

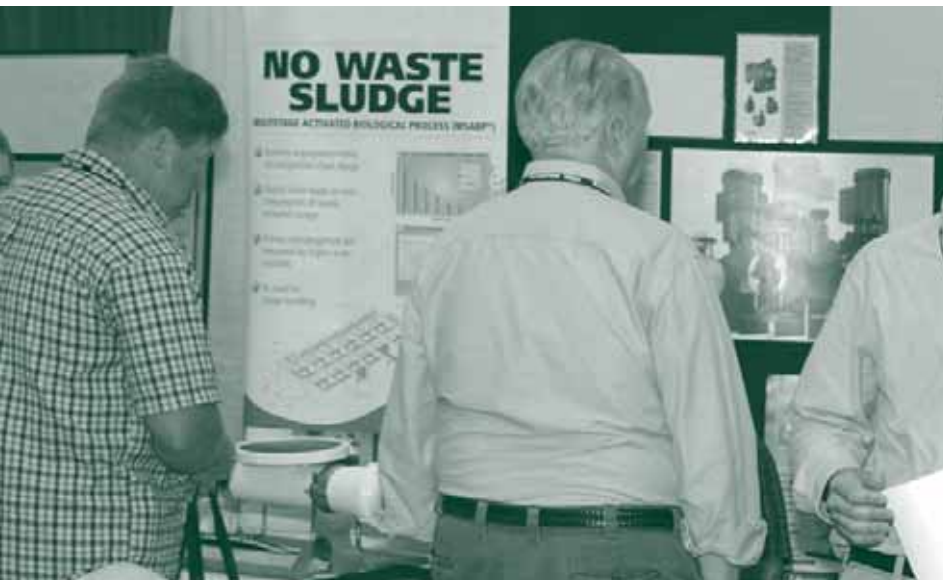


Pennsylvania Water Environment Association

June 13-16, 2010

Penn Stater Conference Center Hotel, State College, PA

www.pwea.org



REGISTRATION PROGRAM



Conference At A Glance

(as of January 29, 2010)

Sunday, June 13

- 9:00am Annual Golf Tournament
- 1:00-7:00pm Registration Open
- 5:00-7:00pm Exhibit Hall Opening & President's Reception

Monday, June 14

- 7:00am-5:00pm Registration Open
- 7:15-8:15am Continental Breakfast in Exhibit Hall
- 7:15am-5:30pm Exhibit Hall Open
- 7:30am-5:00pm Young Professionals Lounge Open
- 8:00-11:30am **Concurrent Morning Programs**
Engineers
Nutrient Removal Technology
Water Reuse
- 8:00-11:30am **Specialty Workshops***
Safety
Utility Management/PWO
Activated Sludge, part 1
- 8:00am-4:30pm Morning Break in Exhibit Hall
- 8:00am-6:00pm Research Poster Presentations
- 9:30-10:00am PWEA Annual Business Meeting with Complimentary Luncheon
Dessert served in Exhibit Hall
- 1:00-3:30pm Plant Tour (Bus departs at 12:30 pm)**
- 1:00-4:30pm **Concurrent Afternoon Programs**
Engineers
Nutrient Removal Technology
Research
Water Reuse
- 2:30-3:00pm Beer & Pretzels Break in Exhibit Hall
- 3:00pm Operator Olympics
- 4:30-6:30pm Meet & Greet Reception in Exhibit Hall
- 6:30-9:30pm PWEA "Rally in the Valley" Annual Dinner & Awards Ceremony**

Tuesday, June 15

- 7:00am-5:00pm Registration Open
- 7:15-8:15am Continental Breakfast in Exhibit Hall
- 7:15am-1:30pm Exhibit Hall Open
- 7:30am-4:30pm Young Professionals Lounge Open
- 8:00-11:30am **Concurrent Morning Programs**
Biosolids
Collection Systems
Industrial Waste Pretreatment
Nutrient Removal Technology
- 8:00am-12:00pm Operations Challenge
- 8:00am-5:00pm **Specialty Workshops***
Laboratory
Activated Sludge, part 2
- 8:00am-6:00pm Morning Break in Exhibit Hall
- 9:30-10:00am Complimentary Lunch in Exhibit Hall
- 11:30am-1:30pm Drawings & Other Announcements in Exhibit Hall
- 1:00pm YP Professional Development Program
- 1:30-3:30pm **Concurrent Afternoon Programs**
Biosolids
Collection Systems
Industrial Waste Pretreatment
Nutrient Removal Technology
- 1:30-5:00pm Afternoon Break in Hotel Break Areas
- 3:00-3:30pm "Are You Smarter Than a YP?" **
This is a Water for People fundraiser
- 5:00-8:00pm
- 12:00pm **Wednesday, June 16**
7:00-8:00am Continental Breakfast in Hotel Break Areas
7:00-11:45am Registration Open
8:00-11:30am **Morning Program**
Financing/Grants Update
8:00-11:30am **Specialty Workshop***
Collection System
8:00am-12:00pm Activated Sludge Practice Exam
12:00pm Conference Concludes

*These workshops are approved for additional PA DEP contact hours. Go to pages 16-17 for details and registration information.

**Ticket required for these events.





A Message from the PWEA President and the Conference Committee Chair

On behalf of the PWEA Board of Directors and the 2010 Conference Committee, we invite you to attend PWEA's 82nd Annual Technical Conference and Exhibition (PennTec 2010) on June 13-16 at the Penn Stater Conference Center Hotel in State College, PA. We hope you will join us!

This year's Conference Program includes a wide range of topics related to the water and wastewater industry. In addition to the Conference 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 a total of 16 contact hours in just a few days!

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, safer manner. We urge you to talk to the vendors about what is most important to you.

The Conference includes networking opportunities for you to meet and interact with your colleagues. We will celebrate the opening of the PennTec Exhibit Hall on Sunday evening with the President's Reception and there will be a Meet & Greet Reception in the Exhibit Hall on Monday evening. The Annual PWEA Dinner and Awards Ceremony will be held on Monday night in Beaver Stadium. And, you won't want to miss "Are You Smarter Than a Young Professional" on Tuesday!

We believe this year's PennTec Conference will provide everything you need under one roof—education, vendor contacts, and networking. We look forward to seeing you there!



Dean Miller
Conference Committee Chair



Alison J. Shuler
PWEA President

Table of Contents

Certification Information	15	Membership	14
Conference at a Glance	2	Program Details	8-15
Conference Registration Form	19	PWO Events	6
Exhibit Hall	5	Registration Chart	4
General Information	4	Social Events	18
Hotel Accommodations	5	Specialty Workshops	16-17
Invitation	3	Young Professionals	7

2010 Annual Business Meeting

Notice is hereby given that the Annual Business Meeting of the Pennsylvania Water Environment Association will be held on Monday, June 14 at 11:30am at the Penn Stater Conference Center Hotel in State College, PA.



General Information

Conference Registration

You may register for the full Conference or at the daily rate. See the chart below for a list of what is included with your registration fee. Access to the Exhibit Hall is included for the day(s) covered by your registration.

Registration Fees

You must be a member of PWEA or WEF/PWEA to qualify for Member rates. Go to page 19 for the registration form.

Credit Card Payments

Due to the ever rising fees charged by banks and credit card companies, effective immediately the PWEA has changed its policy for credit card payments. A surcharge will now be added to the total of all credit card payments. Please add 5% to your total and round up to the next dollar. If paying by check, this surcharge does not apply.

Guest Registration

One guest may register at no charge with each **FULL** Conference registration. Daily and discounted registrations do not qualify. A Guest is a spouse, life partner or dependent who is not in the water or wastewater industry and who will not attend any educational sessions. The "Rally in the Valley" event and other ticketed social events are not included. Ticket(s) must be purchased if a guest wishes to attend.

College Students

Full-time college students may register at no charge if the registration form is submitted with a photocopy of student identification. Social events and meals are not included.

Confirmation Letters

Confirmation letters will be sent by email or fax. Please be sure to include your email address and fax number on your registration form.

Badges

Upon arrival at the Conference, go to the PWEA Registration Desk to pick up your badge and other Conference materials. Everyone must have a badge to enter the Exhibit Hall. Badges will be checked, so please wear your badge in a visible area at all times

Cancellation/Substitution Policy

No refunds granted after April 30, 2010. A \$50 cancellation fee will be assessed on all refund requests received prior to May 1, 2010. All refunds must be requested in writing. Substitutions are permitted with a \$25 per person substitution fee. Substitutions may be made until May 21, 2010 and must be made in writing, accompanied by a new registration form. Substitutions may not be made on-site.

PA DEP Operator License Contact Hours

Due to significant budget cuts within the PA DEP, the Wastewater Training Program has suspended processing the approval of training courses, conferences, workshops, etc., for wastewater operators. Go to page 15 for details on how this affects the PennTec Conference.

NEW! "Rally in the Valley" Annual Dinner & Awards Ceremony at Beaver Stadium

This year the Annual Dinner & Awards Ceremony will be held in the Mount Nittany Club at Beaver Stadium! The event will be held on Monday evening and will include bus transportation and a buffet dinner with a hosted bar. Plans are in the works to make this evening a memorable one!

