- Design floating and ground-mounted solar arrays, battery energy storage systems, and electric vehicle charging stations.

Contact us at  
[rettew@rettew.com](mailto:rettew@rettew.com)

1-800-738-8395  
[rettew.com](http://rettew.com) | [f](#) [in](#) [v](#)

#### PENNSYLVANIA

Conshohocken • Lancaster  
Lehigh Valley • Mechanicsburg  
Pittsburgh • State College • Williamsport

### The PWEA App

The PWEA App is available for iPhone and Android users. Visit your App Store and search for the PWEA App. Manage your member account, view Job Postings, view and register for continuing education events and more.



## Special Events

### Operator Olympics

Tuesday, 4:45-5:45pm

Exhibit Hall

This is a fun activity based on some real Olympic events, but with a wastewater twist. Games may include:

Bowling, using a ball from a pump and BOD bottles; Plunger Toss, tossing small plungers into a bucket; Golf Ball Chip, chipping golf balls into a toilet; Hockey, score a goal through a toilet seat; and Turd Toss, throw (plastic!) turds into a bucket.

Can you think of a better way to spend the afternoon?



There is no charge and pre-registration is not required. This is a competitive event and prizes will be awarded.

### Annual PWEA Golf Tournament

Wednesday, 8:30am Shotgun Start

This year's Golf Tournament at the Deer Valley Golf Course in Hummelstown, PA. The course is located about 15 minutes from the Hershey Lodge. Net proceeds from the tournament will benefit PWEA's Operations Challenge Program.

**Pre-registration was required. On-site registration is not available.**



# Exhibit Hall Highlights

The Exhibit Hall is a very important part of the PennTec Conference. The exhibits will open on Monday at 9:45am and will close on Tuesday at 5:45pm. Visiting the vendors will be informational, educational, and it will also be fun!



## Exhibit Hall Bingo

The PWEA Exhibits & Sponsors Committee organized this event for Monday and Tuesday during the Conference.

### How it Works:

Conference attendees will receive a Bingo card in their registration packets, along with a list of participating exhibitor names. Each participating exhibitor will be assigned a letter/number from the Bingo cards. Attendees will need to visit the exhibitors in order to have their cards stamped.

Once the squares are stamped horizontally, vertically or on the diagonal, the attendee will then turn in the card to Booth 80 during the afternoon break of each day (Monday or Tuesday) for confirmation. **Attendees must be present to win** and can only turn in one card, either on Monday or on Tuesday.

Prizes will be awarded to all Bingo winners during the Exhibit Hall receptions on Monday and on Tuesday. Each day's winners will be entered into a Prize Drawing on Monday and on Tuesday.

## Bingo Participants

(as of May 19; final list available at Registration Desk)

ADS Environmental	GA Industries a VAG Group Brand	Keystone Pump & Power LLC	Riordan Materials Corporation
ARRO Consulting, Inc.	Gannett Fleming	Larson Design Group, Inc.	Robert Brown Associates, Inc.
BissNuss Inc	Geiger Pump & Equipment Company	Motor Technology, Inc.	Shelter Works
Bowen Engineering Corporation	GHD	Mott MacDonald	Spotts, Stevens and McCoy
Buchart Horn, Inc.	Gwin Dobson & Foreman, Inc.	Municipal Maintenance Company, Inc.	Stone Hill Contracting Co, Inc.
Charter Machine Company	Hach Company	Mid-Atlantic Pump & Equipment Co	Suburban Testing Labs
Coyne Chemical/ Environmental Services	Harold Beck and Sons, Inc.	North East Technical Sales	Thaddeus Stevens College
CUES, Inc.	Herbert, Rowland & Grubic, Inc.	PA One Call System, Inc.	The RootX Company
DRV, Inc.	IDEXX Laboratories, Inc.	Pace Analytical Services, LLC	Tnemec/Epoxytec
Entech Engineering, Inc.	Iron Horse Environmental, LLC	Poly Processing Company	TRI-Data Solutions Inc.
Envirep/TLC	Joos Equipment Company	PSI Process Pumping Services, Inc.	Utility Services Group, Inc.
Environmental Services Lab, Inc.	KELSO	Radwell International/ Radwell.com	Whitman, Requardt & Associates, LLP
Evoqua Water Technologies	Keystone Engineering Group, Inc.	Reiner Pump Systems, Inc.	Xylem Dewatering
FieldForce Rentals, Services & Sales		Remington & Vernick Engineers	Xylem Water Solutions

## Exhibit Hall Highlights



### NEW – Car Racing in the Exhibit Hall

The Exhibits & Sponsors Committee is hosting a new event this year: Car Racing!

Hot Wheels cars will be raced down a track in the Exhibit Hall during breaks. Races will be in heats of 6-8 numbered cars. Winner of each heat advances to the final. Each heat winner and the overall winner will receive a gift card.



### NEW – The Biosolids Beauty Contest!

This year, the Exhibits & Sponsors Committee and the Biosolids Committee added a new fun contest to the Conference. Biosolids Professionals were invited to decorate Class A and Class B biosolids in a fun and imaginative way, and to bring their submissions to PennTec. Entries will be judged and a winner will be announced. This photo is an example of an entry from another state's beauty contest.

Please be sure to stop by Booth 79 in the Exhibit Hall in order to view the submissions and to see how creative our Biosolids Professionals can be!

The winner will be announced during the lunch break on Tuesday, June 20! Who will be crowned winner of the first PWEA Biosolids Beauty Contest?

# Exhibit Hall Highlights



## Conference Raffle Prizes

Prizes will be raffled at different times throughout the Conference. Attendees registered for the conference will be given raffle tickets, and there will be marked containers placed randomly throughout the Exhibit Hall – one for each prize. Attendees can put as many of their tickets as they'd like in each marked container. Raffle tickets will be drawn in the Exhibit Hall at various times during the Conference. You must be present to win. Exhibitor representatives are not eligible for these drawings. See Page 39 for the Raffle Prize Drawing Schedule.



## Exhibit Hall Food Functions

Lunch, morning and afternoon breaks, and the President's Reception will be in the Exhibit Hall on Monday. Continental breakfast, morning and afternoon breaks, lunch, and the Beer & Pretzels Reception will be in the Exhibit Hall on Tuesday.



## President's Reception

*Monday, 4:45-5:45pm*

Be sure to attend the President's Reception! Enjoy **FREE BEER, WINE and snacks** while you network with your colleagues and the vendors.

**There is no charge for this event.**



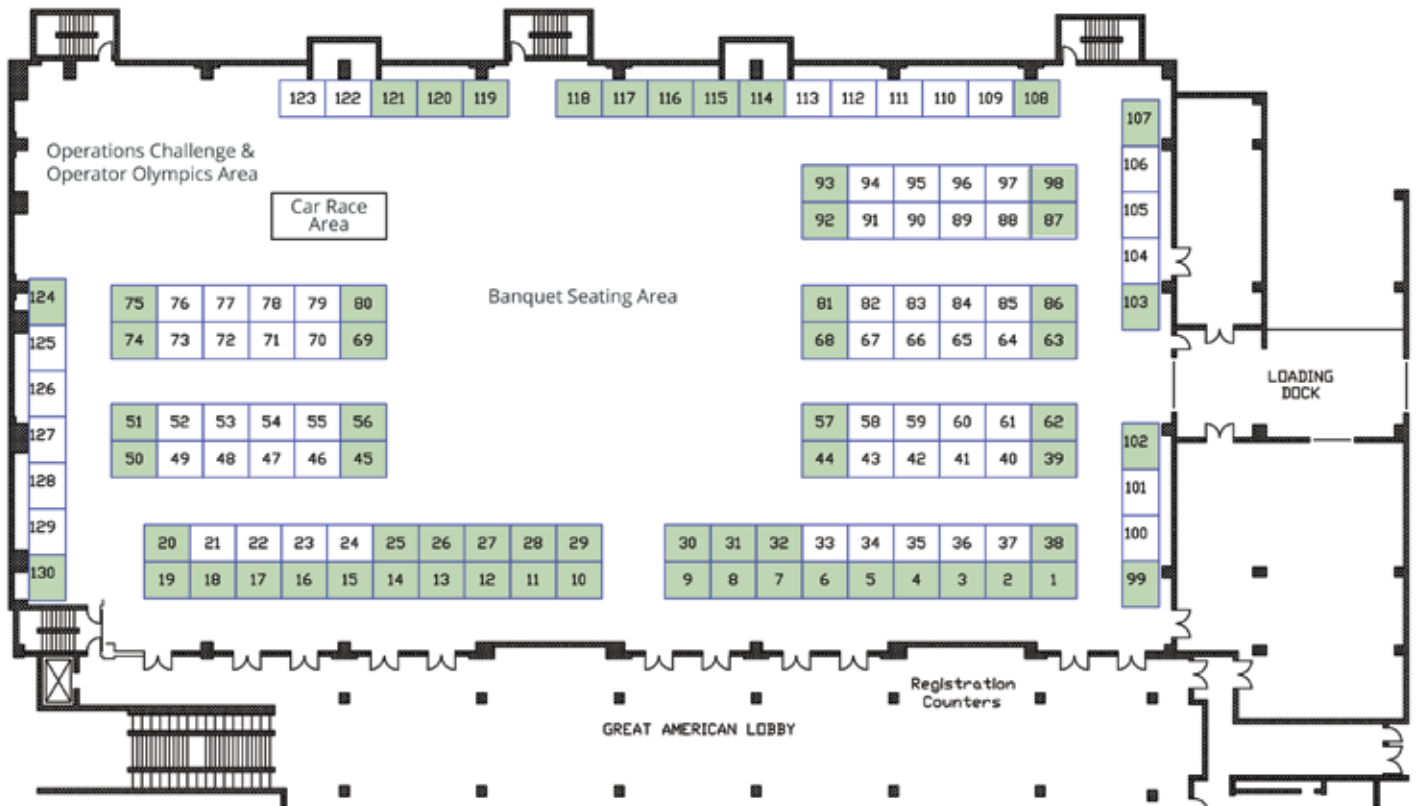
## Beer & Pretzels Reception

*Tuesday, 4:45-5:45pm*

**FREE BEER, WINE and soft pretzels** will be served! Come to the Hall to relax and visit with the vendors.

**There is no charge for this event.**

# Exhibit Hall Floor Plan



## Exhibit Hall Hours

The Exhibit Hall will be open during the following times:

### Monday

**9:45am-5:45pm**

Morning Break	9:45-10:15am
Lunch	2:00-1:00pm
Afternoon Break	2:40-3:40pm
President's Reception	4:45-5:45pm

### Tuesday

**7:30am-5:45pm**

Continental Breakfast	7:30-8:30am
Morning Break	9:40-10:40am
Lunch	11:45am-1:00pm
Afternoon Break	2:40-3:40pm
Beer & Pretzels Reception	4:45-5:45pm

Be sure to visit with the exhibitors!

Visit the Outdoor Displays:

**Boerger, LLC**  
**Duperon Corporation**  
**FieldForce Rentals,**  
**Services & Sales**  
**Golden Equipment Co., Inc.**





*New Look, New Products, Same Great Company*

THE DUPERON®  
**FLEXRAKE IQ®**  
PLATFORM

The **FINEST** screen opening  
for everyday conditions, with a  
new level of **ADAPTABILITY**  
for peak flows, and the

**INTELLIGENCE**  
to know the difference.



Locally Represented by Kappe Associates, Inc.  
Tel: 301-846-0200  
Email: [info@kappe-inc.com](mailto:info@kappe-inc.com)  
[kappe-inc.com](http://kappe-inc.com)

# Exhibitor Listings

## A

### ADS Environmental

35 Rosecroft Run  
Hanover, PA 17331  
240-755-7951  
cpaulin@idexcorp.com  
adsenv.com

**Booth 14**

### Advanced Rehabilitation Technology

525 Winzeler Dr., Unit 1  
Bryan, OH 43506  
419-636-2684  
rusty@artcoatingtech.com  
www.artcoatingtech.com

**Booth 51**

### Anser Advisory

322 North Shore Dr., Ste 240  
Pittsburgh, PA 15212  
412-770-3162  
bryan.martucci@anseradvisory.com  
www.anseradvisory.com

**Booth 74**



### Aqua-Aerobic Systems, Inc.

6306 N Alpine Rd.  
Loves Park, IL 61111  
815-654-2501  
solutions@aqua-aerobic.com  
www.aqua-aerobic.com

**Booth 45**

### AquaPhoenix Scientific

860 Gitts Run Rd.  
Hanover, PA 17331  
717-632-1291  
info@aquaphoenixsci.com  
www.aquaphoenixsci.com

**Booth 16**

### ARRO Consulting, Inc.

108 W Airport Rd.  
Lititz, PA 17543  
717-569-7021  
communications@arroconsulting.com  
www.arroconsulting.com

**Booth 23**

## B



### BGC, Inc. Water & Wastewater Services

2052 Lucan Rd.  
Skippack, PA 19474  
610-222-3508  
info@bgcwws.com  
www.bgcwws.com

**Booth 18**

### BissNuss, Inc.

2600 Boyce Plaza Rd., Ste 218  
Pittsburgh, PA 15241  
412-221-1200  
lmiller@bissnussinc.com  
www.bissnussinc.com

**Booth 71**

### Boerger, LLC

2860 Water Tower Pl.  
Chanhassen, MN 55317  
612-435-7324  
pma@boerger.com  
www.boerger.com

**Outside Space  
(with Sherwood Logan)**



### Bowen Engineering Corporation

153 Helmbright Dr.  
Gahanna, OH 43230  
317-518-4307  
jeremiah.stratton@bowenengineering.com  
www.bowenengineering.com

**Booth 123**

### Buchart Horn, Inc.

445 W Philadelphia St.  
York, PA 17401  
814-574-4518  
scotrussell@bucharthorn.com  
www.bucharthorn.com

**Booth 130**

## C



### Charter Machine Company

720 W. Prospect Ave.  
North Wales, PA 19454  
732-425-7489  
ChrisB@chartermachine.com  
www.CharterMachine.com

**Booth 80**

### Chesapeake Environmental Equipment

199 Overlook Rd  
Morgantown, PA 19543  
610-451-1178  
jnorth@shesequip.com  
www.chesapeakeequipment.com

**Booth 106**

### Colliers Engineering & Design

301 Newman Springs Rd.  
Red Bank, NJ 07701  
732-383-1950  
eventsteam@colliersengineering.com  
www.colliersengineering.com

**Booth 82**



### Coyne Chemical/ Environmental Services

3015 State Rd.  
Croydon, PA 19021  
215-785-3000  
dmaugle@coynechemical.com  
www.coyneenvironmental.com

**Booth 8**



### CUES, Inc.

3600 Rio Vista Ave.  
Orlando, FL 32805  
407-849-0190  
terrim@cuesinc.com  
www.cuesinc.com

**Booth 9**

### CW Sales Corporation

199 S Forrest Ave.  
Norristown, PA 19403  
610-277-6444  
cwsales@cwsalescorp.com  
www.cwsalescorp.com

**Booth 57**

## D

### Denali Water Solutions

250 Lucius Gordon Dr. Ste 8  
West Henrietta, NY 14586  
518-222-5452  
glen.knecht@denaliwater.com  
www.denaliwater.com

**Booth 69**

### DLVEWS, Inc.

2841 Turner Rd.  
Auburn, ME 04210  
717-446-4870  
chris@dlvews.com  
www.dlvews.com

**Booth 70**

### DN Tanks

39 E. Main St.  
Mechanicsburg, PA 17050  
717-356-0491  
corey.meyers@dntanks.com  
www.dntanks.com

**Booth 32**



### DRV, Inc.

6 Commerce Dr.  
Pittsburgh, PA 15239  
412-247-4816  
dshinsch@drv-inc.com  
www.drv-inc.com

**Booth 29**

### Duke's Root Control, Inc.

400 Airport Rd.  
Elgin, IL 60120  
443-821-9605  
matt@dukes.com  
www.dukes.com

**Booth 126**

### Duperon Corporation

1200 Leon Scott Ct.  
Saginaw, MI 48601  
800-383-8479  
info@duperon.com  
www.duperon.com

**Outside Space (with Kappe)**

### Dutchland, Inc.

160 Route 41  
Gap, PA 17527  
717-442-8282  
dbeiler@dutchlandinc.com  
www.dutchlandinc.com

**Booth 93**

## E

### EBARA Pumps Americas Corporation

1651 Cedar Lane Dr.,  
Rock Hill, SC 29730  
803-327-5005  
info@pumpsebara.com  
www.pumpsebara.com

**Booth 46**

### EcoVerde, LLC

2315 E. Washington St.  
Phoenix, AZ 85034  
602-707-6250  
sales@ecoverdetechologies.com  
www.ecoverdetechologies.com

**Booth 48**

### Edwin Elliot & Company, Inc.

P.O. Box 439  
Lafayette Hill, PA 19444  
610-828-8940  
eeco@edwinelliott.com

**Booth 67**

### Entech Engineering, Inc.

P.O. Box 32  
Reading, PA 19603  
610-373-6667  
info@entecheng.com  
www.entecheng.com

**Booth 24**



### Envirep/TLC

3705 Trindle Rd., Ste 110  
Camp Hill, PA 17011  
717-590-7175  
sales@envirep.com  
www.envirep.com

**Booths 47**

# Exhibitor Listings

## Environmental Service Corp.

9121 Valley View Dr  
Clarks Summit, PA 18411  
570-341-6738  
cody.hendricks@esc-par.com  
www.esc-pa.com  
**Booth 105**

## Environmental Service & Equipment Co.

107 Deer Laurel Est Rd.  
Lake Ariel, PA 18436  
610-497-5900  
tom@environmentalequipment.net  
environmentalequipment.net  
**Booth 13**

## Environmental Services Lab, Inc.

100 Timbersprings Dr.  
Indiana, PA 15701  
724-388-4058  
egregg@envlabs.com  
www.envlabs.com  
**Booth 38**

## Eurofins Environment Testing America

2425 New Holland Rd.  
Lancaster, PA 17601  
908-809-9243  
Env.Marketing@ET.eurofinsUS.com  
www.eurofinsUS.com/Env  
**Booth 60**



## Evoqua Water Technologies

409 Hastings Dr.  
Cranberry Township, PA 16066  
724-772-1575  
robert.biase@evoqua.com  
www.evoqua.com  
**Booth 118**

## F

## FieldForce Rentals, Services & Sales

34 Northeast Dr.  
Hershey, PA 17033  
888-426-2926  
kbrach@fieldforcerentals.com  
www.fieldforcerentals.com  
**Booth 73 & Outside Space**

## Flottweg Separation Technology, Inc.

10700 Toebben Dr.  
Independence, KY 41051  
484-793-3270  
jyattcilla@flottweg.com  
www.flottweg.com  
**Booth 113**

## Flow Assessment Services, LLC

72 Priscilla Ln  
Auburn, NH 03032  
603-656-9799  
contactus@flowassessment.com  
https://flowassessment.com  
**Booth 2**

## Franklin Miller, Inc.

60 Okner Pkwy  
Livingston, NJ 07039  
973-535-9200  
tomz@frankmiller.com  
**Booth 113**

## G

## G T Smith & Associates, Inc.

1049 Idaho Ave.  
Cape May, NJ 08204  
609-551-2438  
gtsmithassociates@comcast.net  
**Booth 39**

## GA Industries a VAG Group Brand

234 Clay Ave.  
Mars, PA 16046  
724-900-0241  
g.clifford@vag-group.com  
www.gaindustries.com  
**Booth 37**



## Gannett Fleming

207 Senate Ave.  
Camp Hill, PA 17011  
904-233-6467  
water@gfnet.com  
www.gannettfleming.com  
**Booth 44**



## Gayle Corporation

40 Lloyd Ave., Ste 202  
Malvern, PA 19355  
610-296-0970  
rfuller@gaylecorp.com  
www.gaylecorp.com  
**Booth 125**

## Geiger Pump & Equipment Company

830 Tyrens Rd.  
Aston, PA 19014  
610-459-5747  
agrege@geigerinc.com  
**Booths 119-120**

## GHD

225 Grandview Ave., Ste 403  
Camp Hill, PA 17011  
717-541-0622  
www.ghd.com  
**Booth 15**

## GMH Associates of America, Inc.

5 Chelton Wy, Bldg 15  
Trenton, NJ 08638  
609-396-4751  
tgenniro@gmhassociates.com  
www.gmhassociates.com  
**Booth 103**

## Golden Equipment Co., Inc.

P.O. Box 873  
Mars, PA 16046  
800-242-1494  
golden4pa@hotmail.com  
**Booth 108 & Outdoor Space**

## Gorman-Rupp Company

600 S. Airport Rd.  
Mansfield, OH 44901  
419-755-1011  
eric.knudsen@gormanrupp.com  
www.grpumps.com  
**Booth 47**

## Guardian Environmental Products

P.O. Box 5208  
West Chester, PA 19380  
610-430-6200  
kfuller@guardwater.com  
www.guardwater.com  
**Booth 45**