Full Conference registration includes one complimentary ticket to this event. Daily, Guest, Student, and other discounted registrations and other discounted registrations do not qualify for the complimentary ticket, but a ticket may be purchased for those individuals.

What's included with your Registration?	Regular Conference Sessions	Sunday President's Reception	Monday Continental Breakfast; AM & PM Breaks; Lunch; Meet & Greet Reception	Monday Rally in the Valley Event	Tuesday Continental Breakfast; AM & PM Breaks; Lunch	Tuesday YP Professional Development Course	Tuesday YP Social Event	Wednesday Continental Breakfast; AM Break	Specialty Workshops
Full Conference	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Monday only	Yes	No	Yes	No	No	No	No	No	No
Tuesday only	Yes	No	No	No	Yes	Yes	No	No	No
Tuesday only, YPs	Yes	No	No	No	Yes	Yes	Yes	No	No
Tuesday YP Professional Development Course only	No	No	No	No	No	Yes	No	No	No
Wednesday only	Yes	No	No	No	No	No	No	Yes	No
Guest Registration	No	Yes	Yes	No	Yes	No	No	Yes	No

Exhibit Hall



The Exhibit Hall is a very important part of the PennTec Conference. Visiting the vendors will be informational, educational, and it will also be fun! Here are some of the things we have planned for you in the Hall:

Exhibit Hall Opening & President's Reception

The grand opening of the PennTec 2010 Conference & Exhibition will be celebrated during the President's Reception on Sunday, June 13th, 5:00-7:00pm. Enjoy complimentary hors d'oeuvres and cash bars while you network with your colleagues and the vendors. A ticket for a complimentary beverage at the reception will be included with each registration. And don't forget to enter the raffle for the Door Prize Drawings! Look for your raffle ticket in your registration materials. Only regular Conference attendees are eligible for this raffle. Booth representatives and guests are not eligible to participate. You must be present to win.

NEW! Beer & Pretzels Break

This year we will be serving beer, root beer, and soft pretzels in the Exhibit Hall during the Monday afternoon break! Come to the Hall to relax and visit with the vendors between sessions.

Meet & Greet Reception

This reception gives you another opportunity to visit with the vendors and network with fellow attendees. The reception will be held following sessions on Monday, June 14th 4:30-5:30pm. Festivities will include door prize raffles and refreshments. You will be given a raffle ticket with your registration materials. Only regular Conference attendees are eligible for this raffle. Booth representatives and guests are not eligible to participate. You must be present to win.

NEW! Massage Therapy in the Exhibit Hall

Two Massage Therapists will be stationed inside the Exhibit Hall. Massages will be complimentary to all Conference attendees. Be sure to stop by for your massage!

Sewer Bowl

Back by popular demand, the Sewer Bowl will be in the main Exhibit Hall. This fun competition is open to registrants and vendors. Cash prizes will be awarded for the top scores.

Vendor Booth Drawing Announcements

Some of our exhibitors will be hosting their own raffle drawings. Entry forms can be found at participating booths. PWEA will announce the winners of those raffle drawings at 1:00pm on Tuesday, June 15th, inside the Exhibit Hall.

Food Stations

All food and break stations on Sunday, Monday and Tuesday will be located inside the Exhibit Hall. This includes both receptions, continental breakfasts, coffee breaks, dessert from Monday's lunch, and lunch on Tuesday. The only exception is Monday's lunch buffet, which will be in a ballroom during the PWEA Annual Business Meeting. After the Exhibit Hall closes on Tuesday at 1:30pm, food and beverages will be available at the Hotel break stations.

Hotel Accommodations



Penn Stater Conference Center Hotel 215 Innovation Blvd • State College, PA 16803

A block of rooms has been reserved at the Penn Stater for PennTec 2010.

Reservations must be made by May 12, 2010. Rooms may not be available after this date. The discounted room rates are as follows:

\$113.00 per Room/Single or Double Occupancy

*These rates include overnight accommodations only.
Meals are not included. All rooms are non-smoking.*

Please call Reservations at 1-800-233-7505 and mention **Reservation ID PWE0612** to receive the discounted rates.





Calling All Operators... Are You Up For The Challenge?

PWEA will host an Operations Challenge on Monday and Tuesday, June 14-15, during PennTec 2010 in State College. This is a team event with the winning team going on to represent PWEA at the National Operations Challenge during WEFTEC 2010. The Challenge includes timed events in Maintenance, Safety, Collection System, Laboratory, and Process Control.

Questions? Need more information? You can request the Operations Challenge Rules & Regulations booklet by sending an email to opschallenge@wef.org. Besides the rules, this booklet also contains complete task summaries. Or you may contact Mike DiSantis with DELCORA at 610-876-5523 ext 264 with your questions.

If you would like to participate in the Operations Challenge, please submit your team registration by completing and returning this form by April 30, 2010.

** Team Members must register for the full PennTec Conference to participate. They may register at the Member rate regardless of membership status.*

Operations Challenge Registration Form

Team Name _____

Team Members

1) _____ 3) _____

2) _____ 4) _____

Mail or Fax completed form to:
PWEA Ops Challenge Registration
PO Box 3367
Gettysburg, PA 17325
Fax: 570-549-2221
Phone: 570-549-2204

Registration Deadline is April 30, 2010

Team Contact Information

Coach Name _____

Organization _____

Address _____

City _____ State _____ Zip _____

Phone # _____ Fax # _____

Email _____

PLANT TOUR

Evergreen Farms

Monday, June 14th, 1:00-3:00pm

The location for this year's plant tour is a 2500 head dairy farm. We will tour their manure disposal system.

Be sure to sign up when you register. Only a limited number of tickets will be available on-site. You must have a ticket to board the bus.

Boarding will begin at 12:15pm.

The bus departs at 12:30pm

The cost is \$15 per person. Dress is casual.

Check out how others are doing it!

OPERATOR OLYMPICS

Monday, June 14th, 3:00pm

This is a fun event based very loosely on some real Olympic events but with a wastewater twist. Like the discus throw, where a manhole insert is used instead of a discus. Plastic pipe is used for the javelin throw and a ball from a pump for the shot put. Chipping golf balls into toilets and throwing plungers into buckets—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. The starting time will be 3:00pm with everyone meeting outside (follow the signs). If you're going on the plant tour, don't worry—you can still participate in the Olympics even if you aren't back by the start time.

So join your fellow Operator Olympians—you'll be glad you did!



The Pennsylvania Water Environment Association would like to offer a special invitation to Young Professionals (YPs) thinking about coming to PennTec 2010. YPs have been participating in a number of social and service events over the years and are aiming to continue building the program. The YP Committee is looking forward to seeing you at PennTec.

A special registration category is available for YPs who wish to attend the Conference on Tuesday. The discounted YP fee includes access to the Exhibit Hall and regular Conference educational sessions, plus continental breakfast, breaks and lunch. This registration also includes the YP Professional Development Workshop and a ticket for the Tuesday evening YP social event. The chart on page 4 outlines everything included. The registration form is on page 19.

YPs may register to attend the Professional Development Workshop without registering for the full Conference. So if you can't get away for the entire day, we hope you can come to this year's YP workshop—and plan to stay for the evening social event! Use the registration form on page 19 to sign up for one or both of these events (separate fees apply).

Come join us at the YP Lounge on Monday and Tuesday. Refreshments, internet access, and a comfy spot for YPs to take a break between sessions will be offered throughout both days. This is a great opportunity to network with other YPs. Not a YP member yet? It's easy to sign up. Membership applications will be on hand.

The YP Committee is planning the Tuesday Night Social Event and we invite you to stick around and join in for a few rounds of "Are you Smarter than a Young Professional?" Test your knowledge of wastewater-themed trivia against YPs and OPs (Old Professionals) alike. Play on your own or join a team. Prizes, refreshments and drink tickets will be provided. Please note: this is a fundraiser event and a portion of the proceeds goes to Water for People.

On the Conference registration form, there is a box that you can check indicating if you are age 35 or younger. This will identify you as a YP. You will be given a colored lanyard designating your YP status and this will grant you access to the YP Lounge.

The YP Committee has a number of events planned for 2010 and is looking forward to your participation.

Sara Urbanczyk
YP Committee Co-Chair

Tony Elberti
YP Committee Co-Chair

Introducing...

A Professional Development Workshop for YPs

Tuesday, June 15, 1:30-3:30pm

The Key to Leadership...Know Yourself

Speaker: Philip Tiewater, PE, ELM Consulting

Philip Tiewater continues his series of workshops to help young professionals build the competencies needed for career success. This time he will discuss the importance of understanding yourself as you develop your leadership skills. Leaders need insight to their values, their communication style, and how they react to stressful situations. This insight begins with an understanding of oneself.

This workshop includes a short personality test, an exercise, discussion, and role playing to emphasize the need for self-knowledge before managing and leading others.



Program Details

Monday, June 14 Morning Education Sessions

ENGINEERS PROGRAM

Moderator: Mark Perry, Herbert, Rowland & Grubic, Inc., Harrisburg, PA

8:00-8:45am – CAN DO WWTP Expansion and Upgrade to Meet Chesapeake Bay Nutrient Standards

Speaker: William A. Brown, PE, LO, DEE, Environmental Engineering & Management Associates, Inc., Kulpsville, PA

An existing 0.5 MGD circular extended-aeration package plant was expanded to 1 MGD and upgraded to meet Chesapeake Bay nutrient standards. Aeration volume was reduced and clarifier diameter increased within the existing tanks. Multi-zone anoxic tanks and upflow sand filters have produced total nitrogen <5 mg/l in winter months.

8:45-9:30am – Berwick Success Story: Innovative RAS Treatment and BNR Systems Provide CBTS Compliance in a Cost Effective System

Speaker: Brian L. Book, PE, Herbert, Rowland & Grubic, Inc., State College, PA

The Berwick WWTP received Innovative grants and supplemental funding to implement the Cannibal sludge treatment process and convert the existing plant to Simultaneous Nit/DeNit. This presentation will report the results of the systems that are to achieve an 80% biosolids reduction and associated disposal costs savings, and increase the SRT of the biological process to achieve TN removals that exceed the Chesapeake Bay Tributary Strategy.

10:00-10:45am – Biogas Production: Maximizing Anaerobic Digester Performance with the Right Mixing Equipment

Speaker: Augustin E. Conesa, PE, Gannett Fleming, Inc., Camp Hill, PA

Biogas production and biosolids stabilization in anaerobic digesters is highly dependent upon mixing efficiency. The selection of mixing technology depends on the application, taking gas production, use, biosolids fate, digester geometry, and costs into consideration. This presentation provides a sensible approach in matching the right equipment to the application.

10:45-11:30am – Change is in the Air: New Approaches to Wastewater Planning

Speaker: Jodi L. Reese, PE, CET Engineering Services, Harrisburg, PA

Planning for your next wastewater treatment plant upgrade or expansion is complicated today by several factors, including the economic downturn and timing of the recovery, availability of funding, and unidentified future regulations. This presentation will explore these aspects and provide several innovative approaches to planning to achieve flexible and economical solutions.

NUTRIENT REMOVAL TECHNOLOGY PROGRAM

Moderator: Michele Braas, RETTEW Associates, Inc., Lancaster, PA

8:00-8:45am – Optimizing BNR: Same City, Same Process, Different Effluent TN and TP

Speaker: Katya Bilyk, PE, Hazen and Sawyer, P.C., Raleigh, NC

Two similarly designed WWTPs have exhibited varied effluent quality; Plant A typically achieves <3 mg/L TN and 0.5 mg/L TP while Plant B achieves <7 mg/L TN and requires alum addition. This presentation compares these two plants to illustrate the importance of wastewater characterization and operations on BNR performance and optimization.

8:45-9:30am – Startup of the Havre de Grace WWTP Enhanced Nutrient Removal Facility

Speaker: Scott Crosswell, PE, BCEE, Stearns & Wheeler GHD, Bowie, MD

The City of Havre de Grace recently upgraded and expanded their Wastewater Treatment Plant for enhanced nutrient removal (ENR). Some of the key challenges associated with the construction, start up and initial operation will be presented. In addition, initial plant performance, optimization and lessons learned will be discussed.

10:00-10:45am – Use of Flow Equalization Reactors in BNR Treatment

Speaker: John H. Reid, Reid Engineering Company, Inc., Fredericksburg, VA

Flow Equalization Basin Reactors provide combined hydraulic flow equalization and anaerobic/anoxic activated sludge treatment in multi-stage biological nutrient removal systems. Case Histories provide use of Flow Equalization Reactors to achieve biological nutrient removal when treating municipal, industrial, and combined municipal and industrial wastewater.

10:45-11:30am – Full-Scale BioMag™ Pilot Study

Speaker: Michael Schober, Buchart Horn, Inc., York, PA

This presentation will cover a full-scale pilot test of the BioMag™ process at a 0.6 MGD wastewater treatment plant. The BioMag™ process was tested at full-scale in parallel with a conventional activated sludge system. Actual operational results, findings, problems and recommendations will be presented.

WATER REUSE PROGRAM

Moderators: Lucinda J. Pype, Camp Dresser McKee, Inc., Lancaster, PA, and John E. Spitko, Jr., PE, Spotts, Stevens & McCoy, Inc., Reading, PA

8:00-8:45am – Cost Effective Strategies to Remove Endocrine Disrupting Compounds (EDCs) from Drinking Water Supplies

Speaker: Richard V. Pepino, Franklin & Marshall College, Lancaster, PA

Endocrine Disrupting Compounds (EDCs) are currently being detected in a wide variety of drinking water sources. Currently EPA is examining whether the potential public health risks associated with these molecules require additional regulatory actions to limit exposure. Technology based options and/or pollution prevention options also exist. This presentation looks at which strategies are most cost-effective and provide improved environmental safeguards.



8:45-9:30am – Halia™ Advanced Oxidation System for Water Re-Use

Speaker: Shaun Porter, Air Products & Chemicals, Allentown, PA

The work to be detailed in this presentation documents the pathogen destruction ability of ozone in wastewater, allowing for ozone to be used as a robust barrier to both pathogens and trace organics. This presentation overviews detailed pathogen disinfection research for ozone and advanced oxidation (ozone and hydrogen peroxide) using Applied Process Technology's HiPOx technology to meet the stringent disinfection criteria for "tertiary recycled water" under Title 22 of the California Code of Regulations.

10:00-10:45am – Membrane Treatment for Nutrients and Enhanced Removals of Trace Organics and PPCPs

Speaker: Marie-Laure Pellegrin, HDR Engineering, Tampa, FL

Membrane use is evolving in the wastewater industry. Long used to help keep drinking water safe, membranes increasingly are being used in wastewater treatment as well. This presentation examines key membrane treatment drivers, applications and design considerations in wastewater treatment and evolution of membrane technologies.

10:45-11:30am – Evolution of Wastewater Treatment at Mountainview Thoroughbred Racing Association located at Hollywood Casino at Penn National

Speaker: Thomas H. Jones, Gannett Fleming, Inc., Harrisburg, PA

This presentation provides a historical review of wastewater treatment at the Penn National Race Course located in Grantville, PA. The original WWTP was constructed in the 1970s and was replaced in 2005. The new WWTP is designed for compliance with TN and TP limits stipulated in the Chesapeake Bay Tributary Strategy. Additionally, approximately 25% of WWTP effluent is reused at the Hollywood Casino at Penn National facilities.

SPECIALTY WORKSHOPS

Go to pages 16-17 for the course descriptions and registration information.

8:00-11:30am – Safety Workshop: Waterborne Disease Outbreaks and the Basics of Epidemiology

This course is PA DEP approved for 3.0 water & wastewater contact hours, and is limited to 40 attendees. Course ID 3594. You must register in advance for this course.

Moderators: Joseph E. Rost, McKeesport City Municipal Authority, McKeesport, PA, and James L. Zeigler, City of Harrisburg, Harrisburg, PA

Speaker: Gary Burlingame, City of Philadelphia Water Department

This course is intended for water and wastewater operators, but it is also pertinent to lab staff, plant engineers, regulators, and health officials. The course level is basic through intermediate.

8:00am-4:30pm – Utility Management & PWO Workshop: Asset Management for Water & Wastewater Facilities

This course is PA DEP approved for 6.0 water & wastewater contact hours, and is limited to 40 attendees. Course ID 2673. You must register in advance for this course.

Moderator: Philip Tiewater, ELM Consulting, Wayne, PA

Speakers: Jim Kern, PE, US EPA Region 3, Philadelphia, PA; Members of the PWEA Utility Management Committee; and Members of the PWEA PWO Committee

The target audience is water and wastewater operators and municipal managers. The course level is basic through intermediate.

8:00am-6:00pm – Activated Sludge Course

This course is PA DEP approved for a total of 16.0 wastewater contact hours, and is limited to 40 attendees. Course ID 3884. You must register in advance for this course.

Speaker: Jenifer Fields, DEP SERO, Norristown, PA

This is a two-day course offered on Monday and Tuesday, June 14-15, with an optional practice exam offered on Wednesday, June 16, 8:00am-12:00pm. The target audience is operators in training and it is also a refresher for licensed operators. The course level is basic through advanced.

Monday, June 14

Afternoon Education Sessions

ENGINEERS PROGRAM

Moderator: Mark Perry, Herbert, Rowland & Grubic, Inc., Harrisburg, PA

1:00-1:45pm – Energy from Wastewater: Cogeneration at Small to Mid-Sized WWTPs

Speaker: Stanley J. Chilson, PE, CET Engineering Services, Trevoze, PA

The potential energy in wastewater has remained largely untapped in the United States, especially at small to mid-sized treatment plants. With rising electrical costs and new technologies, however, projects such as co-generation are becoming economically feasible at these facilities. Two case studies serve to illustrate.