## Gwin Dobson & Foreman, Inc.

3121 Fairway Dr.  
Altoona, PA 16602  
814-943-5214  
jballiet@gdfengineers.com  
www.gdfengineers.com  
**Booth 36**

## H

## H-Tec, Inc.

1061 Triad Ct.  
West Oak Business Park II, Ste 5  
Marietta, GA 30062  
770-818-0670  
britt@h-tecvalves.com  
www.h-tec.us  
**Booth 50**

## Hach Company

P.O. Box 389  
Loveland, CO 80539  
800-227-4224  
lyle.gross@hach.com  
www.hach.com  
**Booth 124**

## Harold Beck and Sons, Inc.

11 Terry Dr  
Newtown, PA 18940  
215-968-4600  
msperanza@haroldbeck.com  
www.haroldbeck.com  
**Booth 85**

## Hayward Flow Control

1 Hayward Industrial Dr.  
Clemmons, NC 27012  
336-803-9936  
hfcsales@hayward.com  
https://www.haywardflowcontrol.com  
**Booth 83**

## Herbert, Rowland & Grubic Inc

369 E Park Rd  
Harrisburg, PA 17111  
717-564-1121  
hrg@hrg-inc.com  
www.hrg-inc.com  
**Booth 55**

## I

## IDEXX Laboratories, Inc.

One IDEXX Dr.  
Westbrook, ME 04092  
800-321-0207  
water@idexx.com  
www.idexx.com/water  
**Booth 33**

## Iron Horse Environmental, LLC

P.O. Box 282  
Fairview Village, PA 19409  
215-275-5210  
info@ihe-llc.com  
www.ihe-llc.com  
**Booths 41-43**

## ITAC/Filter Magic

13141 North Enon Church Rd.  
Chester, VA 23836  
804-512-0200  
mark.romers@itac.us.com  
www.itac.us.com  
**Booth 128**

## J



## JHA Companies

466 S. Main St.  
Montrose, PA 18801  
844-542-4757  
tlong@jhacompanies.com  
www.jhacompanies.com  
**Booth 17**

## Joos Equipment Company

P.O. Box 368  
Paoli, PA 19301  
610-513-1236  
ejoos@joosequipment.com  
www.joosequipment.com  
**Booth 122**

# Exhibitor Listings

## K



**Kappe Associates, Inc.**  
100 Wormans Mill Ct.  
Frederick, MD 21701  
301-846-2022  
info@kappe-inc.com  
www.kappe-inc.com  
**Booths 4-6**

**KELSO**  
P.O. Box 743  
East Berlin, PA 17316  
717-932-9980  
info@kelsocompany.com  
www.kelsocompany.com  
**Booth 121**

**Kershner Environmental Technologies, LLC**  
168 Stine Dr.  
Collegeville, PA 19426  
610-283-0849  
www.info@ketllc.com  
www.ketllc.com  
**Booths 25-27**

**Keystone Engineering Group, Inc.**  
590 Lancaster Ave., Ste 200  
Frazer, PA 19355  
610-407-4100  
sales@kegi.net  
www.kegi.net  
**Booth 112**

**Keystone Pump & Power, LLC**  
1480 S. Mountain Rd.  
Dillsburg, PA 17019  
717-502-8500  
mitchell@kpprents.com  
www.kpprents.com  
**Booth 72**

**Kraft Power Corporation**  
4039 Millennium Blvd SE  
Massillon, OH 44646  
330-491-6872  
jsalvati@kraftpower.com  
www.kraftpower.com  
**Booth 101**

**Kubota Membrane USA Corporation**  
11807 N. Creek Pkwy S Ste B-109  
Bothell, WA 98011  
425-381-3604  
kevin.crane@kubota.com  
www.kubota-membrane.com  
**Booth 116**

## L



**Larson Design Group, Inc.**  
1000 Commerce Park Dr., Ste 201  
Williamsport, PA 17701  
570-323-6603  
gcummings@larsondesigngroup.com  
www.larsondesigngroup.com  
**Booth 76**

**LB Water**  
540 S. High St.  
P.O. Box 60  
Selinsgrove, PA 17870  
570-374-2355  
ben.reichley@lbh2o.com  
**Booth 86**

**Longo Electrical-Mechanical**  
1 Harry Shupe Blvd.  
Wharton, NJ 07885  
973-537-0400  
info@elongo.com  
www.elongo.com  
**Booth 56**

**LRM, Inc.**  
P.O. Box 244  
Hiltown, PA 18927  
215-721-4840  
mcrawford.lrm@comcast.net  
**Booth 66**

**Lutz-Jesco America Corporation**  
55 Bermar Pk.  
Rochester, NY 14624  
585-426-0990  
phil@jescoamerica.com  
www.lutzjescoamerica.com  
**Booth 40**

## M

**Maryland Biochemical Company**  
712 Tobacco Run Dr.  
Bel Air, MD 21015  
800-771-7252  
info@marylandbiochemical.com  
www.marylandbiochemical.com  
**Booth 34**

**Mercer Rubber Co.**  
350 Rabro Dr.  
Hauppauge, NY 11788  
631-582-1524  
info@merc-rubber.com  
www.merc-rubber.com  
**Booth 65**

**Mid-Atlantic Biosolids Association**  
203 Geary Ave.  
New Cumberland, PA 17070  
845-901-7905  
mfirestone@mabiosolids.org  
www.mabiosolids.org  
**Booth 111**

**Mid Atlantic Pump & Equipment Co**  
228 N. Rte 73  
Berlin, NJ 08009  
856-768-3880  
dzepp@mapeco.com  
**Booth 68**

**Miller Energy, Inc.**  
3200 South Clinton Ave.  
South Plainfield, NJ 07080  
908-755-6700  
sales@millerenergy.com  
www.millerenergy.com  
**Booth 100**

**Mobile Dredging & Video Pipe, Inc.**  
3100 Bethel Rd.  
Philadelphia, PA 19013  
610-497-9500  
rwillard@mdvpinc.com  
**Booth 109**

**Motor Technology, Inc.**  
515 Willow Springs Ln  
York, PA 17406  
800-632-9060  
tmartin@motortechinc.com  
www.motortechinc.com  
**Booth 63**



**Mott MacDonald**  
325 Chestnut St., Ste 300  
Philadelphia, PA 19106  
215-399-9595  
americas@mottmac.com  
www.mottmac.com  
**Booth 92**

**Mr Rehab, LLC**  
3 Long Ln  
Mechanicsburg, PA 17050  
717-697-1242  
info@mrrehab.com  
www.mrrehab.com  
**Booth 94**



**Municipal Maintenance Company, Inc.**  
1352 Taylors Ln  
Cinnaminson, NJ 08077  
856-786-9434  
dhennessy@mmc-nj.com  
www.mmc-nj.com  
**Booth 30**

## N

**Nexom/Environmental Dynamics International**  
5601 Paris Rd.  
Columbia, MO 65202  
954-540-0672  
michael.cole@nexom.com  
www.nexom.com  
**Booth 114**

**North East Technical Sales**  
200 Foulke Ln  
Springfield, PA 19064  
267-933-6624  
sales@netechsales.com  
www.netechsales.com  
**Booth 1**

## O

**Orenco Systems**  
814 Airway Ave.  
Sutherlin, OR 97479  
541-459-4449 x464  
searl@orencos.com  
www.orencos.com  
**Booth 62**

## P

**PA One Call System, Inc.**  
925 Irwin Run Rd.  
West Mifflin, PA 15122  
570-954-3545  
mawhite@pa1call.org  
www.pa1call.org  
**Booth 104**

**Pace Analytical Services, LLC**  
25 Holiday Dr.  
Englewood, OH 45322  
937-832-8242  
kevin.custer@pacelabs.com  
www.pacelabs.com  
**Booth 81**

**PaWARN**  
212 Whitetail Terr.  
Marysville, PA 17053  
717-880-1303  
mikesnyder@pawarn.org  
www.pawarn.org  
**Booth 89**

## Exhibitor Listings

### Performance Pipelining, Inc.

229 North St.  
Bedford, PA 15522  
814-803-0149  
gwashtingtonppi@gmail.com  
**Booth 127**

### Pleasant Mount Welding, Inc.

45 Dundaff St.  
Carbondale, PA 18407  
570-282-6164 x137  
sales@pmwi.net  
www.pmwi.net  
**Booth 64**

### PMAA

1000 N. Front St.  
Wormleysburg, PA 17043  
717-737-7655  
baer@municipalauthorities.org  
www.municipalauthorities.org  
**Booth 84**

### Poly Processing Company

6 Brook Hollow Dr.  
Nanuet, NY 10954  
318-557-6028  
bvenner@polyprocessing.com  
www.polyprocessing.com  
**Booth 21**



### PSI Process Pumping Services, Inc.

724 S. 11th St.  
Philadelphia, PA 19147  
215-668-1746  
chris.evans@psiprocess.com  
www.psiprocess.com  
**Booth 87**

### PULLMAN

10150 Old Columbia Rd.  
Columbia, MD 21046  
410-883-0959  
dsanschagrin@pullman-services.com  
www.pullman-services.com  
**Booth 54**

### PumpMan Pittsburgh

P.O. Box 199  
Allison Park, PA 15101  
412-487-4140  
lheffley@pumpmanpittsburgh.com  
**Booth 19 & 129**

### PWEA Public Education Committee

P.O. Box 3367  
Gettysburg, PA 17325  
717-642-9500  
pwea@pwea.org  
www.pwea.org  
**Booth 110**

### PWTech

9004 Yellow Brick Rd., Ste D  
Baltimore, MD 21237  
410-238-7977  
abrooks@pwtech.us  
www.pwtech.us  
**Booth 49**

### Pyrz Water Supply Co.

P.O. Box 107  
Harleysville, PA 19438  
215-256-8430  
bob@pyrzwater.com  
www.pyrzwater.com  
**Booth 28**

## R

### Radwell International/ Radwell.com

1 Millennium Dr.  
Willingboro, NJ 08046  
609-288-9393 x839  
ahorner@radwell.com  
**Booth 107**

**GD&F ENGINEERS**  
GDFENGINEERS.COM

Word cloud terms: SCADA, CO-ENERGY PROJECTS, CONVEYANCE, Nutrient Removal, Sewer, TREATMENT, Nutrient, SCADA, HYDRAULICS, Rate, FUNDING, Co, SOLIDS, Funding, SYSTEM EVALUATIONS, Rate Studies, SCADA, Funding, Solids Management, Rehab, ACT 537 PLANNING, Evaluations, Collection, Hydraulics-Modeling, Act 53, SEWER REHAB, Treatment, System Eval, Hydra, COLLECTION.

# Exhibitor Listings



## Reiner Pump Systems, Inc.

53 US Highway 206  
Stanhope, NJ 07874  
973-347-9000

gsermarini@reinerpump.com  
www.reinerpump.com

**Booth 22**

## Remington & Vernick Engineers

555 Croton Rd. Ste 401  
King of Prussia, PA 19406  
610-940-1050

vanessa.nedrick@rve.com  
www.rve.com



## Riordan Materials Corporation

6198 Butler Pk, Ste 150  
Blue Bell, PA 19422  
215-628-9936  
aachenbach@riordanmat.com  
www.riordanmat.com

**Booth 117**

## Robert Brown Associates, Inc.

6-C Mount Pleasant Rd.  
Aston, PA 19014  
610-354-0200  
nsirolli@rbapump.com  
www.rbapump.com

**Booth 7**

## RootX Company

P.O. Box 7626  
Salem, OR 97303  
800-844-4974  
drew@rootx.com  
www.rootx.com

**Booth 53**

## S

## Senate Engineering Company

Uparc 420 William Pitt Way  
Pittsburgh, PA 15238  
724-282-2915  
www.senateengineering.com

**Booth 58**

## Shelter Works

2616 S. 3rd St.  
St Louis, MO 63118  
314-720-1706  
jswanson@shelterworks.com  
www.shelterworks.com

**Booth 46**

## Sherwood Logan & Associates

370 Middletown Blvd., Ste 500  
Langhorne, PA 19047  
215-702-1402  
ezalewski@sherwoodlogan.com

**Booths 10-12**

## Site Specific Design, Inc.

1704 Rockwell Rd.  
Abington, PA 19001  
215-887-3730  
jspeese@sitespecificsales.com  
www.sitespecificsales.com

**Booth 77**

## Spotts, Stevens and McCoy

1047 N. Park Rd.  
Reading, PA 19610  
610-621-2000  
info@ssmgroup.com  
www.ssmgroup.com

**Booth 31**

## Stone Hill Contracting Co., Inc.

P.O. Box 1370  
Doylestown, PA 18901  
215-340-1840  
rkmcintyre@stonehillcontracting.com  
www.stonehillcontracting.com

**Booth 35**

## Suburban Testing Labs

1037F MacArthur Rd.  
Reading, PA 19605  
484-516-0530  
moakes@suburbantestinglabs.com  
www.suburbantestinglabs.com

**Booth 59**

## T

## Thaddeus Stevens College

750 E King St.  
Lancaster, PA 17602  
717-725-9623  
edelman@stevenscollege.edu  
www.stevenscollege.edu

**Booth 52**

## Theia Water

81 Lincoln Ave  
West Chester, PA 19380  
888-330-2260  
betsy@theiallc.com  
www.theiallc.com

**Booth 61**

## Tnemec/Epoxytec

10 N. Main St.  
Pheonixville, PA 19468  
610-551-3713  
wbates@tnemec.com  
www.tnemec.com

**Booth 99**

## TRI-Data Solutions, Inc.

8 Douglas Dr.  
Huntingdon Valley, PA 19006  
267-278-8239  
dmcræe@tri-datasolutions.com  
www.tri-datasolutions.com

**Booth 102**

## Trumbull Mfg

3850 Hendricks Rd.  
Youngstown, OH 44515  
724-699-8776  
bprogers@trumbull.com

**Booth 78**

## U

## UET Mixers

26 Maple St.  
Mechanic Falls, ME 04256  
207-345-3330  
sales@uetmixers.com  
www.uetmixers.com

**Booth 49**

## USABlueBook

PO Box 9005  
Gurnee, IL 60031  
800-548-1234  
elangston@usabluebook.com  
www.usabluebook.com

**Booth 75**

## Utility Services Group, Inc.

1304 Slate Hill Rd.  
Camp Hill, PA 17011  
717-737-6092  
careers@usginc.net  
www.usginc.net

**Booth 91**

## V

## Veolia Water Technologies

4001 Weston Pkwy  
Cary, NC 27513  
919-677-8310  
usmunicipal@veolia.com  
www.veoliawatertech.com

**Booth 50**

## Vogelsang USA

P.O. Box 751  
Ravenna, OH 44266  
330-296-3820  
sales@vogelsangusa.com  
www.vogelsangusa.com

**Booth 48**

## W

## Whitman, Requardt & Associates, LLP

1500 Market St., Ste W2750  
Philadelphia, PA 19102  
215-568-4700  
www.wrallp.com

**Booth 98**

## X

## Xylem Dewatering

84 Floodgate Rd.  
Bridgeport, NJ 08014  
609-617-9315  
voyce.dryden@xylem.com  
www.xylem.com

**Booth 3**

## Xylem Water Solutions

2330 Yellow Springs Rd.  
Malvern, PA 19355  
610-408-6515  
aj.wilson@xylem.com  
www.xylem.com

**Booth 115**

## Workshop Details

**You must have a ticket to attend.  
Seating is limited. If you did not register in advance,  
check at the PWEA Registration Desk for seat availability.**

### **Monday & Tuesday, 8:00am-5:00pm – Empire B**

#### **Activated Sludge Refresher Course**

This course is PA DEP approved for **16.0 wastewater contact hours**. Course ID 3884. You must attend both days to earn DEP credit. Partial credit will not be awarded.

*Instructors: Jeremy Miller, PA DEP; Walter Higgins, US EPA ; and Anita Stabile, PA DEP*

This course was developed as a preparatory course for the activated sludge certification exam as well as a refresher for certified operators. Students will be engaged in active classroom discussion as well as small group exercises. In advance of the training date, students will be provided with vocabulary and other training material to review before the classroom training. Interactive instruction and handouts explaining the activated sludge process, exam taking skills and practice, math drills, general knowledge review, concept reinforcement, confidence building, homework, and a supportive learning environment are included. Registrants should bring a calculator, a notebook, and a pen/pencil.

### **Monday, 8:45am-4:00pm – Empire C**

#### **A Laboratory Practices Committee Workshop**

##### **Laboratory Supervisor Training**

This course is PA DEP approved for **6.0 drinking water & wastewater contact hours**. Course ID 6759.

*Moderator: Curtis Huey, Borough of Mechanicsburg*

*Instructor: Larissa Hoover, ALCOSAN*

Students will learn common lab terms, the role and expectations of a lab supervisor, current Chapter 252 regulations, and typical calculations used to evaluate lab data. The class will be presented in five sections: background information and general provisions; general standards; QA/QC requirements; proficiency study, onsite assessment requirements and miscellaneous provisions; and basic math. Students will apply what they learn during discussion and question/answer sessions; and they will complete a math worksheet to demonstrate their understanding of the math section of the presentation. This course may help students prepare to take the laboratory supervisor test.

### **Monday, 12:45pm-4:45pm – Empire D**

#### **A Training Committee Workshop**

##### **Responsibilities of Clean Water Professionals**

This course is PA DEP approved for **3.5 wastewater contact hours**. Course ID 7122.

*Instructors: Thomas Brown, Erick Ammon, Marc Neville, and Anita Stabile, all with PA DEP*

This course will include an introduction to the Wastewater Operator Code of Ethics. Upon conclusion of the course, students will be able to describe the importance of good communication and establish a communication system with system owners, customers and regulatory agencies. And they will be ready to accept and carry out the responsibilities and rewards of being a Clean Water Professional. Course content will include: Operator Best Practices;

Protecting/Maintaining Your System, Utilizing Resources Wisely; Laws, Rules and Regulations that Impact Wastewater Operators; Security and Emergency Planning for Wastewater Systems; and Educating Owners, Customer and the Public.

### **Tuesday, 8:00am-12:30pm – Empire D**

#### **A Training Committee Workshop**

##### **Common Pump Station Electrical Issues**

This course is PA DEP approved for **3.0 drinking water & wastewater contact hours**. Course ID 8421.

*Instructors: Josh Price and Roger Stauffer, both with Envirep*

Wastewater and Water Treatment managers and operators deal with numerous electrically driven processes at treatment plants and outlying sewage pump stations and water booster pump stations. These processes utilize equipment that is controlled and powered from electrical control panels and various electrical components. Most operations personnel are not electrical engineers but they still have to maintain, troubleshoot and identify problems associated with the electrical equipment. This course will give an in-depth overview of why electrical problems occur, common terminology, discussions of motors, control panels, components, design considerations, startup, troubleshooting, failure analysis, and prevention.

### **Tuesday, 8:00am-4:45pm – Empire C**

#### **A Training Committee Workshop**

##### **Nutrient Workshop**

This course is PA DEP approved for **6.5 wastewater contact hours**. Course ID 9149.

*Instructor: Christine Volkay-Hilditch, City of Lancaster*

The purpose of this course is to prepare students for the wastewater operator certification exam and as a review for students who are already operators. There is a significant need for operators who understand nutrient removal and how to do the process control testing required to operate a plant properly. Course content will include: Nitrogen & Phosphorus in Wastewater; Chemistry Review; Biological Nitrification; Biological Denitrification; Process Variables; Nitrogen Removal Review; Chemical Precipitation of Phosphorus; and Enhanced Biological Phosphorus Removal.



**Please be respectful of the presenters and other attendees. Set your cell phone to vibrate or turn it off during conference training sessions, workshops and the Annual Business Meeting. If you see that you're receiving a call, please exit the training or meeting room to accept or return the call. Thank you!**

## Workshop Details

### Wednesday, 8:00am-11:30am – Wild Rose B

#### A Safety Committee Workshop

##### Introduction Locator Program

This course is PA DEP approved for **3.0 drinking water and wastewater contact hours**. Course ID 579.

*Moderator: Shane Edge, Whitpain Township*

*Instructor: Maria White, PA One Call System*

The program objectives explain the definitions and terminology used in the PA Act 287 of 1974, as amended; a description of a correct notification; an explanation of marking underground lines with the American Public Works Association (APWA) color code standards; and an illustration of how to respond through the Karl Automated Response to Locates (KARL) system.

### Wednesday, 8:00am-11:45am – Wild Rose A

#### A Biosolids Committee Workshop

##### Solids Handling & Disposal

This course is PA DEP approved for **3.5 wastewater contact hours**. Course ID 9165

*Moderator: Richard Valiga, Tully Environmental*

*Instructor: Charles Winslow, GHD; Chris Boyd, Charter Machine Co.; and Howard Butler, GHD*

The purpose of this course is to provide an overview of current trends in biosolids thickening, processing, dewatering, and disposal. The core topics will include thickening technologies, anaerobic digestion, aerobic digestion, and solids management planning. Dewatering strategies and technologies will also be discussed, as well as biosolids disposal and beneficial use opportunities.