1:45- 2:30pm – Connections for Variable Frequency Drives to Mitigate Premature Motor Bearing Failures

Speaker: Ralph Nevel, PE, RCDD, Spotts, Stevens & McCoy, Inc., Reading, PA

This presentation will describe problems encountered with variable frequency drives that can lead to premature failures of the motor bearings and recommendations for motors and connections that can mitigate the bearing failures. It will provide an understanding of potential problems associated with motors connected to variable frequency drives, provide recommendations for motors and connections between the equipment that will extend the operating life of the motors and decrease maintenance costs.



Program Details

3:00-3:45pm – Saving Green By Going Green: Energy Optimization at Wastewater Treatment Plants

Speaker: Joe Rohrbacher, PE, Hazen and Sawyer, P.C., Pittsburgh, PA

Water and wastewater utilities account for approximately 3% of the nation's energy consumption and may represent 1/3 of a municipality's energy costs. Escalating energy costs and emphasis on sustainability have led utilities to evaluate energy usage. This presentation will identify and evaluate process improvements to reduce WWTP energy consumption.

3:45-4:30pm – Energy Reduction and Nutrient Removal in WWTPs Using Real-Time Process Control Systems

Speaker: Tilo Stahl, PhD, BioChem Technology, Inc., King of Prussia, PA

A real-time feed-forward control model allows dissolved oxygen set-points and mixed liquor return to be matched in real time to the influent loading. This results in a significant reduction in electrical energy consumption and improved nitrogen removal. Results achieved in Arizona and Connecticut will be discussed.

NUTRIENT REMOVAL TECHNOLOGY PROGRAM

Moderator: Michele Braas, RETTEW Associates, Inc., Lancaster, PA

1:00-1:45pm – A Framework for Integrating Hedging Strategy in the Evaluative Process for the Selection of Enhance Nutrient Removal Solutions: Factoring Volatility and Safety

Speaker: Dr. Malcolm Fabiyi, Environmental Operating Solutions, Inc., Bourne, MA

This presentation will discuss a novel evaluative hedging framework that incorporates volatility and variability into the selection criteria for carbon sources and treatment technologies. Findings will integrate user assessments of material safety, hazard potentiality, as well as the price volatilities associated with the most commonly used carbon sources.

1:45-2:30pm – An Evaluation of the Use of On-line Analyzers to Optimize Performance of Biological Wastewater Treatment Systems

Speaker: Steve McCuskey, Hach Company

This presentation discusses the results of a study intended to evaluate the utility of on-line analyzers to improve performance of biological wastewater treatment systems. Parameters measured include: UV-organics, DO, ORP, pH, NO₃⁻, NH₄⁺, TSS and PO₄⁻. Plots of process data collected during the study will be shown and discussed to show temporal patterns as well as interrelationships between process variables.

3:00-3:45pm – Implementation, Startup, and the Wider Benefits of Pennsylvania's First Nutrient Recovery Project

Speaker: Matt Kuzma, Ostara Nutrient Recovery Technologies, Seattle, WA

With tightening nutrient restrictions entering the Chesapeake area discharges, municipalities are looking to implement creative and financially beneficial ways of managing nutrients. The York Wastewater Treatment Plant has implemented a project to remove phosphorus and nitrogen from their dewatering stream to improve plant performance, provide cost savings, and generate an environmentally-friendly struvite-based fertilizer.

3:45-4:30pm – Advanced Nutrient Removal and Recovery Using Innovative Liquid/Solid Separation Technology

Speaker: Edward Weinberg, O'Brien & Gere, Blue Bell, PA

A patent pending, non-biological, wastewater treatment system, which selectively recovers nutrients from non-point source facilities, resulting in improved water quality discharge is presented. An economic model has been developed to maximize potential revenues/offsets. Farm profits can be maximized using this process that generates nutrient trading credits by exporting concentrated-nutrient manure.

1:00-4:30pm – Research Session & Discussion on Sustainable Environment

Moderator: Jeanne VanBriesen, Carnegie Mellon University, Pittsburgh PA

This session includes guest speaker Ron Schwartz with the PA DEP, who will discuss the new effluent TDS standards. Award winning students, professionals and academics will present their work on current and future topics that directly effect our living environment.

WATER REUSE PROGRAM

Moderators: Lucinda J. Pype, Camp Dresser McKee, Inc., Lancaster, PA, and John E. Spitko, Jr., PE, Spotts, Stevens & McCoy, Inc., Reading, PA

1:00-1:45pm – Produced and Flowback Water: Opportunities for Value Creation, Water Conservation and Public Benefit

Speaker: Robert Waits, 212 Resources, Salt Lake City, UT

The Natural Gas E&P world faces a number of challenges associated with water management. Rigorous regulatory and treatment demands, public scrutiny across operations... all amid relatively low gas prices and economic uncertainties. This presentation will explore proven, unique treatment solutions, the value implications and creating a context for public dialogue.

1:45-2:30pm – Treatment and Reuse of Waste Fluids from Gas Well Drilling

Speaker: Bryan Swistock, Penn State University, State College, PA

This presentation will briefly describe the gas well drilling process, the types of waste fluids produced during drilling and the chemistry of the waste fluids. Treatment and disposal options for gas drilling waste fluids will be described including the relatively new approach to recycle or re-use waste fluids for subsequent drilling activities.



3:00-3:45pm – Marcellus Shale Development – Protecting Water Resources through Water Reuse

Speakers: John E Spitko Jr, PE, and Eric P Grindrod, PG, Manager, both with Spotts, Stevens & McCoy Inc., Reading, PA

Marcellus Shale development escalates impacts upon Pennsylvania's valuable water resources. Water is required to drill gas wells and frac flow back is produced. Developers make decisions regarding: water sources and dealing with frac flow back wastewater. Drivers include cost, timing, water resource protection regulations, public water supply and aquifer protection. Water reuse offers possible solutions.

3:45-4:30pm – Pharmaceutical Wastewater Effluent Reclamation and Reuse: Case Studies

Speaker: Jack L. Polce, PE, Advanced GeoServices Corp., West Chester, PA

Part of the water conservation initiative by a pharmaceutical manufacturing company is to evaluate reuse of treated pharmaceutical wastewater effluent. The driver behind the project was to reduce potable water consumption and provide cost savings. The two case studies presented show unique opportunities for water reuse at pharmaceutical company's manufacturing facilities.

Tuesday, June 15

Morning Education Sessions

BIOSOLIDS PROGRAM

Moderator: Stefan R. Weaver, Material Matters, Inc., Elizabethtown, PA

8:00-8:45am – What's Greener? Belt Press or Centrifuge

Speaker: Christopher Boyd, Ashbrook Simon-Hartley, North Wales, PA

Explore all the facets that make up the carbon footprint of both the Centrifuge and the Belt Filter Press in municipal dewatering applications. Everything will be covered from manufacturing to installation and long term performance.

8:45-9:30am – Energy Use, GHG Emissions, Land Requirements, and Costs for a Sustainable Biosolids Land-Application Program – A Case Study on Columbus, Ohio

Speakers: Trudy E. Johnston, Aaron B. Stephens, and Robin C. Brandt, PhD PE, all with Material Matters, Inc.; and Robert Van Evra, City of Columbus

As part of the City of Columbus, Ohio's larger solids master planning effort, land application was evaluated as a possible end-use option for the two Columbus treatment plants. Five land application scenarios were evaluated for: cost, land requirement, energy use, GHG production, and overall viability.

10:00-10:45am – Anaerobic Digester Mixing Systems

Speaker: Mark Greene, PhD, O'Brien & Gere, Syracuse, NY

This presentation will compare and contrast several types of mixing systems including mechanical, hydraulic (pumped) and gas recirculation ones. Lessons learned, applicable loading ranges, and the ability of each mixing system to accept external organic sources like fats, oil & grease or food wastes will be discussed. In addition, the use and benefit of modeling techniques like computational fluid dynamics (CFD) will be addressed.

10:45-11:30am – Topic to be announced

COLLECTION SYSTEMS PROGRAM

Moderators: Jeff Cantwell, Flow Assessment Services, LLC, West Chester, PA, and Lori A. Miller, Camp Dresser McKee, Inc., Pittsburgh, PA

8:00-8:45am – Collection System Engineering from a Field Perspective

Speaker: Philip Hannan, PE, Black & Veatch, Gaithersburg, MD

This presentation will review wastewater collection engineering from both the field and maintenance perspectives. Capacity analysis, condition assessment, design and construction enhancements, pipe material performance, SSO and basement backup relationships, and rehabilitation applications will be viewed from the prism of those who both design and maintain the sewers. Contributions of both groups and their shared responsibility toward improved sewer performance and enhanced customer service will be discussed.

8:45-9:30am – SP-24...New Castle County, DE Sewer Rehab

Speaker: Jim Shelton, Malcolm Pirnie Inc., Wilmington, DE

SP-24 is a 14-mile sewer basin encompassing eight neighborhoods in New Castle County, Delaware. Determined through a multi-step hydraulic condition assessment to be badly leaking, a rehabilitation project to greatly reduce I/I was needed. This presentation discusses how the physical condition assessment drove the selection of rehabilitation technologies, how specific technologies were selected, how the construction of these was accomplished, and how effective these methods were in reducing I/I.

10:00-10:45am – Construction of a New Access Manhole to an Existing Deep Tunnel Interceptor

Speaker: Daniel Lockard, PE, ALCOSAN, Pittsburgh, PA

This presentation details the challenges in designing and constructing a new access manhole over an existing concrete pipe sewer interceptor 100 feet deep. The new manhole must provide access for cleaning and inspection. Challenges to be overcome during construction included dewatering, excavation through rock and the existing tunnel structure, and tapping the existing interceptor under surcharged conditions.

10:45-11:30am – Manhole and Pipe Lining Demonstration

Speaker: Hap Witmer, Abel Recon, Mountville, PA

A live demonstration of the Sprayroq manhole lining method and the BlueTek pipe lining method will be done in the classroom.

INDUSTRIAL WASTE PRETREATMENT PROGRAM: Marcellus Shale and Its Impact on POTWs

Moderators: Judy F. Musselman, QEP, CET Engineering Services, Harrisburg, PA, and Brian C. Hagy, Buchart Horn, Inc., Elizabethtown, PA

8:00-8:45am – Marcellus Shale and Pretreatment

Speaker: John Lovell, EPA Region 3, Philadelphia, PA

A discussion of pretreatment responsibilities for POTWs accepting Marcellus Shale wastewater will be presented.



Program Details

8:45-9:30am – Evaluation of Treatability for Marcellus Shale Drilling Waste at POTWs

Speakers: Anthony G. Elberti, PE, Gannett Fleming, Inc., Valley Forge, PA, and Nicholas J. Sahn, Gannett Fleming, Inc., Harrisburg, PA

A step-wise approach has been developed to evaluate the impact on the water quality of the receiving waters, biological treatment processes, and the biosolids quality at wastewater treatment plants accepting gas and oil drilling wastewater. Two case studies will be presented using actual wastewater treatment plant and gas and oil drilling waste data.

10:00-10:45am – Innovative Technology Development for the Treatment and Reuse of Gas Well Fracturing and Produced Waters

Speaker: Matthew J. DeMarco, Advanced GeoServices Corp., West Chester, PA

The extreme high total dissolved solids (TDS) composition of the fracture and production water generated from the Marcellus Shale gas well drilling operations, if not properly managed, threatens to delay the advance of the Marcellus Shale Gas Play. AGC has taken a new approach by exploring technological innovations that Lehigh University's Environmental Engineering Department developed for more conventional desalination applications. This presentation will cover the background of the technology development, a viability assessment for the technology, and the scale up engineering of the desalination process tailored for treatment and reuse of gas well fracturing and produced waters.

10:45-11:30am – Treatment of the Marcellus Shale Water

Speaker: Michael E. Tamplin, GHD, Cazenovia, NY

The treatment and disposal of the water from Marcellus Shale gas drilling has become a major concern for many people living within the shale formation. A recently completed treatability study for the Marcellus Shale gas water will be presented. This project explored the techniques to address the constituents of concern, such as radioactive compounds, high total dissolved solids, high BOD and high conductivity. The study also explored the beneficial reuse of the by-products from this process. During this presentation, a proposed treatment schematic will be presented with a discussion of limitations and costs for each process.

NUTRIENT REMOVAL TECHNOLOGY PROGRAM

Moderator: Michele Braas, RETTEW Associates, Inc., Lancaster, PA

8:00-8:45am – Improving Nitrogen Removal by RAS Addition to the Secondary Anoxic Zone: Results of Full Scale Implementation

Speaker: Luke Wood, I. Kruger Inc., Cary, NC

RAS addition to the secondary anoxic zone or "RAS Bleed" offers a relatively simple method for improving nitrogen removal without necessarily requiring supplemental carbon addition. A full scale study at the Clearwater Road WWTF documents nitrogen removal improvements. Long-term operating data from three full-scale facilities utilizing this process are presented.

8:45-9:30am – Use of Nitrogen Compound Analyzers to Control D.O. Setpoints and SRT for Energy Efficiency and Performance Optimization

Speakers: Steven Kestel, BioChem Technology, Inc., King of Prussia, PA; and Stanley J. Chilson, PE, CET Engineering Services, Treviso, PA

This case study illustrates the use of nitrogen compound analyzers to control variable dissolved oxygen setpoints, internal recycle rates and SRTs for energy savings and performance optimization. Abington Township achieves TN and TP reductions and maintains design flow with no new tanks other than for equalization.

10:00-10:45am – WERF Nutrient Removal Challenge: A Collaborative Effort to Address Technology Performance and Regulatory Requirements

Speaker: JB Neethling, HDR Engineering, Inc., Folsom, CA

The WERF Nutrient Challenge is a multi-year collaborative research initiative established in 2007 to develop and provide current information about wastewater treatment nutrients (specifically nitrogen and phosphorus in wastewater), their characteristics, and bioavailability in aquatic environments to help regulators make informed decisions. The Nutrient Challenge will also provide data on nutrient removal so that treatment facilities can select sustainable, cost-effective methods and technologies to meet permit limits. Work to date has addressed external carbon sources for denitrification, phosphorus removal, refractory nitrogen and phosphorus, and treatment technology performance statistics.

10:45-11:30am – Planning and Coordinating Management of Combined Sewer Overflows with Evolving Nutrient Removal Needs on the Ohio River – A Look Ahead

Speakers: Michael F. Lorenzo and Derek Guthrie, both with HDR Engineering, Inc., Kansas City, MO

The conflicting needs of combined sewer overflow control through the development of Long Term Control Plans for, and the development of, numeric nutrient criteria in accordance with USEPA policy guidance are discussed. An approach to planning for future contingencies at acceptable levels of risk is presented.

SPECIALTY WORKSHOPS

Go to pages 16-17 for the course descriptions and registration information.

8:00am-5:00pm – Laboratory Workshop: Simplified Methods for Nutrient Testing

This course is PA DEP approved for 6.5 water & wastewater contact hours, and is limited to 30 attendees. Course ID 3135. You must register in advance for this course.

Moderator: Patrick J. Canavan, Clairton Municipal Authority, West Mifflin, PA

Speaker: Greg A Starlin, Hach Technical Training

The target audience is water and wastewater system managers and operators. The course level is basic through intermediate.



8:00am-6:00pm – Activated Sludge Course

This course is PA DEP approved for a total of 16.0 wastewater contact hours, and is limited to 40 attendees. Course ID 3884. You must register in advance for this course.

Speaker: Jenifer Fields, DEP SERO, Norristown, PA

This is a two-day course offered on Monday and Tuesday, June 14-15, with an optional practice exam offered on Wednesday, June 16, 8:00am-12:00pm. The target audience is operators in training and, it is also a refresher for licensed operators. The course level is basic through advanced.

Tuesday, June 15 Afternoon Education Sessions

1:30-3:30pm – YP Professional Development Program: The Key to Leadership... Know Yourself

Moderators: Sara Urbanczyk, Geiger Pump & Equipment Co., Aston, PA, and Anthony Elberti, Gannett Fleming, Inc., Valley Forge, PA

Speaker: Philip Tiewater, ELM Consulting, Wayne, PA

Philip Tiewater continues his series of workshops to help young professionals build the competencies needed for career success. Go to page 7 for session details.

BIOSOLIDS PROGRAM

Moderator: Stefan R. Weaver, Material Matters, Inc., Elizabethtown, PA

1:30-2:15pm – Communication and Outreach Strategies for Utilities

Speaker: Michael Wardell, Mid-Atlantic Biosolids Association

The Mid-Atlantic Biosolids Association (MABA) and the PWEA Biosolids Committee have initiated a communications program financially supported by wastewater treatment plants, professional organizations, biosolids contractors, and consultants. The issue in question is the safety and value of biosolids. This project proactively encompasses expanding support for biosolids, and coordinating positive outreach and communication efforts on a local and statewide level.

2:15-3:00pm – Wastewater Treatment Plant Design and Operation Modifications to Improve Management of Biosolids Odors and Sudden Increases in Indicator Organisms

Speakers: Diane Garvey, Garvey Resources, Inc.; Matthew Higgins, PhD, Bucknell University; and Sudhir N. Murthy, PhD, PE, DCWASA

A status report on a WERF research project will be presented. The overall goal of this project is to develop approaches to manage the issues of regrowth, odors, and sudden increase (ROSI) of indicator and pathogenic bacteria in biosolids. The initial research is investigating methods for improving the enumeration of indicator bacteria, mainly E. coli and fecal coliforms, after digestion and dewatering. In addition, research is underway to characterize the odorants that contribute to persistent odors in biosolids. The second phase will focus on developing and implementing solutions in the field.