# YOU NEED WATER. WATER NEEDS YOU.



## Y O U R   R E S P E C T

Your life and community is built on clean water and the infrastructure that supports it. It's so reliable that you might not give it—or the impact of your actions—a second thought.

RESPECT WATER BY TAKING THE TIME TO STOP, THINK, AND ACT.

### WATER'S WORTH IT.

To learn more, visit [www.WatersWorthit.org](http://www.WatersWorthit.org)

 **Water Environment  
Federation**  
the water quality people®

# **GAYLE Corporation – Malvern, PA**

**Environmental Equipment Sales & Service – Since 1984**

Phone (610) 296-0970 | Fax (610) 640-4599  
E-mail: [SALES@GAYLECORP.COM](mailto:SALES@GAYLECORP.COM)

**Factory Authorized Distributor for KSB Submersible, Non-Clog Sewage Pumps & Mixers**

**“Trusted Quality Worldwide Since 1871”**

- **KSB Submersible Sewage Pumps in stock for immediate delivery**
- **Numerous models available to meet a wide variety of design flows (GPM) & pressures (TDH)**
- **Different impeller designs for effective & reliable long-term solids handling**
- **Custom Alloy Options**
- **Specialists in large flow, high pressure & high horsepower pumping applications**

**Replace your existing Xylem Flygt pumps with KSB!**

- **Save money!**
- **KSB submersible pumps retrofit to existing Flygt guide rails with adapter claw**
- **Silicon Carbide mechanical seal faces for superior longevity before service**
- **“Potted” Cable Entry Seal for watertight isolation of the motor interior from moisture intrusion due to damaged submerged power / control cable**

**Representative & Distributor for UGSI Liquid & Dry Polymer Feed Systems**

**“Buy the Products with the Names You Know”**

- **Get local service from the application & field service polymer system experts at GAYLE Corporation!**
- **“POLYBLEND” & “DYNABLEND” liquid & dry polymer feed systems**
- **Complete controls including customized SCADA I/O**
- **Parts sales & knowledgeable field service**

**COSTARS PARTICIPANT & Small Business Enterprise**

**COSTARS™** 

 **Pennsylvania Department of General Services**



### **Wireless Internet Sponsor**

Greenman-Pedersen, Inc.

### **Badge Holder Sponsor**

Gannett Fleming

### **Conference Bag Sponsor**

Hazen and Sawyer

### **Raffle Prize Sponsor**

Miller Energy, Inc.

### **Community Service Project Sponsors**

#### **Gold Level:**

Herbert, Rowland & Grubic, Inc.

#### **Silver Level:**

CUES, Inc. & Mott MacDonald

### **Monday Lunch Sponsors**

HDR Engineering, Inc.

Kappe Associates, Inc.

Mobile Dredging & Video Pipe, Inc.

Tnemec/Epoxytec

### **President's Reception Sponsors**

Hazen and Sawyer

LB Water

Riordan Materials Corporation

### **Awards Ceremony Sponsors**

Barton & Loguidice

Hazen and Sawyer

### **Tailgate Dinner & Cornhole Tournament Sponsors**

#### **Platinum Level:**

Remington & Vernick Engineers

Wade Trim

#### **Gold Level:**

Arcadis US, Inc.

Bassett Engineering

KLH Engineers, Inc.

#### **Silver Level:**

Mott MacDonald

### **Tuesday Lunch Sponsors**

Tnemec/Epoxytec

Wade Trim

Whitman, Requardt & Associates, LLP

Xylem Dewatering

### **Women in Water Luncheon Sponsors**

ADS Environmental Services

HDR Engineering, Inc.

Renegade Solutions, LLC

Thaddeus Stevens College

### **Beer and Pretzels Reception Sponsors**

Anser Advisory

Bowen Engineering Corporation

Dutchland, Inc.

GA Industries a VAG Group Brand

Gannett Fleming

Gwin, Dobson & Foreman, Inc.

Herbert, Rowland & Grubic, Inc.

Industrial Furnace Company

KLH Engineers, Inc.

Remington & Vernick Engineers

Riordan Materials Corporation

Spiniello Companies

Stone Hill Contracting Co., Inc.

### **Operator Olympics Sponsors**

Entech Engineering, Inc.

Renegade Solutions, LLC

### **Golf Hole Sponsors**

D&B/Guarino Engineers

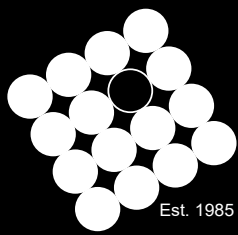
Evoqua Water Technologies

Mobile Dredging & Video Pipe, Inc.

Sanitaire, a Xylem brand

Spiniello Companies

Tnemec/Epoxytec



# LSSE

Civil Engineers and Surveyors



Interim Facility Pipe Manifold and Tanks  
Center Township

## *Headquarters:*

Coraopolis, Allegheny County, PA

## *Branch Offices:*

Greensburg, Westmoreland County, PA

Albion, Erie County, PA

Dublin, Franklin County, OH

Center Township, Beaver County, PA

412-264-4400 | [info@lsse.com](mailto:info@lsse.com)

Visit us at [www.lsse.com](http://www.lsse.com)

## Managing Principals:

Kevin A. Brett, P.E.

Ned Mitrovich, P.E.

Jason E. Stanton, P.E.



BTMA Water Tank  
Brighton Township

## Professional Services

### MUNICIPAL

- GIS/Mapping/Asset Management
- Grants Procurement and Administration
- Green Infrastructure
- Landscape Architecture
- Parks and Recreation
- Planning
- Roadway and Pavement
- Site Design
- Stormwater/MS4
- Surveying
- Water
- Wastewater
- Utilities

## Raffle Drawing Schedule

# Schedule for Conference Raffle Drawings in the Exhibit Hall

**You must be present to win.**

Guests and Exhibitor Representatives are not eligible for the raffle drawings.

### **Monday Lunch**

**12:30pm**

**\$200 Dick's Gift Card  
\$200 Home Depot Gift Card**

### **Monday Afternoon Break**

**3:30pm**

**Solo Tabletop Fire Pit**

### **Monday President's Reception**

**5:30pm**

**Designer Handbag  
\$200 Amazon Gift Card**

### **Tuesday Morning Break**

**10:15am**

**Mini Kegerator  
\$200 Amazon Gift Card**

### **Tuesday Lunch**

**12:30pm**

**\$200 Home Depot Gift Card  
\$200 Dick's Gift Card**

### **Tuesday Afternoon Break**

**3:30pm**

**Wine fridge with two bottles  
of Cardinal Hollow Wine**

### **Tuesday Beer & Pretzels Reception**

**5:15pm**

**Kegerator**



## Low Pressure Sewer Systems

With 97% of ZEP products being made in the USA with a majority of US content, ZEP is proud of our American heritage and US commitment.

The progressing cavity drop-in replacement units are available in 230 V (1 or 2 HP) and 208 V (2 HP only). The replacement units are designed to be compatible with other progressing cavity systems, using a round or rectangular EQD plug, and a gooseneck or flex hose discharge configuration. Zoeller's quality standards and an innovative design make for an easy replacement in existing systems with a reliable product.



zoellerengineered.com

BUILDING CUSTOMIZED PRODUCTS SINCE 1991

John P. Place, Inc.  
JPP  
water and wastewater  
P U M P S

90 Clairton Blvd, Pittsburgh PA  
15236  
Western Pennsylvania  
412.892.2000  
JPPSALES@johnplaceinc.com

G.T. Smith  
Associates, Inc.

South Jersey, Northern Delaware  
and Eastern Pennsylvania  
609-551-2438  
www.gtsmithpumps.com

# Technical Program Details

An extra five minutes has been added between each session to allow attendees time to move between Technical Program rooms, if they choose to do so.

## MONDAY MORNING

### 8:35-8:40pm – 5-Minute Vendor Presentations

Exhibiting vendors will make 5-minute presentations about their products or services prior to the half-day Technical Program.

#### Collection Systems – Reversing Grinder Pumps

Presented by Zoeller Engineered Products / G.T. Smith & Associates

#### Engineering & Construction – Funding in 5

Presented by Entech Engineering

#### Stormwater - New Technology in Coliform Detection

Presented by IDEXX Laboratories

## BIOSOLIDS PROGRAM

### Bioenergy Magnolia CD

*Moderators: Charles Winslow, GHD; and Richard Valiga, Tully Environmental*

### 8:40-9:10am – Digester Upgrade and Expansion for Cogeneration Coupling Membrane Gasholders Covers with Microturbine Generators

*Speakers: Britt Bassett, PE, Bassett Engineering, Inc.; and Michael Matechak, Lackawanna River Basin Sewer Authority*

Lackawanna River Basin Sewer Authority installed dual membrane gasholder covers on the anaerobic digesters at its Throop Wastewater Treatment Plant. This dramatically expanded gas storage and also increased sludge storage which in turn increased sludge detention time, VSS destruction, gas production, and electricity generation, which reduced operating costs.

### 9:45-10:15am – Morning Break in Exhibit Hall

### 9:15-9:45am – Maximizing the Value of Biosolids from THP at the Piscataway WRRF Bio-Energy Project

*Speaker: Joe Uglevich, Stantec*

The Washington Suburban Sanitary Commission (WSSC) is in the process of implementing a Bio-Energy project to thermally hydrolyze and anaerobically digest all biosolids from their five Water Resource Recovery Facilities (WRRFs). The WSSC bioenergy project is aimed at capturing the maximum value of the process without compromising the very real capital investment constraints.

### 10:15-10:45am – Biosolids Processing Alternatives Evaluation: Towamencin Municipal Authority Case Study

*Speakers: Trudy Johnston and Mikayla Regan, both with Material Matters, Inc.*

A biosolids planning study was completed for Towamencin Municipal Authority to identify and evaluate viable alternatives for biosolids processing and associated beneficial use options. Presentation will include results of technology alternatives evaluation, a comparison of energy efficiency and 20-yr costs for short-listed technologies: anaerobic digestion, composting, thermal drying, pyrolysis, and gasification.

### 10:50-11:20am – Thermal Processing Resiliency and Sustainability: Comparison of Pyrolysis, Gasification, and Incineration with Real-World Applications

*Speaker: Charles Winslow, PE, GHD*

This presentation examines the fundamental differences between biological and thermal oxidation, with a particular focus on the three most common thermal technologies - pyrolysis, gasification, and incineration. These technologies are compared in terms of end product quality, greenhouse gas emissions, fossil fuel demand, and bioenergy potential.

### 11:25-11:55am – Unattended Operation Using Unique Design Features & Remote-Monitoring and SCADA Optimizes Dryer Capacity and Performance for PFAS Pretreatment Prior to Pyrolysis/ Gasification or Volume Reduction

*Speaker: Rick Treleven, BCR Environmental*

Incorporating dryers into biosolids processing operations at wastewater-treatment facilities, for Class A & Volume reduction or Pretreatment to Pyrolysis or Gasification for PFAS destruction, must consider the coordination between existing operating schedules and processing rates as well as the balance between capacity and capital cost.

## COLLECTION SYSTEMS PROGRAM

### Collection System Maintenance and Rehabilitation Crystal A

*Moderators: Hyon Duk Shin, Gannett Fleming; and Jeff Cantwell, Flow Assessment Services*

### 8:40-9:10am – Town of Swampscott, MA, Stacy's Brook Comprehensive Sewer Rehabilitation – Lessons Learned from Lateral Renewal

*Speakers: John Rahill, EIT, and Cecilia Carrion-Carmona, both with Kleinfelder*

The Town of Swampscott, MA is completing a comprehensive sewer rehabilitation program to reduce concentrations of bacteria in the stormwater discharging at King's Beach. Kleinfelder's presentation will provide a discussion on the design approach and lessons learned regarding the design and construction of cured in placed pipe (CIPP) lateral lining.

### 9:15-9:45am – ACUA Ventnor Margate Emergency FM HDD Replacement

*Speakers: Michael E. Bisignani, PE, and David Woolley, EIT, both with GHD*

ACUA experienced multiple critical failures of its Ventnor Margate Forcemain which conveys raw sewage via a 24/30-inch pipeline from pumping stations to the ACUA WWTP. Due to the difficult alignment around Bader Air Field, under the bay, Atlantic City Expressway, Amtrak, and many environmentally sensitive areas HDD was utilized.

### 9:45-10:15am – Morning Break in Exhibit Hall

# Technical Program Details

## 10:15-10:45am – Providing Emergency Response and Funding Support to Replace Failing Sewer Infrastructure

*Speaker: Sean P. Riley, PE, HDR*

After sewer failure in a stream, a collaborative effort between HDR, the City of Steubenville, Ohio, and the Contractor was necessary to mitigate the situation quickly, efficiently, and within regulatory requirements. The importance of communication and proactive engagement of regulators and the importance of securing funding will be demonstrated.

## 10:50-11:20am – Stuck Between a Rock and a Hard Place – What to Do with Your Failing Infrastructure

*Speaker: Ashley Reed, PE, Greenman-Pedersen, Inc.*

Much of the sewer infrastructure within the Borough of Ellwood City was installed back in the early 1900's. The main interceptor line runs along a steep hillside above Connoquenessing Creek and is inaccessible and in disrepair. Learn how we overcame physical and regulatory obstacles to replace the failing interceptor.

## 11:25-11:55am – Clearing Up the FOG: Fats, Oils & Grease

*Speaker: Tori Morgan, LO, Entech Engineering, Inc.*

Several FOG Programs that Entech Engineering recently implemented varied in size and scope, specifically crafted to the needs of those clients. All started with a comprehensive understanding of the collection system, then followed six steps to create the FOG Program, resulting in enhanced system operations and improvement of the environment.

### ENGINEERING & CONSTRUCTION PROGRAM

#### Constructability Magnolia AB

*Moderators: Robert Dengler, Gannett Fleming; and Robert McIntyre, Stone Hill Contracting Co.*

## 8:40-9:10am – Investigative-Design-Build Keeps GLWA's Repair Projects Flowing

*Speakers: Brian Gombos, PE, Wade Trim; and Rob Johnson, PULLMAN*

The Great Lakes Water Authority (GLWA) is responsible for the operation and maintenance of the CSO facilities in its footprint. Understanding that the repair of these structures required a higher level of investigation, solution building and budget adherence, GLWA chose the Investigate-Design-Build Delivery system for a major repair of the CSO outfall structures.

## 9:15-9:45am – Creative Approaches to Successfully Managing Treatment System Upgrade Programs

*Speaker: Diane Altland, PE, Greenman-Pedersen, Inc.*

Proposed upgrades will improve the plant's effluent quality and increase the overall ADF capacity from 6.0 to 8.4 MGD. Challenges included maintaining plant operations and compliance during the 2-year construction which was overcome with construction sequencing and taking equipment offline during low flow periods.

## 9:45-10:15am – Morning Break in Exhibit Hall

## 10:15-10:45am – Facilitating Large Construction Projects by Advancing Strategic Utility Improvements

*Speaker: Mason Beck, PE, HDR Engineering*

As part DELCORA's deep tunnel wastewater program a utility staging project was developed to facilitate multiple parallel construction contracts and reduce future impacts to plant operations. This presentation will provide an overview of the utility improvements, including tapping and bypass of two existing large diameter wastewater forcemains.

## 10:50-11:20am – Modern Construction Inspection and Administration Tools

*Speaker: Brad Sick, PE, Larson Design Group*

Broad overview of various modern construction-phase tools, with an emphasis on general benefits and challenges, supported by examples across a variety of wastewater treatment and collection projects. Four general categories will be covered: cloud-based document management and data collection systems, photo and video collection, 3D modeling, and asset management.

## 11:25-11:55am – Keeping the Bugs Alive - Planning for ALCOSAN's Secondary Treatment Bypass

*Speakers: Meredith Welle, PE, HDR; Rucha Shah, Arcadis; and Jeff Argyros, ALCOSAN*

The ALCOSAN North End Project first secondary treatment shutdown that occurred in December 2022, the coordination with ALCOSAN operations and maintenance staff that occurred months ahead of time, and any lessons learned from the shutdown that will be important to carry into the subsequent secondary shutdowns.

### STORMWATER PROGRAM

#### Stormwater Management at the Site Level Wild Rose B

*Moderator: Beth Dutton, Pittsburgh Water and Sewer Authority*

## 8:40-9:10am – Mansfield Borough Pipe Arch Replacement Study

*Speaker: Steven Rowe, PE, Larson Design Group*

Larson Design provided an Engineering Study for replacement options for a 50-year-old pipe arch that is undersized and causing flooding within the Borough. The Study determined that the existing pipe arch can convey a 2-year storm event and options for a culvert that could handle the 100-year storm event were proposed.

## 9:15-9:45am – Construction Lessons Learned from an Innovative Stream Restoration

*Speakers: Shawn Fabian, CPESC, CPSWQ, Herbert, Rowland & Grubic, Inc.; and Monique Dykman, Londonderry Township*

Thorough investigative techniques during the permitting phase of a stream restoration can pay big dividends during construction. Learn why and hear creative techniques for storing, treating, and recycling large quantities of legacy sediment in this case study of the award-winning Conewago Creek Stream Restoration.

## 9:45-10:15am – Morning Break in Exhibit Hall

## Rescuing water from leachate

- High Recovery Rates
- Performance Guarantees
- Low Energy Requirement
- Treats for UVt Interference
- Long Membrane Life
- Simple Modular Design and Operation
- Removes Fluorinated Compounds from Leachate



**RESCUING WATER  
FROM LEACHATE**

www.rochemamericas.com

## Rescuing water from leachate

PFOS/PFAS				
Compound (ng/l)	Leachate	RO 1 Permeate	RO 2 Permeate	Rejection
Perfluorobutanesulfonic acid (PFBS)	280	<2	<1.9	>99.3%
Perfluorobutanoic acid (PFBA)	1100	5	<1.9	>99.8%
Perfluoroheptanoic acid (PFHpA)	480	<2	<1.9	>99.6%
Perfluorohexanesulfonic acid (PFHxS)	690	<2	<1.9	>99.7%
Perfluorohexanoic acid (PFHxA)	2100	7.8	<1.9	>99.9%
Perfluorooctanesulfonic acid (PFOS)	200	<2	<1.9	>99.1%
Perfluorooctanoic acid (PFOA)	820	2.5	<1.9	>99.8%
Perfluoropentanoic acid (PFPeA)	880	2.7	<1.9	>99.8%
Total	6550	18	0	>99.9%

UVt RESULTS	
Source	UVt
City Water	93%
POTW Effluent (No Leachate)	63-76%
POTW Effluent (With Leachate)	17.6%
Nanofiltration Permeate	2%
POTW Effluent w/10% Nanofiltration Permeate	46%
Leachate Reverse Osmosis Permeate	84%
POTW Effluent w/ 10% RO Permeate	78.5%
POTW Effluent w/ 25% RO Permeate	80.5%
POTW Effluent w/ 40% RO Permeate	81.1%

MERCURY REMOVAL				
October	(ng/l)	196	<0.5	99.74%
November	(ng/l)		<0.5	
December	(ng/l)		<0.5	
January	(ng/l)		<0.5	
February	(ng/l)		<0.5	



Bernie Rieder | 574-360-4535  
bernie@rochemamericas.com

## Technical Program Details

### 10:15-10:45am – Innovative Approaches for Improving Water Quality of Ponds and Creating Community Amenities

*Speakers: Daniel Wible, Susan Beck, Claire Maulhardt, and Angela Brackbill, all with Jacobs*

This presentation will discuss two innovative water quality/community amenity projects. In the City of Lancaster, PA, stormwater treatment wetlands are planned to help achieve the City's Chesapeake Bay Pollutant Reduction Plan. In Harrisburg, PA, Capital Region Water is retrofitting two historic community ponds using smart stormwater controls to optimize performance.

### 10:50-11:20am – Improved Acid Mine Drainage (AMD) Treatment Systems with Innovative Technically Advanced Equipment

*Speaker: Harley Schreiber, WesTech Engineering LLC*

Acid mine drainage (AMD) treatment plants are crucial in cleaning up contaminated waters across the coal mine regions. Process refinements improve system efficiency and reduce cost, as they enable AMD plants to control, manage, and reuse contaminated water streams while safely disposing of toxic wastewaters. This presentation focuses on AMD treatment plants and processes used.

### 11:25-11:55am – Weathering the Storm 2.0: Challenges to Stormwater Fees

*Speakers: E. Lee Stinnett, Esq, and Isaac P. Wakefield, Esq, both with Salzmann Hughes, P.C. Attorneys at Law*

Join us for an update of the evolving legal landscape of stormwater fees. Achieve an understanding of new Pennsylvania and national caselaw. Review critical elements of properly structured stormwater fees and receive information on how interested authorities may pursue setting up or amending their own program.

## UTILITY MANAGEMENT & GOVERNMENT AFFAIRS PROGRAM

### Managing Assets in the Digital Age Wild Rose A

*Moderators: Mark Pickering, GHD; and Maria White, PA One Call System*

### 8:40-9:10am – Security is Not Just Tech: Developing Effective Policy, Plans, and Procedures

*Speaker: Padraic Gray, PE, CISSP, CDM Smith*

Policy and planning take a backseat to technology in security planning, yet over 70% of the controls identified in the NIST Cybersecurity Framework pertain policy. This presentation illustrates an approach that utilities can apply to develop effective policies and plans.



### KB Series Biogas CHP Modules



Twin KB 100 Biogas CHP Modules Pictured above

**Kraft Energy Systems KB Series** Biogas Fueled CHP Modules put waste to work. Wastewater treatment facilities, dairy farms, dairy food producers and landfill sites rely on KB Series CHP Modules for environmental solutions that pay back.

Your choice of 7 pre-engineered indoor/outdoor models rated ( 60 - 550 kWe ) with packaged hot water recovery system or straight electrical power generation. Custom single unit solutions available up to 1.3MW or larger with multiple units in parallel.

Kraft Energy Systems CHP modules are sold and serviced by Kraft Power Corporation. Since 1965, Kraft has been a leader in servicing CHP systems as well as critical life safety and emergency power systems. With 7 full service locations, providing 24x7 response, Kraft is a power systems expert, who understands the urgency of keeping power generation assets on line.

**Contact Kraft Energy Systems today to learn more  
877-349-4184**

**CHP@kraftpower.com**

**www.kraftenergysystems.com**



## Technical Program Details

### 9:15-9:45am – Starting on the Road to Digital Transformation

*Speaker: Alton Whittle, GHD*

GHD's Aquanomics (water risk) model projects a total loss of \$3.7 trillion to US GDP by 2050. It is critical for utilities to accelerate their digital transformation by adopting agile processes and smart analytics to improve performance, customer satisfaction, mitigating environmental concerns, and adapting to a dramatically changing environment.

### 9:45-10:15am – Morning Break in Exhibit Hall

### 10:15-10:45am – A Data-Driven Approach to Increasing Compliance Margins

*Speaker: Kevin Flis, Xylem*

The audience will learn how leveraging a digital twin to evaluate treatment plant performance will enhance the capabilities of the operations staff and result in better compliance margins and reduced energy and chemical consumption.

### 10:50-11:20am – Lifecycle Management of Operations Technologies

*Speakers: Heather Heltzinger, Renegade Solutions, LLC; and William Teodecki, LO, Aqua America*

Disparate Operational Technology (OT) systems, such as SCADA, CCTV Systems, Power Generation, BAS, and LIMS, are comprised of components responsible for controlling and monitoring the

environment. Lifecycle management is critical to ensure the efficacy, security, and reliability of critical OT systems. Emerging Standards and Practices to be considered will be discussed.

### 11:25-11:55am – Improving Field Mobility & Digital Record Keeping with GIS

*Speaker: Kenneth A. de Groh III, PE, Suburban Consulting Engineers Inc.*

Utilizing GIS software saves time and money by collecting, accessing and sharing utility information in real time. This presentation will provide an overview of benefits of field-based digital web mapping, GIS-based inspection forms, utilization of dashboard views to summarize information and metrics and leveraging high accuracy GNSS to improve productivity.



**Please be respectful of the presenters and other attendees. Set your cell phone to vibrate or turn it off during conference training sessions, workshops and the Annual Business Meeting. If you see that you're receiving a call, please exit the training or meeting room to accept or return the call. Thank you!**



## WORLD'S FIRST WASTEWATER PUMPING SYSTEM WITH INTEGRATED INTELLIGENCE

This revolutionary system delivers optimal performance while reducing your total cost of ownership. It also offers unparalleled flexibility and simplicity on a whole new level. You might even say it thinks for itself. We invite you to enter a new era in wastewater pumping with Flygt Concertor.

**One powerful solution. Unlimited possibilities.**

**For more information visit Booth #115 or contact your local Xylem product sales professional.**

2330 Yellow Springs Rd  
Malvern, PA 19355  
**610-408-6500**

**NEW**  
**CONCERTOR™**  
PUMPING SYSTEM WITH  
**INTEGRATED INTELLIGENCE**

[www.xylem.com](http://www.xylem.com)

**xylem**  
Let's Solve Water

# ***END-TO-END WASTEWATER TREATMENT EXPERTISE***

Industrial Service Solutions is a single-source provider of wastewater treatment facility design, construction, maintenance, repair and overhaul services.

1 2 3 4 5

**Wastewater  
Collection and  
Transport**

**Wastewater  
Headworks  
Pump Station  
and Process  
Equipment**  
Municipal

**Wastewater  
Biological  
Aerobic  
Activated  
Sludge  
Treatment  
Processes**

**Wastewater  
Aerobic  
Sludge  
Holding and  
Transport and  
De-watering**

**Wastewater  
Effluent  
Disinfection  
Systems  
and Utility  
Recycle  
Systems**



**Industrial Service Solutions**

1095 Montour Industrial Park, West Industrial Boulevard, Coraopolis, PA 15108

(724) 695-5333 • (412) 610-5388 • ISS-NA.com

# Technical Program Details

## MONDAY AFTERNOON

### 12:55-1:00pm – 5-Minute Vendor Presentations

Exhibiting vendors will make 5-minute presentation about their products or services prior to the half-day Technical Programs.

#### **Biosolids – Improving Sludge Quality Before Digestion**

Presented by World Water Works / Kershner Environmental Technologies

#### **Collection Systems – Wet Well Aeration to Eliminate FOG and H2S**

Presented by Maryland Biochemical Company

#### **Engineering & Construction – One Call Applications Update**

Presented by PA One Call System

#### **Stormwater – New Technology in Coliform Detection**

Presented by IDEXX Laboratories

#### **Utility Management & Government Affairs – Funding in 5**

Presented by Entech Engineering

### BIOSOLIDS PROGRAM

#### **PFAS and Bioenergy Magnolia CD**

*Moderators: Charles Winslow, GHD; and Richard Valiga,  
Tully Environmental*

### 1:00-1:30pm – The Opportunity for WRRFs to Advance Regional GHG Reduction Goals

*Speaker: Jay Surti, PE, GHD*

GHG footprint reduction goals are driving cities and utilities to adopt a holistic resource recovery approach for organic waste streams typically disposed in landfills. Using case studies, the authors will share their experience and lessons learned assisting early North American adopters with implementation of organic resource recovery and co-digestion facilities.

### 1:35-2:05pm – PFAS Emissions Testing for Biosolids Pyrolysis and Incineration

*Speaker: DJ Wacker, Brown and Caldwell*

Findings from a recent literature review of thermal PFAS treatment in biosolids will be presented, as well as a review of studies led by the co-authors to evaluate the fate of PFAS in two incinerators and a pyrolysis facility. Objective: Provide a framework for assessing the effectiveness of destruction technologies.

### 2:10-2:40pm – Technology Demonstration and Cost Analysis for PFAS Destruction in Biosolids

*Speaker: Micah Blate, Hazen and Sawyer*

The EPA PFAS Innovative Technology Team identified pyrolysis and supercritical water oxidation for destroying PFAS. The presentation will highlight results from three projects: WRF #5107: Understanding Pyrolysis for PFAS Removal; Demonstration AirSCWO – 6 at Orange County Sanitation District in CA; and Minnesota Pollution Control Agency Analysis of Alternatives for PFAS Destruction.

### 2:40-3:40pm – Afternoon Break in Exhibit Hall

### 3:40-4:10pm – Using Recycled Glass in Reed Beds

*Speaker: Jason S. Coyle, LO, Spotts, Stevens and McCoy*

Four wastewater treatment facilities in Central Pennsylvania have taken an innovative approach to the construction of reed beds at their plants by using recycled glass instead of sand. These are some of the first cases of this in Pennsylvania and have opened a door for other plants across the nation.

### 4:15-4:45pm – Leaving It In the Dust – Full Scale Piloting of Dust Suppression Methods for Dried Biosolids

*Speaker: Megan Brown, PE, Jacobs*

A pilot test was completed to evaluate dust reduction by dust suppressant addition for dried biosolids. Dust suppressant was applied in an existing screw conveyor used for truck loading. This presentation will review complications encountered during testing, adaptations that were made to produce a partly promising result, and lessons learned.

### COLLECTION SYSTEMS PROGRAM

#### **Pump Station Rehabilitation Crystal A**

*Moderators: Alexandria King, Herbert, Rowland & Grubic, Inc.  
and Roger Lehman, Weston Solutions*

### 1:00-1:30pm – A Space Saving Approach to Pump Station Expansion

*Speaker: Gautam Patwardhan, PE, Remington & Vernick Engineers*

Wastewater Pump Station design is regularly limited by site or capital restraints. The site in this case study is bordered by high-pressure gas lines to the back, and wetlands or restricted land on all sides. This presentation discusses the design process of expanding the station's capacity without changing the footprint.

### 1:35-2:05pm – Pump Station Rehabilitation Leads to Long-Term Reliability Improvement and Preservation of Assets

*Speakers: Jeff Naumick, PE, Hazen and Sawyer; and  
Thomas LaRocco, PE, Cape May County MUA*

The Cape May Municipal Utilities Authority (CMCMUA) engaged in the rehabilitation of 13 wastewater pumping stages during off-peak seasons. Pump station inspection, design, and construction phase services included the bypass pumping of each station and the rehabilitation of the structural and mechanical features with the intent of restoring them to "like new" condition.

### 2:10-2:40pm – Evaluation of a Treatment Plant Pump Station for Improved Operations

*Speaker: Casey Cowan, PE, GHD*

Faced with aging equipment, the Niagara Falls Water Board had to determine what to do with their four 250 HP eddy current variable speed pumps at their WWTP to maintain system reliability.

### 2:40-3:40pm – Afternoon Break in Exhibit Hall



Our purpose is to help utilities, engineers and operators address challenges in moving, treating and recycling water.

We listen to our clients to understand their needs, we help them evaluate the alternatives, and using our expertise in process design, treatment, manufacturing, pumping, controls, integration, and operations, we help them to develop and implement the best solution to their pumping and treatment challenges- on time and on budget.

Our employee-owned company has been serving the new york-new jersey region since 1971 with one focus- our customers.

**That's our process.**

**Pumping Service, Inc.**  
201 Lincoln Blvd.  
Middlesex, NJ 08846  
(732) 469-4540 Main  
[info@pumpingservices.com](mailto:info@pumpingservices.com)  
[www.pumpingservices.com](http://www.pumpingservices.com)

---

**Employee Owned**

## Technical Program Details

### 3:40-4:45pm – Mobile Sessions in the Exhibit Hall

*Moderator: Jim Shelton, Arcadis*

The PWEA Collection Systems Committee is bringing a successful concept from the WEFTEC Conference and the WEF Collection Systems Specialty Conference to the PennTec Conference: Mobile Sessions in select exhibit booths. Moderators will lead small groups to the presentations. Attendees receive the same credit as if they were attending a classroom presentation. Presentations are educational, not sales pitches.

#### Meet near the PWEA Registration Desk at 3:25pm:

##### **Different Types of Wastewater Pumps**

Presented by Kelso

##### **Manhole Rehabilitation**

Presented by Utility Services Group

##### **Epoxy Liners and Coating**

Presented by Atlantic Coating Consultants

##### **Wastewater Impellers**

Presented by Municipal Maintenance Co

##### **Air in Force mains**

Presented by Envirep

### ENGINEERING & CONSTRUCTION PROGRAM

#### **Wastewater Treatment Design & Case Studies Magnolia AB**

*Moderators: Robert Dengler, Gannett Fleming; and  
Scott Armbrust, PA American Water Co.*

#### **1:00-1:30pm – Hiccups and Speed Bumps – Years One and Two Construction of a New 300 MGD Headworks in the City of Philadelphia**

*Speaker: Isaac Katz, PE, ENVSP, Whitman, Requardt & Associates, LLP*

Construction has begun on a Preliminary Treatment Building adding 300 MGD of wet weather capacity to the Philadelphia NEWPCP. A year and a half into a four-year project, where are we, how did we get here, and how do we see this project playing out?

#### **1:35-2:05pm – LTTJMSA Lake Carey WWTP & LPSS**

*Speaker: Steven Rowe, PE, Larson Design Group*

Lake Carey is a lake community that is located in Wyoming County, PA. All of the residential properties around the lake are served by failing on-lot disposal systems. LDG designed a conveyance system and new WWTP, and is currently overseeing the construction of these improvements.

#### **2:10-2:40pm – Enhancing Nitrification Stability with Chemically Enhanced Primary Treatment**

*Speaker: Benjamin Deatrich, PE, AECOM*

The City of Bethlehem's WWTP is implementing CEPT to improve primary settling performance and aid in the stability of nitrification to manage effluent NH<sub>3</sub> concentration by reducing organic loading to secondary treatment. Process design and bench testing to develop storage needs, metering pumps, and mixing devices will be presented.

### 2:40-3:40pm – Afternoon Break in Exhibit Hall

#### **3:40-4:10pm – Optimizing Biological Nitrogen Removal Within Existing Tankage at the Lancaster AWWTP**

*Speaker: Brian Lubenow, PE, PMP, CDM Smith*

The pure oxygen Lancaster AWWTP was upgraded to optimize the existing biological nutrient removal process to meet Total Nitrogen limits at flow of 26 MGD within existing tankage. Improvements included converting tankage to anoxic conditions, DO-based oxygen control, and structural repairs to reduce oxygen leakage.

#### **4:15-4:45pm – LOOP MBR: Cost-, Energy- and Space-Saving Cyclical Step Feed MBR Process with Uniquely High Denitrification Efficiency**

*Speaker: Larry Morris, Kubota Membrane USA Corporation*

This presentation describes a new MBR-based wastewater treatment process, LOOP MBR (Low Opex and OPTimized MBR), and reports the results of successful pilot studies where 90% nitrogen removal was achieved without post-denitrification. N-removal is achieved by the cyclical step feed system with a total realized 12Q recycle.

### STORMWATER PROGRAM

#### **Stormwater Management at the Regional Level Wild Rose B**

*Moderator: Nathan Walker, Gannett Fleming*

#### **1:00-1:30pm – Next Generation Stormwater Master Planning**

*Speaker: Andrew Anderson, PE, Hazen and Sawyer*

Recent history has demonstrated how rapidly and unexpectedly watershed conditions and priorities can change, which can quickly diminish the value of a conventional stormwater master plan. This presentation will provide examples of the range of tools and approaches available to municipalities to support next generation stormwater master planning efforts, while discerning the benefits and limitations of these tools.

#### **1:35-2:05pm – The Social and Economic Impacts of an Urban Flood Prone Watershed in Pittsburgh, PA and Nature Based Strategies for Flood Mitigation**

*Speakers: Tom Batrone, PE, CFM, HDR; and  
Lisa Brown, Watersheds of South Pittsburgh*

The Saw Mill Run watershed in Pittsburgh, PA is historically prone to dangerous flash flooding. As a result, significant disinvestment has occurred. This presentation will outline an approach for quantifying the economic and social impacts of persistent flooding and using this information for developing flood mitigation strategies.

#### **2:10-2:40pm – Blue and Green Infrastructure for Climate Resiliency: A New Orleans Case Study**

*Speaker: Bernadette Callahan, PE, Stantec Consulting Services Inc.*

Successful urban water management strategies that promote resilient and adaptive design require us to explore to a new norm of treating water as a resource instead of a nuisance or threat. This presentation highlights the importance of blue and green infrastructure with a New Orleans case study.

## Technical Program Details

### 2:40-3:40pm – Afternoon Break in Exhibit Hall

#### 3:40-4:10pm – Public Outreach Success for All

*Speaker: Barbara Arnold, Lower Allen Township*

Collaborating with school systems and other large properties in a municipality can increase understanding, improve community relations, and provide ongoing growing of BMPs for future generations.

#### 4:15-4:45pm – Pennsylvania State Water Plan Update

*Speaker: James Horton, PA DEP*

This interactive session will summarize the updated Pennsylvania State Water Plan. The Plan is intended to educate all Pennsylvanians on stewardship of our lakes, rivers, streams, and groundwater. DEP's Water Use and Planning Section developed the Plan in collaboration with more than 100 water resources professionals on six regional committees.

### UTILITY MANAGEMENT & GOVERNMENT AFFAIRS PROGRAM

#### Managing Risk in Today's Regulatory Environment Wild Rose A

*Moderators: Nicole Brown, Suburban Consulting Engineers; and Elizabeth Cheeseman, GHD*

#### 1:00-1:30pm – Extracting Actionable Findings from a Condition Assessment of Over 8,000 Assets

*Speakers: Benjamin Deatrich, AECOM; and Melanie Murphy, Philadelphia Water Department*

This presentation will review steps taken by the Philadelphia Water Department (PWD) to assess the conditions of over 8,000 vertical wastewater assets and discuss how PWD overcame the challenge of translating the collected data into an actionable replacement schedule for its wastewater treatment plants.

#### 1:35-2:05pm – Human Resources: Retention and Recruiting the 21st Century Worker

*Speaker: Heath Edelman, PE, LO, Thaddeus Stevens College of Technology*

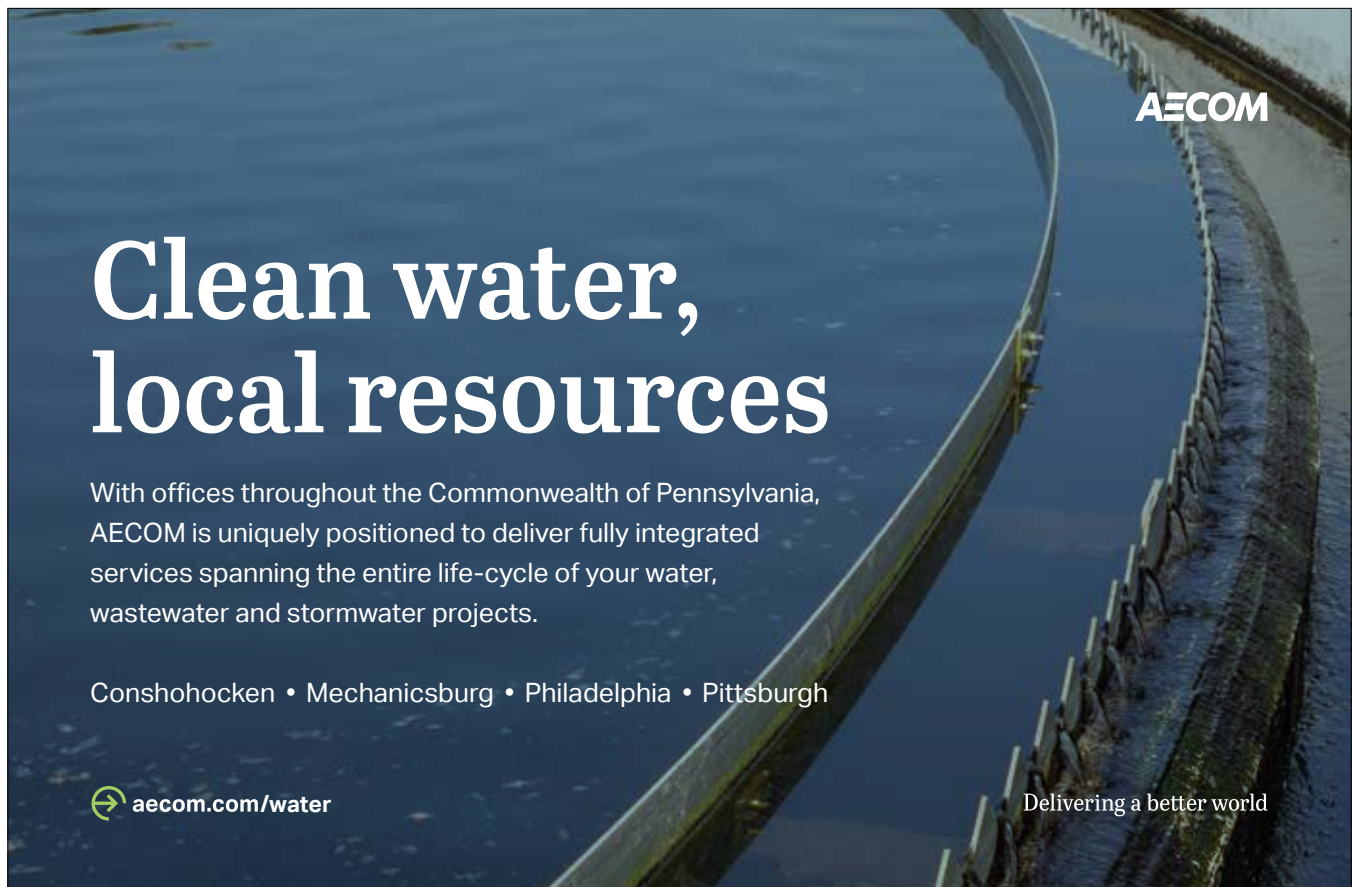
Water utilities are finding it increasingly difficult to recruit, hire, and retain talent in this post-COVID-19 labor market. This presentation will review current challenges including escalation of labor costs, legal concerns, ethics, and succession planning. Historical approaches to recruiting and hiring should be reimagined and workforce development merged with community outreach initiatives.