3:30-4:15pm – Alternative Biosolids Management Investigation: A Comprehensive Investigation into Biosolids Management

Speaker: Ryan Mastowski, RETTEW Associates, Inc., Camp Hill, PA

In order to properly manage their biosolids production, the Lancaster Area Sewer Authority (LASA) contracted a design team to analyze the best alternatives for biosolids management at their facility through a detailed analysis and open communication with all parties involved.

4:15-5:00pm – Topic to be announced

COLLECTION SYSTEMS PROGRAM

Moderators: Jeff Cantwell, Flow Assessment Services, LLC, West Chester, PA, and Lori A. Miller, Camp Dresser McKee, Inc., Pittsburgh, PA

1:30-2:15pm – Developing a Private Property Inspection Program for a Small Municipality

Speaker: Matthew Peleschak, PE, Larson Design Group, Williamsport, PA

The Borough of South Williamsport's collection system consists of approximately 30 miles of pipe and two pump stations. There are approximately 3,000 properties connected. During wet weather events, the Borough conveys untreated sewage directly to the receiving waters. In 2006, the Borough entered into a Consent Order with the Pennsylvania DEP to develop a Wet Weather Flow Management Plan, which identifies how the Borough will address public and private property issues.

2:15-3:00pm – Pump Station Upgrades

Speaker: Gus Belmont, Whitpain Township, Blue Bell, PA

Pump station upgrades specifically for collection system operators will be discussed. Topics will include pump upgrades, motor controller upgrades, wet well/dry well upgrades, and force main bypass upgrades.

3:30-4:15pm – Removal of Stream Inflow Sources to Combined Sewer Systems

Speaker: Jan Oliver, ALCOSAN, Pittsburgh, PA

The presentation discusses projects the Allegheny County Sanitary Authority (ALCOSAN) has initiated to remove natural streams from combined sewer systems. These streams take up sewer capacity for dry weather flow, increase sewer maintenance and contribute to combined sewer overflows. The projects are in various phases of planning, design and construction for the removal of the stream from the system. One project incorporates day lighting the stream through public park land.

4:15-5:00pm – LASA Demonstration of Their Camera Truck

Speaker: Albert Knepp, Lancaster Area Sewer Authority, Lancaster, PA

The Lancaster Area Sewer Authority will bring their new camera truck to demonstrate its capability for main line and lateral investigations. Demonstrations will be carried-out above ground in demo pipes. LASA methods of documentation will be demonstrated as well.



Program Details

INDUSTRIAL WASTE PRETREATMENT PROGRAM: Marcellus Shale and Its Impact on POTWs

Moderators: Judy F. Musselman, QEP, CET Engineering Services, Harrisburg, PA, and Brian C. Hagy, Buchart Horn, Inc., Elizabethtown, PA

1:30-2:15pm – Marcellus Wastewater – Why Citizens are Concerned about How It is Treated

Speaker: Thomas Y. Au, Pennsylvania Sierra Club

Rightly or wrongly, citizens are concerned about the inflow of wastewater from Marcellus Shale gas wells to POTWs. Concerns raised by some citizens about the chemical composition of the frac water, the degree of treatment of the wastewater, and the effect on the receiving streams will be discussed. Steps that POTW operators can take to address these concerns will be outlined.

2:15-3:00pm – A Gas Company’s Perspective: Pretreatment/POTW Treatment of Gas Well Wastewater — Why It Makes Sense

Speaker: L. Richard Adams, Chief Oil & Gas, LLC, Montoursville, PA

This presentation will describe recent changes in the gas industry's management of well pad wastewater that now relies upon reuse, which results in significant reductions in volumes requiring disposal. Given this trend, the presentation will describe how the combination of pretreatment and POTW treatment can be accomplished safely, and why it makes sense, as one of the management alternatives.

3:30-4:15pm – Economic Impacts of the Marcellus Shale on the Local Economy

Speaker: Anthony J. Ventello, Central Bradford Progress Authority, Towanda, PA

This presentation will describe the economic impacts of the Marcellus Shale Natural Gas drilling in Bradford and Susquehanna counties and why it may differ from other natural gas plays in the US and Canada.

4:15–5:00 PM – Understanding the Options for Treatment of High TDS Flowback Water

Speaker: Robert Kimball, PE, BCEE, Camp Dresser & McKee, Inc. (CDM), Helena, MT & Pittsburgh, PA

The development of natural gas resources from shale formations has resulted in the need to manage and sometimes treat high TDS flowback water. The selection of the best treatment technology for high TDS water, especially from the oil and gas industry, is complex and is dependent on a lot of factors including the volume, water chemistry, treatment requirements, reuse opportunities, mobility of equipment and cost. This presentation will provide a summary of the available treatment options, their application to various types of waters and TDS concentrations, pretreatment requirements and limitations, and a relative understanding of both mobility and cost.

NUTRIENT REMOVAL TECHNOLOGY PROGRAM

Moderator: Michele Braas, RETTEW Associates, Inc., Lancaster, PA

1:30-5:00pm – Nutrient Criteria Development for Freshwater Streams

Speakers: William T. Hall and John C. Hall, both with Hall & Associates, Washington, DC

Issues surrounding nutrient criteria development and TMDL implementation will be presented. The session will include evolution/critique of nutrient criteria development in PA; status of post-TMDL actions; and engineering solutions for meeting TMDL TP limits. Also discussed will be TMDL implementation issues: MS4 permits; growth/development; agriculture; and economic impact.



PWEA Membership



Not a member of PWEA? Go to www.pwea.org and download the membership application form. Include the completed form with your PennTec registration to receive the PWEA member rate for the Conference and for future 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 the wastewater industry.

You will also receive the monthly PWEA Job Bank, advertising employment opportunities in the field; and the monthly PWEA e-Newsletter, keeping you up-to-date on the latest wastewater industry news and PWEA events.

Program Details



Wednesday, June 16 Morning Education Sessions

8:00-11:30am – Grant Update & Financing

Moderator: Russell F. McIntosh, Herbert, Rowland & Grubic, Inc., Harrisburg, PA

This year's workshop will review the two grant and loan programs enacted as Act 63 of 2008 (PA H2O) and Act 64 approved by the voters in November, 2008. The Commonwealth Finance Authority will discuss the second round of applications that will be received July 1, 2010. The Pennsylvania Infrastructure Investment Authority (PENNVEST) will discuss the status of the \$400,000,000 authorized by Act 64 of 2008 and provide a general review of the program's requirements, priorities, and funding outlook balance of 2010 and beyond.

USDA's Community Facilities program will be reviewed including the availability and sources of funding for 2010. The program's eligibility requirements, median household income limits, and general application procedures will be discussed.

Sustainable infrastructure has been viewed by many as an effective means of reducing the reliance on grants to keep wastewater systems up-to-date and in regulatory compliance. The report of the Sustainable Infrastructure Task Force, established by Governor Rendell, addressed mechanisms for achieving financial sustainability. A discussion of the report's recommendations is planned.

The workshop will bring together representatives of the agencies that will help administer and guide the programs along with speakers from DEP, and other finance professionals.

SPECIALTY WORKSHOP

Go to pages 16-17 for the course descriptions and registration information.

8:30-11:00am – Collection Systems Workshop: Funding Issues for Collection Systems: Gaining Board Support to Fund Sewer Work – “Real-Life” Lessons

This course is PA DEP approved for 2.0 wastewater contact hours, and is limited to 80 attendees. Course ID 3769. You must register in advance for this course.

Moderator: Jeff Cantwell, Flow Assessment Services, LLC, West Chester, PA

Speakers: Lou Stalsitz (retired); Bruce Hulshizer, Buchart Horn, Inc.; Kevin Conrad, Spotts, Stevens & McCoy, Inc.; Bud Bowen, Bowen Calhoun & Associates; Mark Britton, Aqua Structures; and Marilyn Baron, Baron Enterprises.

The target audience is collection system operators, collection system managers, municipal managers involved in funding and/or facing action in their collection system, engineers involved in collection systems. The course level is basic through intermediate.

8:00am-12:00pm – Activated Sludge Practice Exam

This practice exam is part of the two-day Activated Sludge Training course and it simulates the DEP Wastewater Operator Certification Exam. Those who take the course and who also plan to take the actual exam in the future are strongly urged to participate in the practice exam.

Certification



PA DEP Operator Certification

Due to significant budget cuts within the PA DEP, the Wastewater Training Program has suspended processing the approval of training courses, conferences, workshops, etc., for wastewater operators. This means the PWEA PennTec Conference will not be able to offer contact hours for attendance at the regular Conference sessions.

Contact hours may still be earned for attending workshops that already have PA DEP approval. So in addition to the regular Conference sessions, we are offering five workshops which are approved for hour-for-hour credit. Please go to pages 16-17 for course descriptions and registration information. These workshops will run concurrently with the Conference and may have extended hours.

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.

PWEA requires that a copy of your PA DEP Client ID Card or License be included with your registration so that your contact hours can be accurately reported to the PA DEP.

Other Certification

At this time, the PWEA cannot provide continuing education certification for anyone other than PA DEP water and wastewater operators. However, Certificates of Attendance can be prepared and mailed upon request. It is your responsibility to check with your certification board to determine whether this type of certificate is acceptable.