#### 2:10-2:40pm – Risk Management Perspectives Panel

*Panelists: Tom Spokas, Philadelphia Water Dept (Large Utility); Mike Kyle, Lancaster Area Sewer Authority (Medium Utility); and Jan Klotz, Mount Pocono Municipal Authority (Small Utility)*

Managers of large, medium, and small utilities will engage with the audience on how they manage fiscal and operational risks in today's world.

### 2:40-3:40am – Afternoon Break in Exhibit Hall




**AECOM**

# Clean water, local resources

With offices throughout the Commonwealth of Pennsylvania, AECOM is uniquely positioned to deliver fully integrated services spanning the entire life-cycle of your water, wastewater and stormwater projects.

Conshohocken • Mechanicsburg • Philadelphia • Pittsburgh

 [aecom.com/water](https://aecom.com/water)

Delivering a better world

## Technical Program Details

### 3:40-4:45pm – DEP Update

*Speaker: Jay Patel, PA Department of Environmental Protection*

DEP will present an update on various initiatives and ongoing changes to its regulations and policies that could affect you as an operator or manager of a utility.

### BIOSOLIDS PROGRAM

### 11:15-11:45am – Mobile Sessions in Exhibit Hall

*Moderator: Chris Boyd, Charter Machine Company*

The PWEA Biosolids Committee is bringing a successful concept done by the Collection Systems Committee for the past several years: Mobile Sessions in selected booths. Moderators will lead small groups to the presentations. Attendees receive the same credit as if they were attending a classroom presentation. Presentations will be educational, no sales pitches.

## TUESDAY MORNING

### 7:55-8:00am – 5-Minute Vendor Presentations

Exhibiting vendors will make 5-minute presentations about their products or services prior to the half-day Technical Programs.

#### Collection Systems – Making Structures Stronger and Last Longer

Presented by PULLMAN

#### Engineering & Construction – Improved Technology for Wastewater Treatment Plant Processes

Presented by Parkson Corporation / Kershner Environmental Technologies

#### Privatization – Privatization of Water & Wastewater Utilities – Pros and Cons

Presented by Remington & Vernick Engineers

### Meet near the PWEA Registration Desk at 3:25pm:

#### How Does a Centrifuge Work

Presented by Flottweg Separation Technology Inc.

#### Types of Dewatering Equipment Used in Industrial Applications

Presented by Mobile Dredging & Video Pipe Inc.

#### Description of Electroosmosis Dewatering

Presented by Charter Machine Company

# Bassett Engineering Inc.

1440 Broad Street - Montoursville, PA 17754 - (570) 368-2131 - [www.bassetteng.com](http://www.bassetteng.com)



Wastewater  
Renewable  
Natural Gas  
Water



Environmental Permitting



Nutrient  
Removal  
Industrial  
Leachate

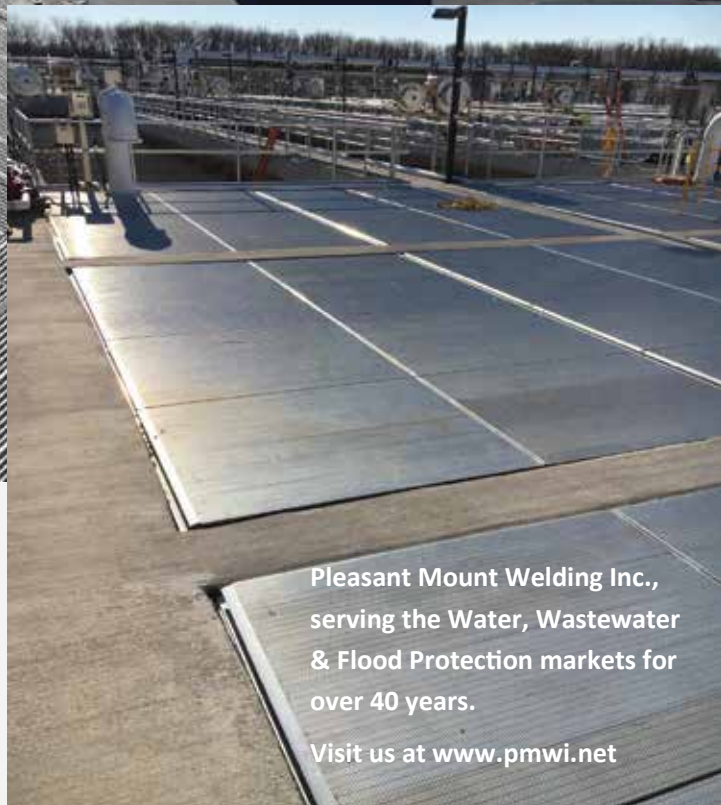


**INTRODUCING OUR STANDARD-DUTY  
ALUMINUM INTERLOCKING  
FLAT PANEL COVERS**

**PMWI**

**Pleasant Mount Welding, Inc.**

**WE'VE GOT YOU COVERED**



Pleasant Mount Welding Inc.,  
serving the Water, Wastewater  
& Flood Protection markets for  
over 40 years.

Visit us at [www.pmwi.net](http://www.pmwi.net)

*Digester Covers*

*Clarifier Covers*

*Sludge Holding  
Tank Covers*

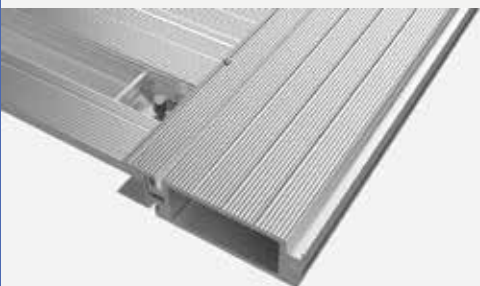
*Storage Vessel  
Covers*

*Laundry Covers*

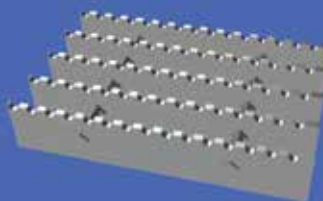
*Odor Control*

*Reservoir Tank  
Covers*

*Protection*



*Aluminum Covers and more .....*



*Aluminum Bar Grating*



*Aluminum Plank*



*Aluminum Ladders & Handrail*

**PMWI.NET**

# Technical Program Details

## COLLECTION SYSTEMS PROGRAM

### System Technologies Crystal A

Moderators: Elizabeth Cheeseman and Melissa Smith, both with GHD

#### 8:00-8:30am – Innovation vs. Risk: Using Artificial Intelligence Responsibly to Augment the Role of CCTV Operators in Wastewater Inspections

Speaker: Justin Starr, PhD, Community College of Allegheny County

Artificial Intelligence has been touted as a technology with the potential to replace CCTV operators. This positioning is unrealistic, as inspectors provide essential data about system health. Instead, we will show how AI deployed correctly – as a ‘decision support’ tool – can compensate for cognitive overload and augment rather than replace an inspector.

#### 8:35-9:05am – Assessing I&I Issues Using Intelligent Data Collection and Management Systems

Speaker: Ifeanyi Odigbo, PE, CFM, CPESC, Greenman-Pedersen, Inc.

Accurately identifying and assessing I&I and its impacts on collection systems and WWTPs has always been problematic. This paper presents Smartwater approaches and techniques you can use to characterize flows in your systems which will enhance assessment and mitigation efforts while reducing costs.

#### 9:10-9:40am – The Implementation of Artificial Intelligence for Optimizing Odor Control Chemical Dose Rates

Speaker: Calvin Horst, Evoqua Water Technologies

This presentation will demonstrate the successful use of artificial intelligence for the routine optimization of dosing odor control chemicals into a wastewater collection system. Included are the results of its implementation in two odor control applications, optimized weekly resulting in as good or better odor control without increasing chemical usage.

#### 9:40-10:40am – Morning Break in Exhibit Hall

#### 10:40-11:45am – Smart Panel

Panelists: Alton Whittle, GHD; George Sarapa, GPI; Claire Maulhardt, Capital Region Water; Calvin Horst, Evoqua Water Technologies; Kevin Flis, Xylem, and Justin Starr, Community College of Allegheny County

The advancement of Smart Technologies to function as a tool to assist in the operation and management of collection systems has progressed significantly in recent years. Please join us for a discussion with industry experts to discuss the current and future state of Smart Technologies and applications.



Please be respectful of the presenters and other attendees. Set your cell phone to vibrate or turn it off during conference training sessions, workshops and the Annual Business Meeting. If you see that you're receiving a call, please exit the training or meeting room to accept or return the call. Thank you!

## ENGINEERING & CONSTRUCTION PROGRAM

### PFAS and Wastewater Magnolia AB

Moderators: Jeremiah Stratton, Bowen Engineering Corp; and Scott Armbrust, PA American Water Co.

#### 8:00-8:30am – Designing a PFAS Removal System – More Than Just Carbon

Speaker: Mark A. Hubal, PE, BCEE, Remington & Vernick Engineers

Per- and polyfluoroalkyl substances (PFAS) are a high-priority concern in the water/wastewater sectors. There are thousands of PFAS compounds; several are already regulated by certain states. EPA will soon be promulgating regulations - utilities should prepare to design treatment. This presentation will review different treatments and issues/constraints associated with each.

#### 8:35-9:05am – PFAS in Wastewater: Promising Management and Treatment Strategies

Speaker: Jay Surti, PE, GHD

Using case studies, this presentation will provide regulatory updates, steps wastewater utilities can take to evaluate and mitigate PFAS risks through promising management strategies such as source control, adaptive planning, implementing treatment (separation and destruction) to address PFAS challenges, and disposal approaches for PFAS laden treatment media.

#### 9:10-9:40am – PFAS Treatment Design 102: Beyond the Basics

Speakers: Jon Reuther, PE, and Kyle Hay, PE, both with Brown and Caldwell

It's important for utilities to keep abreast of the rapidly changing PFAS treatment industry to appropriately respond to potential challenges. Utilities and consultants will benefit from this presentation which will move beyond design basics and shine a light on some of the unique challenges associated with PFAS treatment in drinking water.

#### 9:40-10:40am – Morning Break in Exhibit Hall

#### 10:40-11:10am – A Multi-Pronged Approach for Managing PFAS in Water Resource Reclamation Facilities

Speakers: Mohammad Abu-Orf and Micah Blate, both with Hazen and Sawyer

PFAS are ubiquitous, mobile, persistent, and can be cycled within the WRRF and be present in the effluent and biosolids. This presentation will provide insights into how two WRRFs are utilizing a combination source control, and terminal liquids and biosolids treatment technologies to address PFAS.

#### 11:15-11:45am – PFAS Considerations for Wastewater Professionals

Speaker: Kevin W. Custer, PhD, Pace Analytical Services, LLC

In this session you will learn about PFAS sources and receivers for wastewater systems, selecting the applicable test methods, field sampling considerations, and a regulatory update at the federal and state levels.

# CREATING A BETTER WATER ENVIRONMENT, **TOGETHER.**

Treatment Facilities  
Pipelines  
Pump Stations  
Stormwater  
Infrastructure Financing  
Construction Services



Greater Hazleton Joint Sewer Authority Treatment Plant  
Hazleton, Pa.

Eight Pennsylvania Offices  
610.650.8101  
[gannettfleming.com](http://gannettfleming.com)



# Technical Program Details

## INDUSTRIAL WASTE PRETREATMENT PROGRAM

### Magnolia CD

*Moderators: Jenna Bishop and Dave Schlott, Jr.,  
both with ARRO Consulting, Inc.*

#### 8:00-8:30am – PFAS Removal? Problem Solved

*Speaker: Mike Cecil, DBIA, Cecil Consulting, LLC*

The first-of-its-kind patented system for PFAS removal! This is the latest buzzword in the industry, and you will learn all about groundbreaking technology that is proven and currently going through extensive pilot testing. A case study on the city of Summerville, Georgia. It is intriguing.

#### 8:35-9:05am – Sampling 101

*Speaker: Brad Griffiths, M.J. Reider Associates*

To obtain representative and legally defensible sampling results, it is necessary to follow specific protocols that are standard practice in the industry. This session will cover the basics of industrial user sampling, including sample types, field parameters, equipment maintenance, chain of custody, sample preservation and hold times, etc.

#### 9:10-9:40am – Degreasing the Pipes: Effectively Processing FOG at the Central WPCF

*Speaker: Kelly Baxter, PE, Mott MacDonald*

The Ocean County Utility Authority is looking to improve handling of fats, oils, and grease (FOG) at its Central Water Pollution Control Facility. This presentation details challenges and engineered solutions associated with bulk FOG conveyance and storage. Learn also how OCUA plans to beneficially use FOG.

#### 9:40-10:40am – Morning Break in Exhibit Hall

#### 10:40-11:10am – Most-Open-Valve Automation Automated Solutions for Optimizing Aeration Blowers Using VFDs & Advanced Controls

*Speaker: Bob Kisler, Hoffman & Lamson*

A successful control system design must integrate the process requirements at the basins, the distribution of air flow between basins, and control of the blowers providing the air flow. A variety of parameters must be incorporated into the control logic for each portion of the process.

#### 11:15-11:45am – Elements of an Industrial User Permit

*Speaker: Jenna Bishop, ARRO Consulting, Inc.*

This presentation reviews the requirements of an industrial user permit required for all industrial users that are part of the industrial pretreatment program as required by 40 CFR Part 403.

## PRIVATIZATION PROGRAM

### Empire A

*Moderator: Michael Kyle, Lancaster Area Sewer Authority*

#### 8:00-9:40am – Privatization Issues for Water and Wastewater Authorities in Pennsylvania, Part 1

*Speaker: Steven A. Hann, Esq, Hamburg, Rubin, Mullin,  
Maxwell & Lupin*

This presentation will cover the background of privatization. Privatization is a misunderstood phenomenon occurring with our water utilities. While there are certainly cases where a private utility is more beneficial to a community than a public one, and vice-versa, communities need to prepare and educate themselves to make informed decisions for their community now and in the future. An informed decision should be made based on the right information and data. This presentation will cover the background of privatization, the *Municipality Authorities Act*, Act 12 of 2016, the Public Utility Commission, resources for Municipal Authorities regarding private party acquisitions, the value of a Municipal Authority to the community and recent examples of privatization.

#### 9:40-10:40am – Morning Break in Exhibit Hall

#### 10:40-11:10am – Privatization Issues for Water and Wastewater Authorities in Pennsylvania, Part 2

*Speaker: Steven A. Hann, Esq, Hamburg, Rubin, Mullin,  
Maxwell & Lupin*

This is a continuation of the earlier presentation.  
See description for Part 1.

#### 11:15-11:45am – Our Negotiation with Privatization: The Financial Analysis

*Speaker: John Larson, Norristown Sewer Treatment Plant*

The Norristown Sewer Authority operates the sewer system for Norristown, PA. The Municipality of Norristown and the Authority experienced full exposure to selling their assets to a private organization. This presentation will examine the financial analysis and politics that drove the final outcome.

## PROFESSIONAL OPERATORS PROGRAM

### Wild Rose B

*Moderator: Dennis Duryea, Kiski Valley Water  
Pollution Control Authority*

#### 8:00-8:30am – Will It Fit? Using 3D Laser Scanning Technology to Integrate New Infrastructure into Existing Facilities

*Speakers: Dan Goodwin, PE and Neil Wakeman,  
both with Wade Trim, Inc.*

Recently our industry has been challenged to retrofit new projects into existing infrastructure. Reality capture is a technological advancement that allows digital capture of existing facilities that can be transformed into a 3D model for use in design, allowing for new facilities to be designed in and around existing infrastructure.

## Technical Program Details

### 8:35-9:05am – Facility Planning for Nutrient Removal Using Proactive Testing of Innovative Technologies

*Speaker: Sean McKelvey, PE, Philadelphia Water Department*

The Philadelphia Water Department (PWD) has explored different innovative nutrient management technologies to meet pending effluent ammonia and TN limits. This presentation will cover desktop, bench, and ongoing pilot studies for evaluating an innovative nutrient management technology called the Nuvoda mobile organic biofilm (MOBTM).

### 9:10-9:40am – FlexRake IQ® Screens Increase Safety, Decrease Costs and Minimize Risk in Crookston, MN

*Speaker: Steve Macomber, Duperon Corporation*

The City of Crookston, Minnesota, needed an efficient and capable tool to remove problem contaminants including rocks, sand, and flushable wipes from its sewage. To eliminate the dangerous and expensive problem, the city turned to Duperon's FlexRake IQ® screen.

### 9:40-10:40am – Morning Break in Exhibit Hall

### 10:40-11:45am – Advanced Biological Nutrient Removal

*Speaker: Dennis J. Barnes, PE, Xylem, Inc.*

Traditionally, Biological Nutrient Removal was based on nitrification in aerobic zones, denitrification in non-aerated anoxic zones, and non-aerated anaerobic zones to enhance biological phosphorus removal. In recent years, other pathways to achieve BNR have been demonstrated. The benefits of using these pathways to achieve BNR will be discussed.

## UTILITY MANAGEMENT & GOVERNMENT AFFAIRS PROGRAM

### Project Planning and Financing Wild Rose A

*Moderators: Peggy Miller, RETTEW;  
and Maria White, PA One Call Systems*

### 8:00-8:30am – Act 537 Sewage Facilities Planning from a Utility Management Perspective

*Speaker: William L. Bohner, Jr., PE, ARRO Consulting, Inc.*

This presentation will look beyond Act 537 Sewage Facilities Planning as the municipal and regulatory exercise to plan for future wastewater needs. It will provide an overview of how to plan operationally to be ready for future wastewater flows related to potential upgrade to collection, conveyance, and treatment systems.

### 8:35-9:05am – Accelerate Your Project(s) by Utilizing the Technical Assistance Program to Increase Access to IIJA Funding

*Speaker: Quay Schappell, Larson Design Group*

Want to get your project ready to ensure you maximize the opportunity to receive Infrastructure Investment and Jobs Act (IIJA) funding? Learn about the no-cost program to assist in preparing and submitting a complete funding application for eligible capital improvement projects.

### 9:10-9:40am – Don't Flush Your Savings:

#### Cost Effective Energy Conservation for Your Plant

*Speakers: Ben Pressman, PE, Spotts, Stevens and McCoy; and Heather Cowley, PA DEP*

Explore cost-effective energy conservation opportunities common to many plants, increasing challenges of balancing water and air quality regulations with energy and climate concerns to minimize overall negative impacts, and insight from DEP on the department's sustainability goals and plans to assist municipalities in reaching their goals.

### 9:40-10:40am – Morning Break in Exhibit Hall

### 10:40-11:10am – Developing Projects with Complex Planning and Permitting Requirements; When It Makes Sense to Separate Projects to Meet Compliance Deadlines

*Speakers: Josiah D. Bair, PE and Elizabeth Cheeseman, both with GHD, Inc.*

What started out as an inflow and infiltration removal project to meet consent order compliance became a review of end-of-service-life of the force main, determination of future capacity of the trunk line, and evaluation of construction alternatives to reduce forested wetland impacts. The presentation will discuss associated planning, permitting, decisions, and impacts.

### 11:15-11:45am – Developing Projects with Complex Planning and Permitting Requirements; When It Makes Sense to Separate Projects to Meet Compliance Deadlines

*Speaker: Tesra Schlupp, PENNVEST*

PENNVEST funding options – traditional, new and innovative ways to fund projects as well as Federal Infrastructure Bill funding information. PENNVEST services the communities and citizens of Pennsylvania by funding sewer, storm water, non-point source and drinking water improvement projects. The primary focus of the presentation will be on PENNVEST funding opportunities.

## TUESDAY AFTERNOON

### 12:55-1:00pm – 5-Minute Vendor Presentations

Exhibiting vendors will 5-minute presentations about their products or services prior to the half-day Technical Programs.

#### Collection Systems – Manhole and Pump Station Rehabilitation

Presented by Advanced Rehabilitation Technology

#### Engineering & Construction – Dutchland Precast Concrete Tank Solutions

Presented by Dutchland

#### Industrial Waste Pretreatment – How to Have a Successful Multi-jurisdictional Pretreatment Program

Presented by Remington & Vernick Engineers

#### Professional Operators – Benefits of Oxygen & Ozone for H2S Removal in Collection Systems

Presented by Anue/Kershner Environmental Technologies

# MUNICIPAL MAINTENANCE CO.

1352 Taylors Lane  
Cinnaminson, NJ 08077

(856) 786-9434  
[www.mmc-nj.com](http://www.mmc-nj.com)

## Water and Wastewater Equipment Specialists

- Pump and Rotating Equipment Repairs
  - Electrical and Control Systems
    - Equipment Installations
    - General Mechanical Work
    - 24/7 Emergency Services
  - Machining and Fabrication Services

MMC is proud to be a Manufacturer's  
Representative of the following companies:



Contact our team of sales engineers at [equipmentsales@mmc-nj.com](mailto:equipmentsales@mmc-nj.com)

# COSTARS™

Pennsylvania Department of General Services

# Technical Program Details

## COLLECTION SYSTEMS PROGRAM

### Wet Weather Flows

#### Crystal A

*Moderators: Alexandra King, Herbert, Rowland & Grubic; and Lucas Chapman, Flow Assessment Services*

### 1:00-1:30pm – Regional Combined Sewer Separation – Challenges & Lessons Learned

*Speakers: Stephanie Cuthbert, PE, CME, and Christopher McCormick, both with Remington & Vernick Engineers*

Combined Sewer Systems have established their respective Long Term Control Plans and the evaluation of alternatives to control combined sewer overflows. For three Combined System Owners, the regional separation of their systems is underway. The presentation will review lessons learned from a technical and construction perspective and government collaboration effort.

### 1:35-2:05pm – Storm Event Analysis for Active Control Structures

*Speakers: Philip Pickering, PE, Philadelphia Water Department; and Eddie Speer, PE, PMP, Stantec Inc.*

Engineers at the Philadelphia Water Department analyze storm event data collected by remote sensors using spreadsheet templates as a powerful tool for monitoring the health of the collection system. Their focus is on active gate controls used to direct flows and minimize combined sewer overflows.

### 2:10-2:40pm – Hydraulic Modeling, Can It Be More than Steady State Snapshots?

*Speaker: Matt Crow, PE, Hazen and Sawyer*

This presentation will provide a defined approach to assessing the impacts of treatment facilities upgrades as well as wet-weather flow, utilizing calibrated dynamic hydraulic model. A series of PA case studies will be shared as practical application of this approach.

### 2:40-3:40pm – Afternoon Break in Exhibit Hall

### 3:40-4:45pm – Collection Systems Quizzo

*Moderators: Jim Shelton, Arcadis; and Cheryl Paulin, ADS Environmental*

The Collection Systems Quizzo will feature multiple short presentations with fun quizzes to test your knowledge led by industry experts.

#### How to Calculate the Slope of a Pipe

Presented by Vanessa Nedrick, Remington & Vernick

#### How to Calculate the Capacity of a Gravity Pipe

Presented by Steve Gibson, Gwin, Dobson & Foreman

#### Selecting CSO Storage vs. Treatment

Presented by Ed Zalewski, Sherwood Logan

#### How to Read a Pump Curve

Presented by Dan Hennessy, Municipal Maintenance Co

#### Manhole Inspections Using 3D Cameras

Presented by Shawn Downey, Larson Design Group



## Designing Solutions that Strengthen Communities



HRG is a proud supporter of the PennTec Conference.

[www.hrg-inc.com](http://www.hrg-inc.com)

# Technical Program Details

## ENGINEERING & CONSTRUCTION PROGRAM

### Wastewater Process and Technology

#### Magnolia AB

Moderators: Robert Dengler, Gannett Fleming; and  
Matt Chisnell, Capital Region Water

#### 1:00-1:30pm – A Comprehensive Approach to Utilizing Embedded Carbon Maximizes Bio-P and Aeration Efficiency

Speaker: Tyler Kunz, PE, EnviroMix

A demonstration at a 5.5 MGD water reclamation facility modified existing infrastructure to add an adaptive process reactor and inline fermentation using compressed gas mixing. This approach improves management of the carbon that enters the facility. Results will be shared demonstrating improved nutrient removal, chemical reduction and energy savings.

#### 1:35-2:05pm – Using Siphon to Reduce Cost and Simplify MBR Operations

Speakers: Joel Kostelac, PE BCEE; and Thor Young, both with GHD

Most membrane bioreactors (MBRs) use pumps to draw permeate through the membranes. However, with sufficient downstream head, a siphon or partial siphon can be used to draw permeate through the membranes by gravity, thus saving energy. This paper explores siphon design, operation, and multiple case studies to highlight its benefits.

#### 2:10-2:40pm – Utilization and Practical Approach of Ammonia-Based Aeration Control (ABAC) at Bonnybrook Wastewater Treatment Plant, Canada

Speaker: Danelle Bishoff, MASC, EIT, Stantec Consulting Ltd.

Ammonia-based aeration control (ABAC) can provide energy savings with the aim of maintaining partial nitrification in the system. Two strategies for ABAC in a full-scale system and BioWin® were reviewed: feedforward-feedback based on (i) cascading DO setpoints dependent on ammonia load; and, (ii) modified DO setpoints based on microbial kinetics.

#### 2:40-3:40pm – Afternoon Break in Exhibit Hall

#### 3:40-4:10pm – Shining a Light on UV Disinfection Facility Design

Speaker: Andrew D. Crew, Gannett Fleming; and  
Richard Dudek, PA American Water Co.

Ultra-violet (UV) disinfection has gained popularity in wastewater treatment. Gannett Fleming recently designed a 60 MGD UV system for an existing facility. Design challenges included treating landfill leachate, providing back-up disinfection, reducing algal growth and maintaining residual dissolved oxygen. This presentation will discuss preliminary engineering through construction and lessons learned.

#### 4:15-4:45pm – Wet Weather Compliance and ALCOSAN'S CSO Bypass and Disinfection Project

Speakers: Joel Kostelac, PE BCEE, GHD; and Jeff Argyros, ALCOSAN

As part of their ongoing wet weather compliance program, the Allegheny County Sanitary Authority (ALCOSAN) continues their major plant expansion and upgrade projects. This presentation focuses on the design of the project at the heart of the facility, which will provide primary effluent bypass and disinfection to nearly 300 MGD.

## INDUSTRIAL WASTE PRETREATMENT PROGRAM

### Magnolia CD

Moderators: Jenna Bishop and Dave Schlott, Jr.,  
both with ARRO Consulting, Inc.

#### 1:00-1:30pm – Brewery Wastes and Impact on Wastewater

Speaker: Natalie O'Connor, Entech Engineering, Inc.

Microbreweries are popping up in communities across the state. These breweries can grow rapidly, increasing the wastes generated and the impact on wastewater. This session will present information on brewery wastes, opportunities for recycling in lieu of discharge with wastewater, and possibilities for reduction in organic loading with the wastewater discharged to a POTW.

#### 1:35-2:05pm – Industrial User Inspections

Speaker: H. David Miller, Entech Engineering, Inc.

In accordance with the Industrial Pretreatment regulations, all Significant Industrial Users (SIUs) must be inspected at least annually. This session will cover the steps for conducting an inspection of an SIU, including Pre-Inspection Conference, Review of Records, Facility Walk-Through, Wastewater Sample Collection, Facility and Pretreatment System Photos, Employee Interviews, and Closing Conference.

## STRUCTURE. & INTEGRITY.

### PITTSBURGH TANK & TOWER GROUP

An ESOP Company

Since 1919

"100 years and still climbing"

**CREWS  
AVAILABLE  
GLOBALLY**



[WWW.PTTG.COM](http://WWW.PTTG.COM)



#### INSPECTIONS REPAIR TANKS



Wet  
Dry  
ROV

In-Service  
Cleaning

Code  
Updates  
Paint  
Insulation

Elevated  
Ground  
Relocation  
Erection  
Dismantles

**NEW TANKS** – Rick DiZinno  
(270) 826-9000 ext. 2601

**EXISTING TANKS** – Jordan Pyles  
(270) 826-9000 ext. 4601



[www.procoproducts.com](http://www.procoproducts.com)

# PROFLEX™ CHECK VALVES

ENGINEERED  
COMPONENTS FOR  
WATER MANAGEMENT  
SYSTEMS



Represented Locally By:



[www.valvetechsales.com](http://www.valvetechsales.com)

PH: 610-746-6406

# Technical Program Details

## 2:10-2:40pm – A Sustainable Real-World Approach to Removing PFAS from Contaminated Water Sources

Speaker: George Federico, Theia, LLC

This presentation explores the application of dry media for treating PFAS contaminated water. We provide data and comparative performance of different medias as well as hurdles these different water sources present and the solutions to overcoming them. We touch on exciting new destruction technologies for dealing with spent treatment media.

## 2:40-3:40pm – Afternoon Break in Exhibit Hall

## 3:40-4:10pm – Reducing Bakery Wastewater FOG - A Case Study

Speakers: Kara Humes and Dale Miller, both with Entech Engineering, Inc.

Large commercial bakeries can be a significant source of fats, oils and grease (FOG). This session will include a case study of a sweet goods manufacturing industry and the method used to reduce FOG and total suspended solids in the wastewater effluent discharged to a POTW.

## 4:15-4:45pm – Wastewater: A Reflection of Society – The Impact of PFAS on Water Reclamation Facilities

Speaker: Jane Madden, PE, BCEE, CDM Smith

PFAS fast are becoming part of the vernacular of water/wastewater utilities, and their impact on the cost to operate can be astounding. Research to date on the occurrence and fate and transport of PFAS through WRRFs, current regulations, and means to help Pennsylvania prepare for future regulations will be presented.

### LABORATORY PRACTICES PROGRAM

#### Empire D

Moderator: Curtis Huey, Borough of Mechanicsburg

## 1:00-2:00pm – Q&A Roundtable with PA DEP Bureau of Laboratories

Presenter: Annmarie Beach, Chief of the Laboratory Accreditation Program

Join this roundtable discussion to talk about your questions regarding the Laboratory Accreditation Program, future changes to the program, audits, and other related topics.

### PRIVATIZATION PROGRAM

#### Empire A

Moderator: Autumn Crawford, Western Butler County Authority

## 1:00-1:30pm – Best Practices of Effectively Managed Utilities – Private and Public

Speaker: Michael Kyle, Lancaster Area Sewer Authority

The presenter will discuss how to implement and maintain asset management for proactive success. An update on SB 597 will be included.

## 1:35-2:05pm – Effective Educating – Stakeholder and Community Outreach

Speaker: Jason Dailey, Dailey Operation Consulting, LLC

The presenter will discuss effective communication and education of stakeholders, key decision makers, and the community on privatization.

## 2:10-2:40pm – Why We Offer Privatization: A Brief Talk from Aqua PA

Speaker: Todd Duerr, Aqua PA

The passage in 2016 of Act 12 allowed water and wastewater utilities to offer their assets for sale at fair market value. Several utilities in Pennsylvania have sold their systems to Aqua PA. This presentation will offer insight from Aqua PA.

## 2:40-3:40pm – Afternoon Break in Exhibit Hall

## 3:40-4:10pm – Downingtown Area Regional Authority – Alternatives to Privatization

Speaker: Herbert Mays, Downingtown Area Regional Authority

Downingtown Area Regional Authority (DARA) has practiced a hybrid of public/private since the late 1980s. The presenter will discuss the benefits, including being able to maintain ownership of assets.

## 4:15-4:45pm – Financial Solvency for Authorities Before and During Privatization

Speakers: Adrienne Vicari and Bruce Hulshizer, both with Herbert, Rowland & Grubic, Inc.

Strategies for financial solvency whether privatization is on the table or not will be discussed.

### PROFESSIONAL OPERATORS PROGRAM

#### Wild Rose B

Moderator: Dennis Duryea, Kiski Valley Water Pollution Control Authority

## 1:00-1:30pm – The First Full-Scale Sidestream Treatment on the West Coast using the Microvi MNE Nitrogen Removal Technology

Speaker: Jacob Metch, Microvi

Sidestream treatment is an attractive mechanism for managing nutrient discharge loads. Oro Loma Sanitary District implemented Microvi's MNE technology to manage nutrients from their 20 MGD facility in the San Francisco Bay Area. This presentation details the results of the first years' operation of the MNE technology at Oro Loma.

## 1:35-2:05pm – Polymer/Flocculant 101 – Fundamentals of Thickening and Dewatering

Speaker: Patrick Gallagher, PhD, UGSI Solutions, Inc.

This presentation illustrates how to optimize polymer performance by understanding many factors that affect the quality of polymer solution such as polymer chemistry, handling, water, mixing profile, and aging. Laboratory testing and field evaluations at municipal wastewater treatment plants confirmed that well-designed polymer systems could improve dewatering process significantly.

## 2:10-2:40pm – Case Studies of True Batch Sequencing Batch Reactor Systems Designed for Nutrient Removal

Speaker: Thea Davis, Aqua-Aerobic Systems, Inc.

This presentation will cover the true batch version of the SBR Technology and highlight operation of several plants in Pennsylvania and surrounding states. An SBR system operates in a time management approach allowing for modifications to the environment to meet stringent effluent, including total nitrogen and total phosphorus.

## Technical Program Details

### 2:40-3:40pm – Afternoon Break in Exhibit Hall

#### 3:40-4:10pm – S2EBPR Operation at the Upper Montgomery Joint Authority WRRF Achieves Consistent, Reliable and Cost-Effective Phosphorus Removal

*Speakers: Paul Dombrowski, PE, BCEE, F.WEF, and Anthony Elberti, both with Woodard & Curran; and Jason DiPietro, Upper Montgomery Joint Authority*

The Upper Montgomery Joint Authority completed a significant upgrade of their trickling filter/solid contact process to full biological nutrient removal activated sludge in 2019. The presentation will describe the project and focus on startup and operation of the facility, especially the sidestream enhanced biological phosphorus removal (S2EBPR) system that has proven very effective at removing phosphorus.

#### 4:15-4:45pm – Zero2Waste® Gravity Filter Systems – Water... Every Drop Counts!

*Speaker: Mark Romers, ITAC*

This presentation showcases the results and conclusions for a backwash optimization pilot study at a large gravity filter water plant in the Atlanta Georgia area and a large water plant in south Texas whose water source is the Rio Grande River where they reduced their backwash water consumption substantially.

### STUDENT RESEARCH PROGRAM & POSTER CONTEST

#### Wild Rose A

*Moderator: Holly Frederick, Wilkes University*

#### 1:00-4:45pm

The Research Program showcases the ongoing research activities of students (graduate and undergraduate) in the fields of wastewater, water quality, and environmental management relevant to Pennsylvania. Oral presentations and poster presentations will be made by the students. See page 65 for list of presentations.

## WEDNESDAY MORNING

### ENGINEERING & CONSTRUCTION PROGRAM

#### WWTP Process and Solids Handling Magnolia AB

*Moderators: Robert Dengler, Gannett Fleming; and Qian Zhang, GHD*

#### 8:00-8:30am – Troubleshooting Start-Up of Dewatering Screw Presses

*Speakers: Jeffrey Harman, EIT, and Logan Jury, both with Herbert, Rowland & Grubic, Inc.*

See a highly successful approach to troubleshooting dewatering system start-ups based on several case studies. Content applies to all dewatering systems, but emphasizes screw presses, a technology for which system-wide troubleshooting guidance isn't readily available. Topics will include polymer make-down and quality control, solids conditioning, and screw press performance optimization.

#### 8:35-9:05am – Polymer Treatment Applications - 5 Key Design Elements that Should Be Considered During the Course of the Design Selection through Project Delivery

*Speakers: Edward Spayd, PE, and Logan Jury, both with Herbert, Rowland & Grubic, Inc.*

Polymer addition costs can make up a large fraction of the operating budget for treatment facilities. To avoid polymer overuse and minimize costs, utilities must carefully select their polymer and properly coordinate design. Learn how to ensure successful start-up and operation of polymer treatment applications in this presentation.

#### 9:10-9:40am – Cold Temperature Nitrification of Lagoon Wastewater Using a Biologically Active Filter (BAF), Seven Years of Operation

*Speaker: Philip Pedros, PhD, PE, Mott MacDonald*

This presentation will describe the use of a biological active filter (BAF) for cold temperature nitrification at a lagoon. The theory of the process and performance data from the last 7 years of operation in Waverly Township, PA will be presented.

### 9:40-10:10am – Morning Break in Hallway

#### 10:10-10:40am – Optimizing the Feed to the GHJSA's Fluidized Bed Sewage Sludge Incinerator

*Speaker: Nicholas Sahd, Gannett Fleming, Inc.*

Greater Hazleton Joint Sewer Authority's 15 dry ton/day Fluidized Bed Sewage Sludge Incinerator became operational in June 2020. Gannett Fleming will present an overview of the new incinerator process and detail how fats, oils, and grease in the solids feed resulted in cost savings and limited supplemental fuel need.

#### 10:45-11:15am – First North American Installation of an Adaptive Clarifier Inlet

*Speaker: Mario Benisch, PE, GHD*

The adaptive clarifier inlet promises optimal (adaptive) hydraulics and blanket filtration to produce filter effluent quality and add capacity. The first US installation (Norfolk, VA) met that promise with an average effluent turbidity < 2 ntu and an estimated capacity gain of 30%.

### PFAS PROGRAM

#### Magnolia CD

*Moderators: Elizabeth Cheeseman, GHD; and Linda Leopold, Pittsburgh Water & Sewer Authority*

#### 8:00-8:30am – PFAS in Wastewater: Promising Management and Treatment Strategies

*Speaker: Jay R. Surti, PE, GHD, Inc.*

Using case studies, this presentation will provide regulatory updates, steps wastewater utilities can take to evaluate and mitigate PFAS risks through promising management strategies such as source control, adaptive planning, implementing treatment (separation and destruction) to address PFAS challenges, and disposal approaches for PFAS laden treatment media.

## Technical Program Details

### 8:35-9:05am – Lessons Learned in Five Years of Operating PFAS Treatment Facilities

*Speaker: Alexander Dyke, PE, Gilmore & Associates, Inc.*

What happens after startup? There are operational challenges with any new treatment facility, but those associated with treatment of a new or emerging contaminant can be unique. This presentation highlights the potential water quality, capacity, cost, and regulatory compliance challenges experienced by one Southeastern PA water provider.

### 9:10-9:40am – Technical and Legal Challenges for Addressing PFAS in Municipal Water Treatment Systems

*Speaker: Brian J. Yates, PE, Burgess & Niple, Inc.*

This presentation will cover the technical and legal challenges for addressing PFAS in municipal water treatment systems. These challenges include removal of PFAS in source waters and wastewater influent including technologies for removal of PFAS. Legal challenges include lawsuits related to upstream sources of PFAS and discharge of PFAS.

### 9:40-10:10am – Morning Break in Hallway

### 10:10-11:15am – Sampling and Analysis for PFAS

*Speaker: Sara Kuzma-Stump, Suburban Testing Labs, Inc.*

PFAS regulations affecting our public water suppliers and wastewater treatment plants are emerging. Sampling is complicated, and information about analysis is not yet widely understood. This presentation will cover what PFAS is, what the emerging lab testing requirements are, and sampling procedures.

## Have You Visited PWEA's Public Education Toolbox?

The Public Education Toolbox includes a list of editable documents that can be downloaded. The posted articles are not copyrighted, which allows anyone the ability to edit and adapt them to their specific use. The articles posted have been freely donated by the authors with no conditions or promises attached. Items included in the Toolbox include: Informational Brochures and Fact Sheets, General Informational Articles, Biosolids Articles, and Non-Flushable Wipes Articles.

Visit [pwea.org](http://pwea.org), click on the Publications Tab and then click on the Public Education Toolbox in the drop down box.



Please be respectful of the presenters and other attendees. Set your cell phone to vibrate or turn it off during conference training sessions, workshops and the Annual Business Meeting. If you see that you're receiving a call, please exit the training or meeting room to accept or return the call. Thank you!



CHEMICAL FEED AND PROCESS EQUIPMENT FOR WATER & WASTEWATER  
VISIT OUR WEBSITE FOR ACCOUNT LISTING: [www.bissnussinc.com](http://www.bissnussinc.com)

#### PITTSBURGH / WEST VIRGINIA

2600 Boyce Plaza Rd.  
Suite 218  
Pittsburgh, PA 15241  
Tel: (412) 221-1200 Fax: (412) 221-5952

#### CANFIELD

7 Court Street  
Suite 210  
Canfield, OH 44406  
Tel: (330) 533-5531 Fax: (330) 533-6857

FOR CHEMICAL FEED PARTS & SERVICE VISIT [www.bnrinc.com](http://www.bnrinc.com) OR CALL 888-256-3142



**EPOXYTEC™**

PART OF THE TNEMEC FAMILY OF COATINGS

**CPP Sprayliner™**

# Restore. Protect. Enhance.



Blended with reinforcing agents and a proprietary blend of microfibers, CPP Sprayliner is an applied fiber-reinforced polymer (FRP) with high strength properties for deteriorated structures. This system is designed to line many aggressive enclosed, immersive and partially opened environments and performs in areas subject to hydrogen sulfide ( $H_2S$ ) attack. Plus, CPP Sprayliner has been proven to prevent corrosion while holding back water migration, inflow/infiltration (I&I) and hydrostatic pressure.