Specialty Workshops

The following workshops are being offered during PennTec 2010 on June 13-16 at the Penn Stater Conference Center Hotel in State College, PA. You may add these courses to your PennTec registration, or you may register for individual course(s) separately. See the registration form on the next page for fees.

Monday, June 14, 8:00-11:30am - Safety Workshop

Waterborne Disease Outbreaks and the Basics of Epidemiology

This course is PA DEP approved for 3.0 water & wastewater contact hours, and is limited to 40 attendees. Course ID 3594.

Moderators: Joseph E. Rost, McKeesport City Municipal Authority, McKeesport, PA, and James L. Zeigler, City of Harrisburg, Harrisburg, PA

Speaker: Gary Burlingame, City of Philadelphia Water Department

The skill requirement for water and wastewater operators has increased. There is a greater need for technical training. However, the education on the basics of why we do what we do often gets lost, as the motivation by which to maintain excellent operations gets muddled. Public health and safety needs to go beyond just meeting regulatory requirements. Operators need to be infused on a regular basis with the deeper reasons for why their jobs are so important to society, even today.

Monday, June 14, 8:00am-5:00pm - Utility Management & Professional Wastewater Operations (PWO) Workshop

Asset Management for Water & Wastewater Facilities

This course is PA DEP approved for 6.0 water & wastewater contact hours, and is limited to 40 attendees. Course ID 2673.

Moderator: Phillip Tiewater, ELM Consulting, Wayne, PA

Speakers: Jim Kern, PE, USEPA Region 3, Philadelphia, PA; Members of the PWEA Utility Management Committee; and Members of the PWEA PWO Committee

Asset management can be defined as managing infrastructure capital assets to minimize the total cost of owning and operating them, while delivering the service levels customers desire. Asset management programs with long-range planning, life-cycle costing, proactive operations and maintenance, and capital replacement plans based on cost-benefit analyses can be the most efficient method of meeting this challenge. This course will present the basic principles of asset management by leading the students through the development of an asset management program. Free asset management software will be demonstrated and distributed at the end of the course.

Monday & Tuesday, June 14-15, 8:00am-6:00pm both days

Activated Sludge Training

This course is PA DEP approved for a total of 16.0 wastewater contact hours, and is limited to 40 attendees. Course ID 3884.

Speaker: Jenifer Fields, DEP SERO, Norristown, PA

This is a two-day course, with an optional practice exam offered on Wednesday, June 16, 8:00am-12:00pm. Those planning to take the Activated Sludge Licensing Exam are strongly encouraged to participate in the practice exam. The target audience for this course is operators in training, and it is also a refresher for licensed operators.

Operators will be engaged in active classroom discussion as well as small group exercises. Operators will be provided, in advance of the training dates, with vocabulary and other training material. Successful students will familiarize themselves with this material before the classroom training. The training provides an opportunity to prepare for the activated sludge licensing exam. Training includes exam taking skills and practice, math drills, concept reinforcement, confidence building, homework, and a supportive learning environment. Training topics include: troubleshooting; nitrogen cycle in wastewater; nutrient removal; organisms throughout the treatment process/microlife; general activated sludge processes; aeration systems; solids management; process control; calculations/decision making; wet weather operations; final clarifiers; chemical feed rates; process control math.

Tuesday, June 15, 8:00am-5:00pm - Laboratory Workshop

Simplified Methods for Nutrient Testing

This course is PA DEP approved for 6.5 water & wastewater contact hours, and is limited to 30 attendees. Course ID 3135.

Moderator: Patrick J. Canavan, Clairton Municipal Authority, West Mifflin, PA

Speaker: Greg A Starlin, Hach Technical Training

This class is designed as an introduction to nutrient controls and the techniques available for sampling and measurement of pH, alkalinity, DO, nitrogen, and phosphorus in wastewater, drinking water, environmental waters, and industrial water. The course objectives will be met by presenting technical background, incorporating practical applications of sampling and analytical testing, and through hands-on experience using portable field use and laboratory instruments. Students are required to analyze water samples of known and unknown values. This workshop will include up to three hours of hands-on lab time.

Wednesday, June 16, 8:30-11:00am - Collection Systems Workshop

Funding Issues for Collection Systems: Gaining Board Support to Fund Sewer Work – “Real-Life” Lessons

This course is PA DEP approved for 2.0 wastewater contact hours, and is limited to 80 attendees. Course ID 3769.

Moderator: Jeff Cantwell, Flow Assessment Services, LLC, West Chester, PA

Speakers: Lou Stalsitz (retired); Bruce Hulshizer, Buchart Horn, Inc.; Kevin Conrad, Spotts, Stevens & McCoy, Inc.; Bud Bowen, Bowen Calhoun & Associates; Mark Britton, Aqua Structures; and Marilyn Baron, Baron Enterprises.

This workshop will start with a mock board meeting for Leaky Township. A citizen will complain about his sewage-filled basement. The three supervisors, the collection system manager and the consulting engineer will discuss causes and cures. Responses will be presented in terms of cost (funding). The presentation is designed to stimulate a lively discussion with all attendees. An interactive session will follow where the attendees will form groups to work through an exercise of identifying collection system needs and some methods of presenting these to board members, engineers and ratepayers.

Specialty Workshop Registration Form



PLEASE PRINT

Registrant Name: _____ Nickname (for badge): _____
 Organization: _____
 Mailing Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____ Fax: _____
 Email Address: _____
 PWEA Member #: _____ PA DEP Client #: _____

Note: a copy of your PA DEP Client ID Card (or PA DEP License) must be submitted with your registration if you are attending for PA DEP contact hours.

SPECIALTY WORKSHOP FEES

		WITH FULL PENNTEC REGISTRATION	WORKSHOP ONLY
Monday, June 14 – 8:00-11:30am Safety Workshop: Waterborne Disease Outbreaks and the Basics of Epidemiology PA DEP approved for 3.0 water & wastewater contact hours	PWEA Member Non-Member	<input type="radio"/> \$45 <input type="radio"/> \$75	<input type="radio"/> \$90 <input type="radio"/> \$120
Monday, June 14 – 8:00am-4:30pm Utility Management & PWO Workshop: Asset Management for Water & Wastewater Facilities PA DEP approved for 6.0 water & wastewater contact hours	PWEA Member Non-Member	<input type="radio"/> \$90 <input type="radio"/> \$120	<input type="radio"/> \$180 <input type="radio"/> \$210
Monday & Tuesday, June 14-15 – 8:00-12:30pm Activated Sludge Course (this is a two-day course) PA DEP approved for 16.0 wastewater contact hours	PWEA Member Non-Member	<input type="radio"/> \$250 <input type="radio"/> \$280	<input type="radio"/> \$490 <input type="radio"/> \$520
Tuesday, June 15 – 8:00am-5:00pm Laboratory Workshop: Simplified Methods for Nutrient Testing PA DEP approved for 6.5 water & wastewater contact hours	PWEA Member Non-Member	<input type="radio"/> \$150 <input type="radio"/> \$180	<input type="radio"/> \$245 <input type="radio"/> \$275
Wednesday, June 16 – 8:30-11:00am Collection Systems Workshop: Funding Issues for Collection Systems PA DEP approved for 2.0 wastewater contact hours	PWEA Member Non-Member	<input type="radio"/> \$30 <input type="radio"/> \$60	<input type="radio"/> \$60 <input type="radio"/> \$90

To qualify for the discounted fee with your full PennTec registration, you must attach this form to the completed registration form found on page 19 and include payment for PennTec and the workshop(s) you wish to attend. One check may be issued for the combined total due.

Method of Payment

- Check (payable to PWEA) Total Due: \$ _____
- Credit Card: **add 5% of the total, rounded up to the next dollar** Credit Card Surcharge: \$ _____
 - MasterCard
 - Visa
 - American ExpressTotal Due by Credit Card: \$ _____

Card Number: _____ Expiration Date: _____ Security Code: _____
 Name (as it appears on card): _____ Signature: _____
 Billing Address (if different from above): _____

Cancellation/Substitution Policy

No refunds granted after April 30, 2010. A \$50 cancellation fee will be assessed on all refund requests received prior to May 1, 2010. All refunds must be requested in writing.

Substitutions are permitted with a \$25 per person substitution fee. Substitutions may be made until May 21, 2010 and must be made in writing, accompanied by a new registration form.

Please send completed registration form, a copy of your PA DEP Client ID Card, and full payment by May 21, 2010 to:

PWEA – Specialty Workshop Registration
 PO Box 3367
 Gettysburg, PA 17325
 Fax: 570-549-2221 • Phone: 570-549-2204
 Email: pweameetings@npacc.net



Social Events

Please note, you must register in advance for social events. On-site registration is not available in most cases. We are required to provide guaranteed counts prior to arriving at the hotel and it is not always possible to increase those counts. So please think about your social events and sign up for them by May 21st.