**To learn more about these ultra-high build, fiber-reinforced, spray-applied linings, stop by booth #99 and visit with your local Tnemec representatives.**



**Atlantic Coating Consultants**

**t.** 855-855-0100 **e.** [atlantic@tnemec.com](mailto:atlantic@tnemec.com) **w.** [tnemec.com/acc](http://tnemec.com/acc)



# Student Research Presentations

**Tuesday, 1:00-4:45pm – Wild Rose A**

The Research Program showcases the ongoing research activities of students (graduate and undergraduate) in the fields of wastewater, water quality, and environmental management relevant to Pennsylvania. The PWEA Research Committee reviews student research abstract submissions from across the region and selects the top abstracts for oral presentation and to receive the Student Research Award. In addition, qualifying abstracts are invited to participate in a Poster Contest at the Conference. After judging by faculty and practicing engineers, the top poster presenters in both undergraduate and graduate categories will be selected. All posters will be available for viewing by Conference attendees. Awards will be presented during the Research Program.

## Student Podium Presentations

<b>Title:</b>	Wastewater-Based Epidemiology: Detection of SARS-CoV-2 RNA in Bethlehem and Lehigh University Wastewater
<b>Student:</b>	Nusaibah Alqasawah Lehigh University
<b>Advisor:</b>	Kristen Jellison
<b>Title:</b>	The Application of Pelletized Duckweed in Limiting Off-Site Nutrient Transport from Agricultural Fields
<b>Student:</b>	Jordan Brown Penn State University
<b>Advisor:</b>	Rachel Brennan
<b>Title:</b>	Use of Duckweed to Treat Dairy Wastewater While Simultaneously Producing Protein-Rich Biomass for Livestock Feed in a Circular Bioeconomy
<b>Student:</b>	Kari Lagan Penn State University
<b>Advisor:</b>	Rachel Brennan
<b>Title:</b>	The Role of Free-Living Amoeba in the Fate and Transport of Multi-Drug Resistant Bacteria in Drinking Water Systems
<b>Student:</b>	Jennifer Rao Lehigh University
<b>Advisor:</b>	Kristen Jellison
<b>Title:</b>	Application of Wastewater-Based Epidemiology to Estimate Unreported COVID-19 Infections Using Machine Learning
<b>Student:</b>	Shunyu Tang Cumberland Valley High School/Indiana University
<b>Advisor:</b>	Yongtao Cao

## Student Poster Presentation

<b>Title:</b>	The Recovery of Waste Nutrients under Suboptimal Conditions to Generate Protein-Rich Duckweed for Food Production
<b>Student:</b>	Sarine McKenzie Penn State University
<b>Advisor:</b>	Rachel Brennan

**Additional posters to be added on-site.**

## Have You Logged into Your Member Account Lately?

If you are not receiving PWEA's monthly eNewsletter, continuing education announcements, and other timely bulletins, your profile may not include your current email address. Log into your account to view or update your contact information. Also, as long as you remain a current Member, you have 24/7/365 access to continuing education transcripts stored in your account.



Not a member of PWEA?  
Go to [www.pwea.org](http://www.pwea.org) to join online or to download the membership application

form. Members receive the PWEA member rate for the PennTec Conference and for other PWEA training events.

Member benefits include the *Keystone Water Quality Manager*, a quarterly technical publication containing legislative updates, design/process operations articles, problem-solving case histories, and advance notice of continuing education. This valuable magazine also highlights current technology trends and issues affecting water quality.

You will also receive the monthly PWEA e-Newsletter, keeping you up-to-date on the latest water quality news and PWEA events, which also includes a link to current employment opportunities.

**Questions? If you have questions about PWEA, please contact the PWEA Administrative Office at 717-642-9500 or by email at [pwea@pwea.org](mailto:pwea@pwea.org).**



As a leading engineering, design, construction management, construction materials inspection and testing, and environmental professional services firm, we are committed to delivering infrastructure solutions that enhance public safety, respect the natural environment, and strengthen our communities.



Bellefonte Borough Wastewater Treatment Plant - Bellefonte, PA

[centuryeng.com](http://centuryeng.com) | [kleinfelder.com](http://kleinfelder.com)  
[info@kleinfelder.com](mailto:info@kleinfelder.com)

## Committees

### 2022-2023 Board of Directors

Kara Humes, *President*  
Linda Leopold, *First Vice President*  
William LaPorte, *Second Vice President*  
Lisa Webb, *First Past President*  
David Brown, *Second Past President*  
Dean Miller, *Secretary/Treasurer*  
Janet Miklos, *Editor*  
Autumn Crawford, *Professional Operators Director*  
Christina Crawford, *Young Professionals Director*  
Christine Volkay-Hilditch, *First Federation Director*  
Douglas Pike, *Second Federation Director*  
Tia Trate, *Central Section Director*  
Dale Miller, *Eastern Section Director*  
James Degnan, *Western Section Director*

### 2023 Conference Committee

Linda Leopold, *Committee Chair*  
William LaPorte, *Committee Vice Chair*  
Jeff Cantwell, *Program Chair*  
Robert Dengler, *Program Vice Chair*  
Marilyn Baron, *Exhibitors & Sponsors Chair*  
Chris Boyd, *Exhibitors & Sponsors Vice Chair*

### 2023 Exhibitors & Sponsors Committee

Marilyn Baron, <i>Chair</i>	Linda Leopold
Christopher Boyd, <i>Vice Chair</i>	Jason Marie
Arthur Auchenbach	Lori Miller
Nicole Brown	Cheryl Paulin
Shannon Drosnock	Mark Pickering
Eric Fox	James Protin
Eric Joos	Brian Rogers
Jennifer Kintzer	Julie Silvia
William LaPorte	Lisa Webb
	Maria White

### 2023 Program Committee

Jeff Cantwell, <i>Chair</i>	Michael Kyle
Robert Dengler, <i>Vice Chair</i>	William LaPorte
Jenna Bishop	Linda Leopold
Elizabeth Cheeseman	Margaret Miller
Autumn Crawford	Christopher Patackis
Beth Dutton	Mark Pickering
Shane Edge	John Rae
Casey Ericson	Hyon Duk Shin
Holly Frederick	Richard Valiga
Chris Henry	Nathan Walker
Larissa Hoover	Charles Winslow
Curtis Huey	

## Committee Meeting Schedule


*All meetings will be held in Cocoa Terrace & Cocoa 1, unless otherwise noted.*

#### Monday, June 19

6:30am Awards Committee  
6:30am Biosolids Committee  
6:30am Government Affairs Committee  
6:30am Laboratory Practices Committee  
6:30am Public Education Committee  
7:00am Stormwater Committee

#### Tuesday, June 20

6:45am Collection Systems Committee  
7:00am Engineering & Construction Committee  
7:00am Professional Operators Committee  
7:00am Students & Young Professionals Committee  
7:00am Training Committee  
7:00am Utility Management Committee  
11:45am Research Committee (in Exhibit Hall)



**QUESTIONS?**

If you have questions about PWEA,  
please contact the PWEA Administrative Office at  
717-642-9500 or by email at [pwea@pwea.org](mailto:pwea@pwea.org).



**ENVIRONMENTAL ENGINEERING  
&  
MANAGEMENT ASSOCIATES INC.**

**FOR ALL OF YOUR WATER  
AND WASTEWATER NEEDS**

P.O. BOX 232, KULPSVILLE, PA 19443  
(215) 368-3375 • FAX (215) 368-6739  
[www.eema-inc.com](http://www.eema-inc.com)

# Want to Get More Involved Professionally Outside of Your Work Environment?

## Ever considered serving on a PWEA committee?

### What serving on a committee is...

- Stepping outside our comfort zone
- Sharing your talents and expertise
- Working as part of a team
- Networking and learning from others
- Boosting your career
- Discovering new skills and new interests
- Gaining knowledge of the organization and its inner workings
- Serving members and contributing to the advancement of the Association and its goals

### What serving on a committee isn't...

- Always being in the spotlight
- Having to go it alone
- Always having to be physically present – technology affords the opportunity to be virtually present when in-person meetings just aren't possible

The PWEA invites you to contribute your expertise and a small portion of your time to PWEA committee activities. If you would like to participate in any of the committees, visit [www.pwea.org/pwea\\_committees.php](http://www.pwea.org/pwea_committees.php) and click on the link to download the form with the list of committees available.



# CharterMachine Company

*Your Complete Source for Dewatering Equipment*

See us @PennTec 2023  
June 18-21



**ROYAL SCREW PRESS**  
High-Efficiency, Low Power



**15 ROLL SENTRY PRESS**  
Every Little Bit Counts



**ELODE**  
Electro Osmosis Dehydrator



**DEWATERING TRAILERS**  
Self-Sufficiency on Wheels



**TP7.4 TOWER PRESS**  
Smaller Capacity,  
Big Capabilities



**TOWER PRESS**  
High Solids, Low Maintenance



**SKIDMOUNT SYSTEMS**  
The All In One Solution



**ROEMIX**  
Lime Post  
Treatment  
System



**POLYMER SYSTEM**  
Roedos Customized  
Dry Polymer System



**CONVEYORS**  
To Suit Your Needs



CharterMachine Company

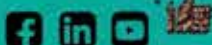
WE BUILD  
SOLUTIONS



CharterMachine Company

DO ME A  
DRY SOLID

FOLLOW US



@chartermachinecompany



www.chartermachine.com

CONTACT US

55 Wester Ave,  
Metuchen, NJ 08840

732-494-5350

FAX 732-494-4596

## Certification

### PA DEP Operator Certification

The PWEA Annual Technical Conference has been planned in accordance to the requirements of House Bill 183 (Act 11) and application has been submitted to the PA DEP to provide five (5) wastewater operator contact hours. The PWEA is a PA DEP Approved Training Provider and is permitted to issue continuing education credit to water and wastewater operators.

To ensure you meet continuing education requirements, please refer to the Operator Certification 3-Year Renewal Cycle Schedule.

**IMPORTANT: Contact hours received outside of your renewal cycle will not count toward your requirements.**

**To comply with accreditation sponsor requirements, the PWEA will require every attendee to check in and out of each half day timeslot by presenting the contact hour tracking sheet for stamping.**

Contact hour tracking sheets will be available at the Registration Area. Review this form very carefully so you are aware of all requirements. You must attend at least 2.5 hours in each half day in order to qualify for contact hours. Each half day session is worth 1.0 contact hour. Use the same contact hour tracking sheet for all Conference sessions.

Completed sheets must be turned in to the PWEA registration staff during posted registration hours. You must provide a photo ID when turning in your tracking sheet. Certificates will be processed and emailed approximately one month after the Annual Conference.

**In addition to the Conference contact hours, seven workshops have been approved by the PA DEP for additional credit.** Go to pages 20-21 for more information. These workshops will run concurrently with the Conference and may have extended hours. You will receive credit for either the workshop or the Conference session, depending on what you attend during each timeslot.

**Please note: You may only receive credit for attending a specific workshop once during your renewal cycle. DEP will not count the same workshop more than once within a cycle. Please check your records to be sure you have not previously attended one of these workshops within your current cycle.**

### Continuing Education for Professional Engineers and Other Professionals

PWEA technical sessions are not pre-approved by state boards for licensed professionals. Therefore, it is not possible to guarantee their acceptance for certification purposes. PWEA will issue certificates based on the attendance information provided on tracking sheets, which will be available at the Registration Area. Certificates for Professional Engineers, Geologists, Land Surveyors, and other professionals will show 2.5 hours of continuing education per half day program. Time will be earned in half day increments; partial time will not be issued. This time represents actual classroom hours. PWEA will not convert the continuing education time into Professional Development Hours or any other type of continuing education credit. It is the responsibility of each individual to convert those hours and to submit them in the format required by their state licensing boards.



### Your Partner in Innovation

At CDM Smith, we thrive on helping you meet your challenges with solutions that maximize the benefit of advances in technology.

**CDM  
Smith**  
cdmsmith.com

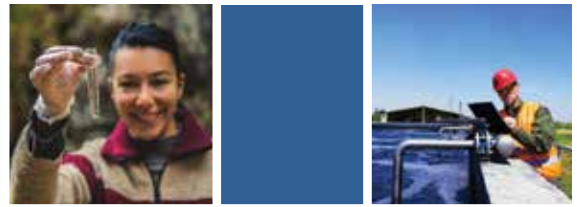
Pittsburgh | Philadelphia | Lancaster | Harrisburg



## The Power of Commitment

↳ GHD proudly supports the  
Pennsylvania Water Environment Association

→ [ghd.com](http://ghd.com)



# Job Board

## Do You Know About PWEA's Job Board?

PWEA's Job Board connects candidates with employers seeking to fill open positions. Employment positions submitted to PWEA are viewable on the PWEA Website at any time. Visit [www.pwea.org](http://www.pwea.org) and click on the "News & Info" tab; then select "Job Board – Open Positions."

**Proven Efficient Solutions to Water Quality Challenges**

**HARMSCO®**  
Technology

**HURRICANE®**

ECO FRIENDLY PRACTICES

NSF  
Certified to NSF/ANSI Standard 61

- Available for Immediate Shipping!
- 3.6 Log Cyst Reduction
- Pre-Filtration
- 1-Micron Absolute
- THREE Filters in ONE:
  - Cyclonic Separator
  - Cartridge Filter
  - Upflow Filter
- Up to 20% Less Energy Costs
- Flow Rates <1.9 - 151.4L/s per Housing
- Proven Installations Across All Canadian Provinces, North America & Worldwide!

**HARMSCO® MUNICIPAL**

(800) 327-3248 • (561) 848-9628 • [sales@harmasco.com](mailto:sales@harmasco.com) • [Harmasco.com](http://Harmasco.com)

**ARRO**

ARRO is a full service **engineering, environmental, information technology, and management consulting firm**, headquartered in Lancaster County (PA) with 4 other strategically located offices in Pennsylvania and Maryland.

Some of **ARRO**'s services include:

- Water/Wastewater
- Stormwater/MS4
- Geospatial/GIS
- Rate Studies
- Grants/Funding Assistance
- Contract Operations
- RPR/Construction Observation
- Leak Detection
- Municipal Staffing & Consultation

(610) 495-2111  
[arroconsulting.com](http://arroconsulting.com)

# Quality rental equipment and bypass & dewatering services



FieldForce provides equipment rentals and water transfer services for the municipal, construction, manufacturing, and industrial sectors. Within our fleet, we carry Atlas Copco pumps, compressors, and generators available to rent or purchase. In addition, FieldForce also carries temporary piping, filtration equipment, light plants, and heaters available to rent.

**FieldForce** can deploy rental equipment for bypass, dewatering, and other temporary pumping services throughout the Northeast United States.

Rely on FieldForce to deliver solutions for complex water management projects, including temporary pipeline, specialized filtration, and maintenance events.

- Rapid response service
- WaterForce™ State-of-the-art controls and remote monitoring
- Emergency rentals available on a 24/7 basis
- Locally owned and operated



**Visit [FieldForceRentals.com](http://FieldForceRentals.com),  
call 717-508-0550, or email  
[Ask@FieldForceRentals.com](mailto:Ask@FieldForceRentals.com)  
to learn more or request a quote.**

 **FieldForce**  
Rentals • Services • Sales  
a division of Keystone Clearwater Solutions



**Tri-Data Solutions, Inc.**

## **On-Line lift Station Monitoring with Cellular Technology**

**Monitoring  
Wet Well level**

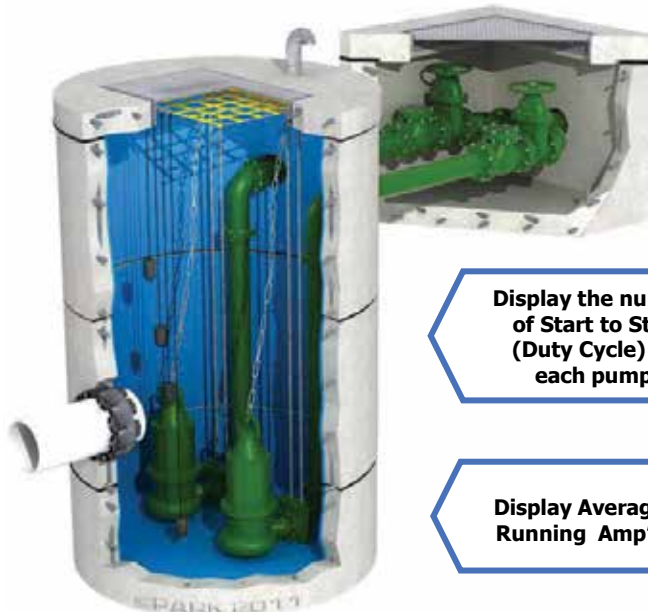
**Display Total Gallons  
Pumped Daily, Weekly,  
and Monthly.**

**Auto Generating  
Email Notification  
for High/High Alarm**

**Pump Run-Time**

**If Pumps are  
Alternating**

**Auto Generating Monthly  
and Problem Reports via  
Email**



**Display the number  
of Start to Start  
(Duty Cycle) for  
each pump.**

**Display Average  
Running Amp's**

**Count the Number of  
Pump Event Starts Per  
day for the individual  
pump and reset the  
counter after 24 hours**

**with Asset Management System Includes (CMMS, inventory)**

*See us in Booth 102, for a Demonstration*

Call: Frank Barbato  
Phone: 215-840-0334

8 Douglas Dr. Huntingdon Valley, PA. 19006

## PennTec 2024 Call for Abstracts

Pennsylvania Water Environment Association  
95th Annual Technical Conference & Exhibition (PennTec)  
Penn Stater Conference Center Hotel  
June 16-19, 2024 – State College, PA

Technical and case study presentations are the lifeblood of PennTec. If you have some experience in the fields of Biosolids, Collection Systems, Engineering, Construction, Government/Regulatory Affairs, Industrial Waste Treatment, Laboratory Practices, Operations, Safety, Stormwater, or Utility Management, the Pennsylvania Water Environment Association (PWEA) invites you to submit your topic for PennTec 2024.

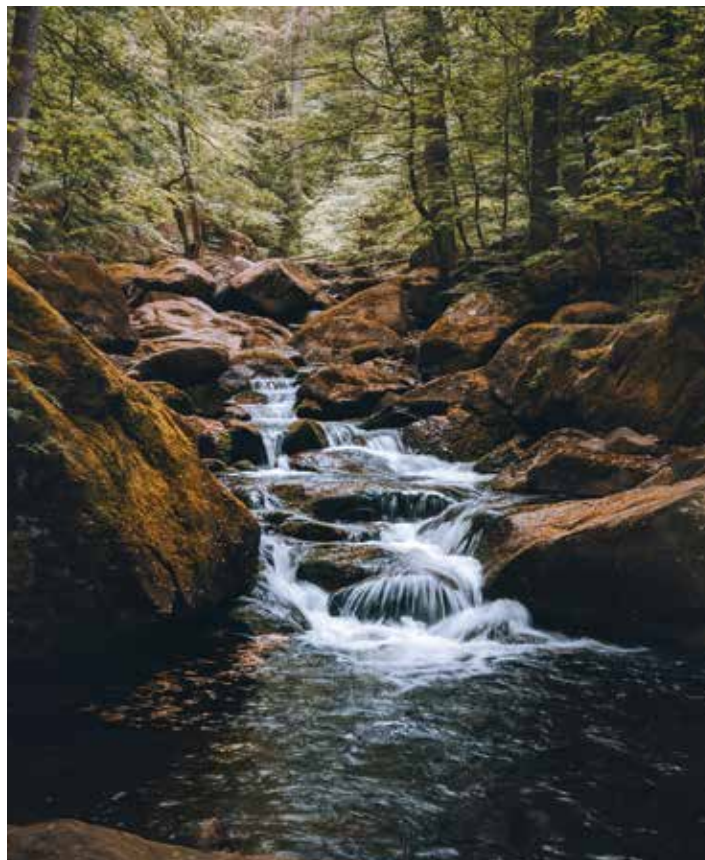
Experience or case studies from some of the smallest municipalities often become the most popular, so please do not think that your project is too small to interest your fellow professionals.

Abstracts of 300 words or less, should describe the subject matter with enough detail to allow evaluation of the proposed topic. Session presentations will be in 30-minute blocks including time for questions.

Abstract submittals will only be accepted electronically in WORD format. **Submission details and the abstract submittal form will be posted on the PWEA website in August.** You will be asked to identify which of the Technical Programs would best fit your topic. Submissions should be emailed to: [abstracts@pwea.org](mailto:abstracts@pwea.org).

No travel or assistance funds are available for speakers. Speakers are responsible for all of their own transportation and lodging expenses. Discounted speaker registration fees will be offered for the day of the presentation or for the full conference.

Questions should be directed to [abstracts@pwea.org](mailto:abstracts@pwea.org).



Pennsylvania Water  
Environment Association

# PennTec 2024

## June 16-19, 2024

Penn Stater Conference Center Hotel  
State College, PA

**PennTec**   
2024 95th Annual Technical  
Conference & Exhibition

# GAYLE CORPORATION

“Environmental Equipment Sales & Service” – *Since 1984*

P.O. Box 542 Berwyn, PA 19312 \* Office (610) 296-0970 \* [sales@gaylecorp.com](mailto:sales@gaylecorp.com)

## **PUMPS**

- **GORMAN-RUPP**

**(PA Territory - Chester, Delaware, Montgomery, Bucks & Philadelphia Counties)**

*High-Head “V-Series” & “Super T Series” Self-Priming Pumps; Submersible Non-Clog Sewage Pumps & Pre-Engineered Packaged Pumping Stations with Custom System Controls*

- **CARVER PUMPS**

*Stainless Steel & Cast Iron Centrifugal Water Pumps, Specialty Pumps*

- **HCP PUMPS**

*Submersible Stainless Steel Sump Pumps, End Suction Pumps, Sewage Pumps, Vertical Column Sump Pumps*

- **HYDROFLO PUMPS (Division of Taco)**

*Stainless Steel Vertical Turbine Pumps & Mixed-Flow Propeller Pumps*

- **KSB**

*Submersible Pumps, Sludge and Slurry Pumps, Submersible Dry Pit Non-Clog Pumps, Axial Flow Propeller Pumps for BNR applications, Submersible Process Mixing Equipment*

- **Pentair - AURORA PUMPS**

*Horizontal Split Case Pumps, End Suction Pumps, Dry Pit Sewage Pumps*

- **TIGERFLOW**

*NSF-61 Potable Water Packaged Booster Systems & Packaged Utility Water Systems - Vertical Multi-Stage Pumps, Horizontal Split Case Pumps, Turbine Pumps, End Suction Pumps*

## **PROCESS EQUIPMENT**

- **LS ELECTRIC AMERICA** – *Variable Frequency Drives & Configured Control Packages*

- **“PIPELINER”™** – *Sludge Conditioning Grinders*

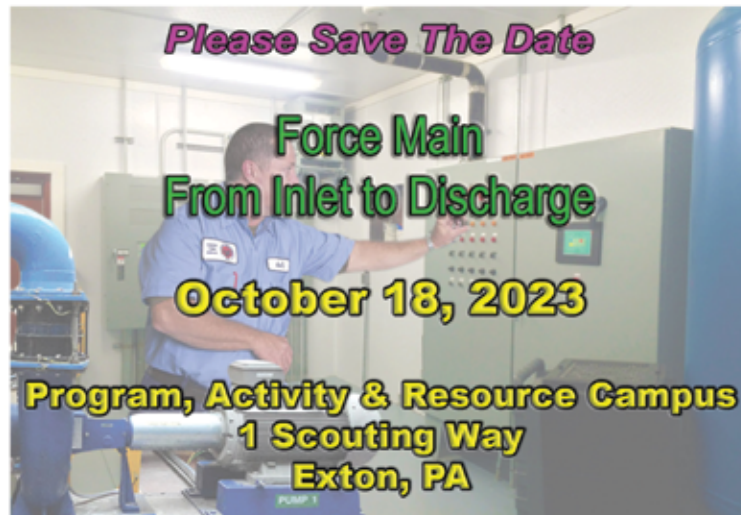
- **SHARPE MIXERS** – *Process Mixing Equipment*

- **UGSI – STRANCO “POLYBLEND”™ & FLUID DYNAMICS**

**“DYNABLEND”™** – *Liquid & Dry Polymer Feed Systems, Chemical Metering Pumps and Chemical Feed Systems*



### Collections System Committee Specialty Conference

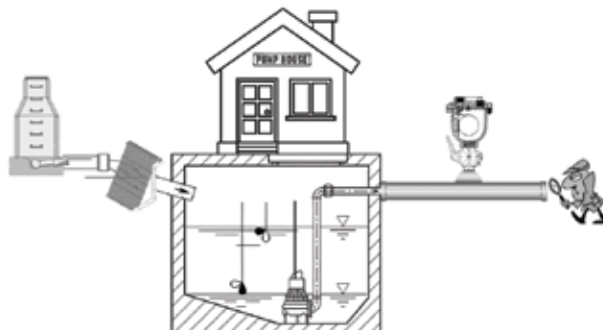


### Speakers & Topics

- 💧 Inlet Protection – JWC
- 💧 Pumps for Pump Stations – Riordan Materials
- 💧 Pump Station Controls – Xylem
- 💧 Data Driven Approach – JK Muir
- 💧 Air Release Valves – Envirep
- 💧 Force Main Inspection – Pure
- 💧 Pressure Pipe Rehab – National Water Main
- 💧 Pump Station Case Study – Brown & Caldwell
- 💧 Panel Discussion - All Presenters & Attendees

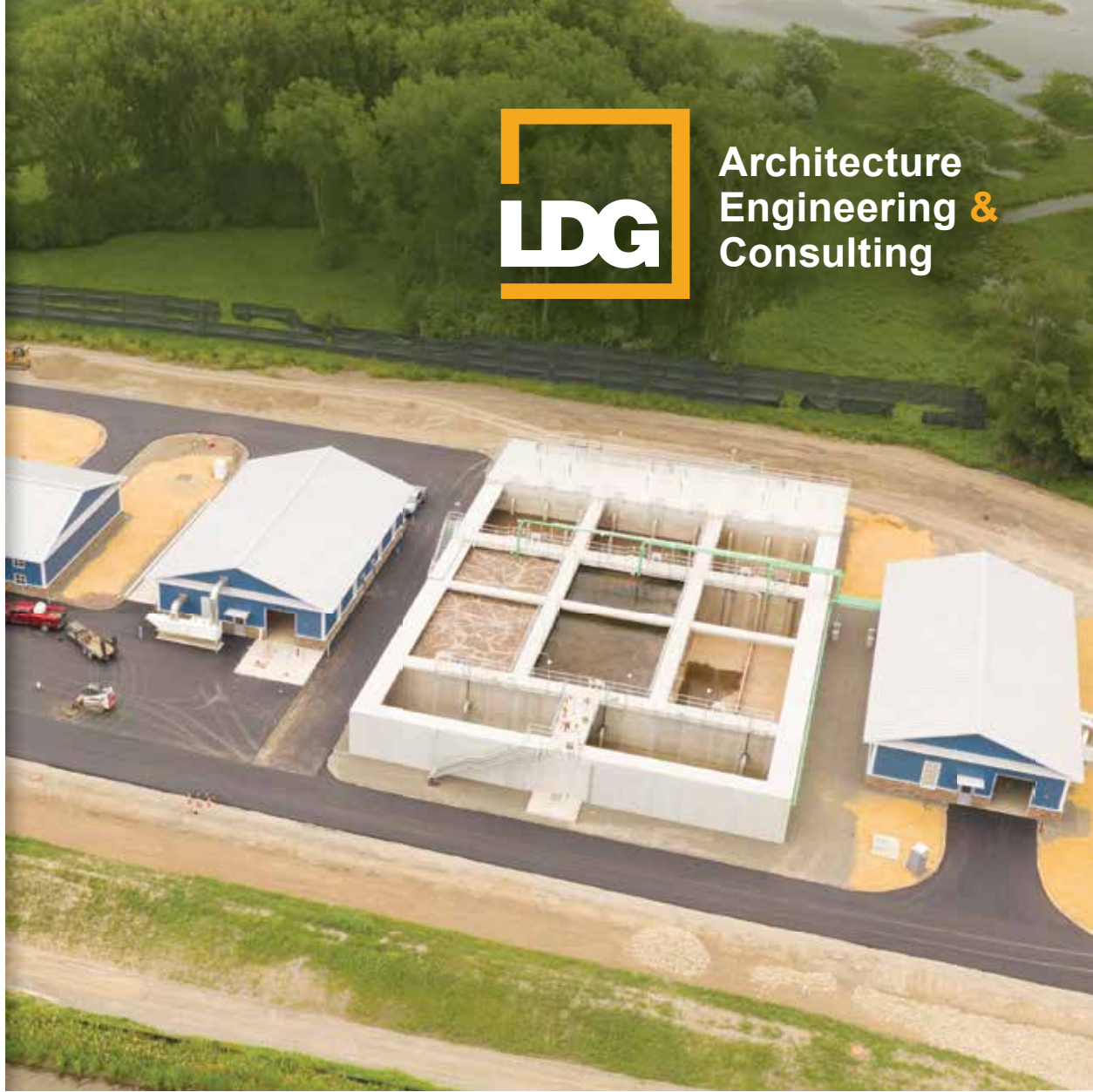
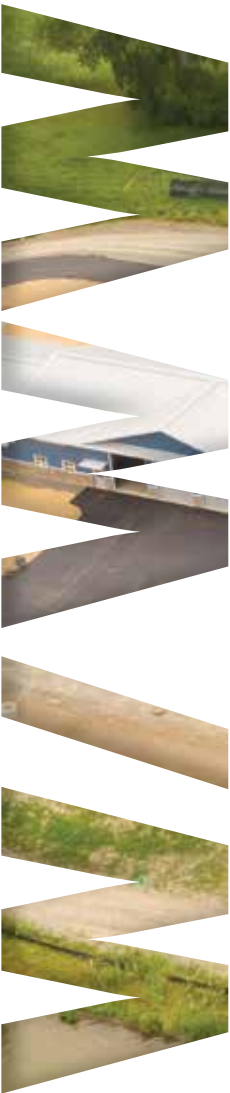
For More Information:

Luke Chapman: [lchapman@flowassessment.com](mailto:lchapman@flowassessment.com)  
Jeff Cantwell: [jcantwell@flowassessment.com](mailto:jcantwell@flowassessment.com)





Architecture  
Engineering &  
Consulting



LDG provides the full spectrum of services for the water/wastewater market assisting clients with day-to-day operations through our numerous on-call retainer contracts. Our approach to each project is the same - we leverage the expertise of our multi-disciplined in-house specialists to provide our clients with high quality, economical solutions including:

- Larger, multi-million-dollar wastewater and water treatment facility capital projects
- Water purification and distribution
- Sewer water collection and treatment
- Pipeline systems
- Treatment plants
- Filtration systems
- Pump stations
- Treatment systems
- Reservoirs
- Holding tanks
- Force mains
- Grant writing
- Funding assistance



Hazen and Sawyer is proud to be a  
continued supporter of PWEA and  
the 2022 PennTec Conference.

**Hazen**

[hazenandsawyer.com](https://hazenandsawyer.com)  
215-592-4402

## TREATING MORE WITH EXISTING ASSETS

Photo courtesy of Berks-Montgomery Municipal Authority

Ballasted clarification dramatically increases biological treatment capacity, helping meet ENR limits and produce effluent quality far superior than conventional alternatives, and at lower lifecycle costs. Ballasted clarification uses magnetite—fully inert iron ore particles—to ballast biological floc or conventional chemical floc, enhancing settling rates and increasing the performance of wastewater and water treatment facilities, while substantially reducing costs to upgrade process performance.

**BioMag® Systems** produce up to 300% more treatment capacity in existing tankage.

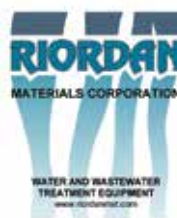
**CoMag® Systems** settle floc up to 30 times faster than conventional treatment



### LEARN MORE!

Visit [evoqua.com](https://evoqua.com) or scan the QR code

Represented by:



#### Eastern Pennsylvania

Art Auchenbach  
aauchenbach@riordanmat.com  
1-215-628-9936

#### Central Pennsylvania

August Koloras  
akoloras@riordanmat.com  
1-215-628-9936



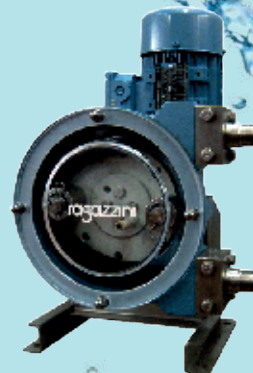
# **Environmental Service & Equipment Company, Inc.**

**Established in 1973**

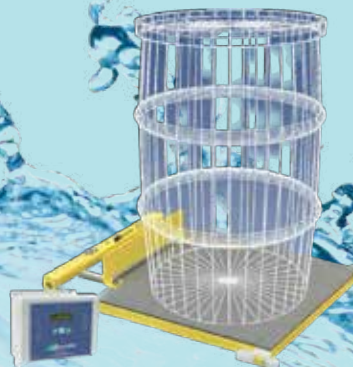


**Equipment, Parts and Service**

**Proudly Servicing  
NJ, PA, DE, MD, VA, WV**



**hydro**  
INSTRUMENTS™



**evoQUA**  
WATER TECHNOLOGIES



**Contact Us For More  
Information!**

[www.EnvironmentalEquipment.net](http://www.EnvironmentalEquipment.net)

**610.497.5900**

[George.Manganaro@EnvironmentalEquipment.net](mailto:George.Manganaro@EnvironmentalEquipment.net)

A dynamic splash of blue water at the top of the page, with bubbles and droplets visible. The background transitions from a light blue gradient to a solid dark blue at the bottom.

**KLH**

**ENGINEERS, INC**

**Water  
Wastewater  
Municipal**

**412.494.0510**

**[www.klhengineers.com](http://www.klhengineers.com)**



**We know water.**

Exceptional service in  
the engineering  
industry since 2008.

**Let's get to work!**



Travis Long, CEP, LO  
Team Leader

**(844) 542-4757 | [jhacompanies.com](http://jhacompanies.com)**

## Advertiser Product & Service Center



**The Pennsylvania Water Environment Association Conference Program** is made possible by the companies listed below that have included their important messages on our pages. We thank them for their support of the PWEA and its range of publications. We encourage you to contact them when making your purchasing decisions.

A&H Equipment.....	10	Harmsco Filtration Products .....	70
AECOM.....	50	Hazen & Sawyer.....	77
Aqua-Aerobic Systems.....	15	HDR .....	18
ARRO Consulting .....	70	Herbert Rowland & Grubic, Inc.....	58
Atlantic Coating Consultants (Epoxytec/Tnemec) .....	64	Industrial Furnace Company .....	82
Bassett Engineering.....	51	JHA Companies .....	81
Best Management Products, Inc. ....	8	Kappe Associates, Inc. ....	28
BGC, Water & Wastewater Services .....	IBC	Keystone Clearwater Solutions.....	71
BissNuss, Inc. ....	63	KLH Engineers, Inc. ....	80
Bowen Engineering Corporation .....	21	Kraft Power Corporation .....	44
Buchart Horn, Inc.....	82	Lakeside Equipment Corporation .....	3
Carroll Engineering Corporation .....	16	Larson Design Group .....	76
CDM Smith .....	69	Lennon, Smith, Souleret Engineering, Inc.....	38
Century Engineering, A Kleinfelder Company .....	65	Mott MacDonald .....	20
Charter Machine Company.....	68	Municipal Maintenance Company .....	57
Core & Main .....	19	Pittsburg Tank & Tower Group, Inc.....	59
Coyne Environmental Services.....	13, 14	Pleasant Mount Welding, Inc.....	52
DRV Incorporated.....	6	Proco Products .....	60
Envirep/TLC.....	IFC	PSI Process .....	48
Environmental Engineering & Management Associates, Inc. ....	66	RAM Industrial Services, LLC .....	46
Environmental Service & Equipment Company, Inc. ....	79	Reiner Pump .....	4
Evoqua.....	78	Rettew .....	22
Ferguson.....	5	Riordan Materials Corp. ....	OBC
Gannett Fleming .....	54	Rochem Americas, Inc. ....	43
GAYLE Corporation .....	36, 74	Tri-Data Solutions .....	72
GHD .....	69	W.C. Weil Company .....	12
GPI .....	17	Whitman Requardt and Associates, LLP .....	11
Gwin Dobson & Foreman, Inc. ....	32	Xylem.....	45
		Zoeller Company .....	40



**BUCHART HORN**  
ENGINEERS • ARCHITECTS • PLANNERS

Preserving, Protecting, and  
Improving Water Resources  
since 1945

Offices located throughout Pennsylvania:  
York • Pittsburgh • State College

[www.bucharthorn.com](http://www.bucharthorn.com)



**Multiple Hearth**

[www.industrialfurnace.com](http://www.industrialfurnace.com)  
585-654-3018 • PFAS Temps

# SERVICE SPOTLIGHT

# BGC



## COSTARS™

Pennsylvania Department of General Services

### IN-HOUSE PUMP REPAIR & RESTORATION

The BGC, Inc., Water & Wastewater Services Team has complete in-house pump repair and restoration services available to our clientele. Avoid new or replacement pump costs and rest assured that your equipment will be fixed to OEM specifications and reinstalled in a timely manner.

#### In-House Pump Repair & Restoration Services Include:

- Fully disassembled, cleaned & inspected
- Elimination of scoring of shafts by machining to factory specifications
- Bearings, seals, o-rings and normal wear items replaced
- In-house Media Blasting & Painting
- In-house AWS & ASME Certified Welders
- In-house Certified Welding Inspector
- OEM rebuild quality
- 24 Hour Emergency Service
- Mobile mechanical & crane service available



#### Fully Bonded & Insured, OSHA Trained & Certified, Complete Turn Key Services

- SAME DAY EMERGENCY RESPONSE
- Available 24/7/365
- ONE CALL AND WE'RE THERE!
- 844.802.4050

Scan here to  
learn more.



**Blooming  
Glen**  
**Contractors**  
Inc.  
**WATER & WASTEWATER  
SERVICES DIVISION**  
EOE Including Disability & Vet

P.O. Box 55, Skippack, PA 19474  
Phone: 215.258.7530  
Fax: 215.257.7761  
Email: [info@bgcwws.com](mailto:info@bgcwws.com)  
Web: [bgcwws.com](http://bgcwws.com)



Consulting: [lucky@bgcwws.com](mailto:lucky@bgcwws.com)  
Service: [mmilewski@bgcwws.com](mailto:mmilewski@bgcwws.com)  
Estimating: [cpurdy@bgcwws.com](mailto:cpurdy@bgcwws.com)  
Engineering: [jmoses@bgcwws.com](mailto:jmoses@bgcwws.com)  
Metals  
Fabrication: [mdodge@bgcwws.com](mailto:mdodge@bgcwws.com)  
Metals  
Estimating: [mtendayi@bgcwws.com](mailto:mtendayi@bgcwws.com)

**STOP BY RIORDAN  
ROW (BOOTHS 113-  
118) TO DISCUSS  
YOUR NEXT PROJECT!**



## Riordan Materials Corporation Water & Wastewater Treatment Equipment

# A to Z - Riordan has you covered!

From Amwell to Zimpro, Riordan has over 100 years collective experience representing the industry leaders in water and wastewater equipment and technologies.

Our mission is to provide quality, cost effective solutions for our clients, while providing the best technical support services available before, during, and after installation. We are proud to represent the premiere line of products for water treatment, wastewater treatment, odor control, solids handling, pumping, and biosolids processes. Our history of consultative sales, combined with our outstanding platform of equipment, provide you the best alternatives available.

**At Riordan we're not just sales.....**

**.....we're solutions.**

### Sales Staff

Art Auchenbach  
Augie Koloras  
Jason Donaldson  
Henry Hood  
Tom Rainier

### Offices Locations

Blue Bell, PA  
Reading, PA  
York, PA  
Baltimore, MD

Proud Supporter of:



### **Riordan Proudly Represents:**

AlgaeWheel hybrid attached growth treatment  
Amwell/E&I Corporation clarification & grit systems  
AquaTurbo aerators & mixers (fixed & floating)  
CBI Walker egg shaped anaerobic digestion systems  
Charter Machine dewatering equipment  
DeLoach degasification, forced & induced draft aeration  
Dupont Memcor membrane filtration  
Elgin intake screens  
EDI (Nexom) diffused aeration systems, screens, filters  
Engineered Fluid, Inc. (EFI) packaged water stations  
Enviroquip of TX (Ovivo) process equipment  
Evoqua Water VAF, CoMag  
Evoqua Wastewater Biomag, Jettech, Davco, Zimpro  
Flottweg solids dewatering centrifuges  
Flygt (a xylem brand) submersible pumps, mixers  
Ford Hall launder brush systems  
Franklin Miller grinders and screens  
FRC Systems dissolved air flotation units  
GNA CSO stormwater & CSO technologies  
Galene packaged water & wastewater systems  
Headworks automatic wastewater screens  
Headworks BIO IFAS & MBBR systems  
Inovair single stage turbo blowers  
Ishigaki, Inc. rotary screw presses  
Kaeser rotary lobe & screw PD blower systems  
KLA Systems jet aeration & mixing systems  
Kubota USA membrane bioreactors  
LCI Corporation biosolids dryers  
Merit Media Systems sludge drying beds  
Noreva nozzle check valves  
Primozone ozone generation systems  
Pulsed Hydraulics, Inc. big bubble mixing systems  
Pumpcon package PS controls & buildings  
RedZone collection system inspection & mapping  
S&N Airoflo floating aerators & brush rotors  
Spirac screw conveyors & headworks equipment  
TomCO2 carbon dioxide feed systems  
Trident Process multidisc dewatering press  
Walker Process clarifiers, digestion systems