Sunday, June 13

9:00am Annual PWEA Golf Tournament

Net proceeds from the golf tournament will benefit PWEA's Operations Challenge Program and will help send PA's winning team on to the national event held at WEFTEC 2010.

Join your colleagues for a friendly game of golf! The tournament will be held at the Penn State Blue Golf Course. Refreshments and prizes will be provided.

To qualify for the special foursome rate, all four names must be included on one registration form and accompanied by full payment. You may not register at the foursome rate using individual registration forms.

Cost is \$90 per person (or \$340 per foursome), and includes greens fee and cart fee. Pre-registration is required. You must register by May 21, 2010; on-site registration is not available for this event. Appropriate golf attire is required.

5:00-7:00pm Exhibit Hall Opening & President's Reception

Be sure to attend the Grand Opening of the 2010 PennTec Conference & Exhibition and the President's Reception! This is a great way to network with your colleagues and find out about the latest developments in the field while strolling through the Exhibit Hall. Enjoy complimentary hors d'oeuvres and a cash bar. One complimentary drink ticket will be provided to each Conference registrant. Make sure you are there with your free raffle ticket during the Prize Drawing! You must be present to win.

There is no charge for this event. Dress is casual.

Monday, June 14

11:30am-1:00pm PWEA Annual Business Meeting & Buffet Luncheon

Join us for this luncheon which is complimentary to all Conference registrants. Dessert will be available in the Exhibit Hall.

PWEA members and non-members are invited to attend and participate in the Annual Business Meeting. The Board of Directors welcomes input from everyone. Not a member? Print a membership application from the PWEA web site, www.pwea.org, or pick one up at the registration desk on-site.

There is no charge for this event. Dress is business casual.

3:00pm Operator Olympics

Another event you won't want to miss is the Operator Olympics! This is a fun event based very loosely on some real Olympic events, but with a wastewater twist.

There is no charge for this event and pre-registration is not required. Dress is casual.

2:30-3:00pm Beer & Pretzels Break

This year we will be serving beer, root beer, and soft pretzels in the Exhibit Hall during the Monday afternoon break! Come to the Hall to relax and visit with the vendors between sessions.

There is no charge for this event.

4:30-5:30pm Meet & Greet Reception

This is another chance for you to visit with the vendors and network with fellow attendees. The reception will be held following sessions on Monday. Festivities will include door prize raffles and refreshments. You will be given a raffle ticket with your registration materials. You must be present to win.

There is no charge for this event. Dress is business casual.

6:30-9:30pm PWEA "Rally in the Valley" Annual Dinner & Awards Ceremony

This year the Annual Dinner & Awards Ceremony will be held in the Mount Nittany Club at Beaver Stadium! The event will be held on Monday evening and will include bus transportation and a buffet dinner with a hosted bar. Plans are in the works to make this evening a memorable one! The evening will include a short WEF presentation and the Annual Awards Ceremony honoring your colleagues who have won prestigious state and national awards.

Attendance is complimentary to those with a PAID FULL CONFERENCE REGISTRATION. Tickets will only be given to those who check the appropriate box on the registration form. Guests, daily registrants, and those with other types of registrations may purchase tickets to attend. Tickets are \$70 per person.

Pre-registration is required. On-site registration is not available for this event. Dress is business casual.

Tuesday, June 15

5:00-8:00pm "Are You Smarter Than a Young Professional?"

A fundraising social event hosted by the PWEA Young Professionals Committee, this event is not just for YPs—OPs (Old Professionals) are encouraged to attend this wastewater-themed trivia competition! Play on your own or on a team! Compete against other players for prizes and bragging rights! Beat your boss! Beat your engineer! Beat the YPs! Or just come for food and drinks and watch the game!

This is a fundraiser event and a portion of the proceeds will be donated to Water for People.

Cost is \$25 per person, which includes two drink tickets and a buffet. Pre-registration is required. Dress is casual.

Conference Registration Form



PLEASE PRINT

Registrant Name: _____ Nickname (for badge): _____
 Organization: _____
 Mailing Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____ Fax: _____
 Email Address: _____
 PWEA Member #: _____ PA DEP Client #: _____

- Check here if you are a Young Professional. (Age 35 or younger)
- College Students** – Registration fee is waived for full-time college students if this form is submitted with a photocopy of student identification. Social events are not included.

CONFERENCE REGISTRATION

Check box for appropriate fee. By March 31 April 1-May 21 On-Site

Full Conference

PWEA Member	<input type="radio"/> \$365	<input type="radio"/> \$415	<input type="radio"/> \$450
Non-Member	<input type="radio"/> \$445	<input type="radio"/> \$495	<input type="radio"/> \$530

Monday Only

PWEA Member	<input type="radio"/> \$175	<input type="radio"/> \$225	<input type="radio"/> \$260
Non-Member	<input type="radio"/> \$235	<input type="radio"/> \$285	<input type="radio"/> \$320

Tuesday Only

PWEA Member	<input type="radio"/> \$175	<input type="radio"/> \$225	<input type="radio"/> \$260
Non-Member	<input type="radio"/> \$235	<input type="radio"/> \$285	<input type="radio"/> \$320

Tuesday Only Young Professional (YP) Registration*

**Age 35 or younger. Driver's License ID required.*

YP Member	<input type="radio"/> \$115	<input type="radio"/> \$165	<input type="radio"/> \$200
YP Non-Member	<input type="radio"/> \$130	<input type="radio"/> \$180	<input type="radio"/> \$215
YP Professional Development Session Only	<input type="radio"/> \$30	<input type="radio"/> \$40	<input type="radio"/> \$50

Wednesday Only

PWEA Member	<input type="radio"/> \$75	<input type="radio"/> \$90	<input type="radio"/> \$105
Non-Member	<input type="radio"/> \$90	<input type="radio"/> \$105	<input type="radio"/> \$120

Guest Registration – A Guest is a spouse, life partner, or dependent who **is not in the water or wastewater industry**. One guest may register at no charge with each paid FULL Conference Registration. Social Events are not included.

Guest Name: _____

SOCIAL EVENTS

Complimentary Events – please indicate whether you will attend

Sunday - President's Reception	<input type="checkbox"/> yes	<input type="checkbox"/> no
Monday - Meet & Greet Reception	<input type="checkbox"/> yes	<input type="checkbox"/> no
Monday - "Rally in the Valley" Dinner	<input type="checkbox"/> yes	<input type="checkbox"/> no
If yes, will you ride the bus?	<input type="checkbox"/> yes	<input type="checkbox"/> no

(The Dinner is only complimentary with a paid Full Conference Registration.)

Ticketed Events – please indicate quantity of tickets and total.

	<u>Quantity</u>	<u>Cost</u>	<u>Total Due</u>
Sunday, June 13			
Golf Tournament	_____	\$ 90 per person	\$ _____
Foursome discount *	_____	\$340 per foursome	\$ _____
<i>* To qualify for the foursome discount, full payment must accompany this form. Provide names, if known.</i>			
1. _____	3. _____		
2. _____	4. _____		

Monday, June 14

PWO Plant Tour	_____	\$15 per person	\$ _____
"Rally in the Valley" Dinner	_____	\$70 per person	\$ _____

(This is the cost for guests and anyone who did not pay for a regular Full Conference Registration.)

Tuesday, June 15 – This is a Water for People fundraiser event.

"Are You Smarter Than a YP?"	_____	\$25 per person	\$ _____
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No charge for Tuesday Only YP registrants.
 Check here if you will attend.

Method of Payment

- Check (payable to PWEA)
- Credit Card: **add 5% of the total, rounded up to the next dollar**
 - MasterCard
 - Visa
 - American Express

Total Registration Fees: \$ _____

Total Social Events Fees: \$ _____

Total Due: \$ _____

Credit Card Surcharge: \$ _____

Total Due by Credit Card: \$ _____

Card Number: _____ Expiration Date: _____ Security Code: _____

Name (as it appears on card): _____ Signature: _____

Billing Address (if different from above): _____

Cancellation/Substitution Policy

No refunds granted after April 30, 2010. A \$50 cancellation fee will be assessed on all refund requests received prior to May 1, 2010. All refunds must be requested in writing.

Substitutions are permitted with a \$25 per person substitution fee. Substitutions may be made until May 21, 2010 and must be made in writing, accompanied by a new registration form.

Please send completed registration form and full payment by May 21, 2010 to:

PWEA – PennTec Registration
 PO Box 3367
 Gettysburg, PA 17325
 Fax: 570-549-2221 • Phone: 570-549-2204
 Email: pweameetings@npacc.net



Pennsylvania Water Environment Association
PO Box 3367
Gettysburg, PA 17325
www.pwea.org

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Top Five Reasons To Attend PennTec 2010

- 1 **Technical Training & Educational Opportunities**
- 2 **Earn Up To 16 PA DEP Contact Hours**
- 3 **Exchange Ideas, Challenges & Experiences With Colleagues**
- 4 **Learn About New Products, Equipment, Processes & Services From Vendors**
- 5 **Meet & Network With Others In The Industry**

PENNTec 2010 
82nd Annual Technical Conference & Exhibition