

2022 WWETT Education Program Course Codes, Title, Day, Time

Code: MO01
Course Title: NASSCO LACP Codes for Lateral Side and Building Sewer Condition Assessment
Date: Monday, 2/21/2022
Time: 9:00am-10:00am

We will have a discussion on the development and application of NASSCO Version 7 coding for use in condition assessment and renewal of private lateral and building sewers.

1. Discuss the NASSCO condition assessment coding system
2. Recognize the differences between codes and inspection methods for LACP vs PACP inspections
3. Connect LACP codes to corresponding grades
4. Explain how LACP codes fit into an asset management program

Code: MO02
Course Title: The Life Cycle of OWTS - A Principled Approach
Date: Monday, 2/21/2022
Time: 9:00am-10:00am

This course will introduce the concept of onsite systems as a long-term answer to what we do with wastewater, thinking of it in terms of a life-cycle. In addition, we will be discussing a principled approach to each step within the lifecycle of an OWTS. We will be discussing the diversity of the industry and the need for professionals to have multiple levels of skills, and the importance of being a leader within the onsite industry.

1. Describe the lifecycle of an OWTS and the "principled approach" to its development, creation, maintenance and life
2. Evaluate your current business and propose ideas and processes to improve your approach and outcomes related to business operations
3. Apply principled tools and techniques to be a leader within the industry

Code: MO03
Course Title: Overview of Wastewater Characteristics for Design
Date: Monday, 2/21/2022
Time: 9:00am-10:00am

The presentation will provide an overview of residential and commercial influent parameters of interest when designing septic systems including black and graywater. Key parameters quantified will be pathogens, organics and nutrients. These parameters will be applied to designing based both on hydraulic and organic loading.

- 1, Explain the difference between BOD and COD
- 2, Calculate organic loading
3. Discuss the typical pathogen load from graywater versus typical residential wastewater
4. Quantify the amount of nitrogen in influent

Code: MO04
Course Title: Opportunities in the Covid and Post-Covid World
Date: Monday, 2/21/2022
Time: 9:00am-10:00am

This presentation will discuss the opportunities that have arisen for the portable sanitation industry due to the Covid-19 pandemic, and discuss what the industry can continue to expect once we reach a post-Covid state.

Code: MO05
Course Title: Reducing Odor, FOG, H₂S, Sludge and Flushable Wipes Nature's Way
Date: Monday, 2/21/2022

2022 WWETT Education Program Course Codes, Title, Day, Time

Time: 9:00am-10:00am

1. Discuss advancement in dealing with FOG, H2S and odor
2. Effectively turn a collection system into a pretreatment system
3. Understand the benefits of upstream bio-augmentation
4. Increase system capacity and efficiency without additional capital expenditures

Code: MO06

Course Title: Pump Sizing 101 and Best Practices

Date: Monday, 2/21/2022

Time: 9:00am-10:00am

This session focuses on submersible pump designs and differences including which pump to use for which application, pump sizing and best practices in the field. Other topics include: pump capacity requirements; how flow is calculated, minimum velocity requirements in pipe, and how it keeps the forcemain clean; TDH calculation and the benefits of an accurate design; solids-handling requirements; and minimum pump run times. There will be an actual example of sizing pumps to a specific onsite application, including examples with appropriate charts and tables.

1. Discuss the differences between sump, sewage, and grinder pumps in order to properly apply in the appropriate application to maximize product life cycle
2. Explain basic sizing techniques and applications for each type of pump and certain special situations which can negatively affect each if misapplied
3. Perform basic calculation of Total Dynamic Head by means of a specific application example including all necessary major and minor friction loss factors (pipe sizes, flow rate, fittings, and valves).
4. Discover how a pump operates as a system not just an appliance which removes unwanted water and waste and the effects of improper maintenance and installation

Code: MO07

Course Title: Extraordinary Thinking Creates Extraordinary Leadership

Date: Monday, 2/21/2022

Time: 9:00am-10:00am

Leadership is not a title but action you exhibit daily through being the example. The foundation for extraordinary leaders comes down to extraordinary thinking. How you think creates the action you take in the moment as part of the process that leads to desired results. This foundation starts with building a growth mindset that embraces a process to become the example with certain habits and disciplines. This inspires others to be responsible and accountable for their own tasks so they can come together and form an interdependent work environment. Transparent leaders create other leaders to build momentum and sustain growth over time. Even through difficult periods of time. Come learn the methodology how to think from a growth mindset to become an extraordinary leader.

1. Recognize that productivity is a result of how thinking from a growth mindset leads to effective communication for higher engagement with their team
2. Explain the proper techniques and process how to use self-awareness to lead by example while impacting others in a productive and efficient manner in their organization
3. Share the process and outline how to create an interdependent environment with a leadership style that relates to others across an interdisciplinary team
4. Discuss the importance of values in leadership to increase engagement and grow the organization

Code: MO08

Course Title: Flushable Wipes and Grease, How Can We Problem Solve Them?

Date: Monday, 2/21/2022

Time: 9:00am-10:00am

2022 WWETT Education Program Course Codes, Title, Day, Time

What's worse - Grease or Wipes? For many years grease has created major problems for drain lines, septic fields and for anyone having to work on a system loaded with grease. As an industry we started understanding the anatomy of grease and were able to create products that could help handle the grease problems. Now flash forward to this day and age where flushable wipes are becoming much more popular. Wipes by themselves are becoming a problem. Blend together grease and wipes, we now have a major problem. This has caused a real headache for the industry. Let's learn the make up, the break down, and how we as a collective group can help solve this problem.

1. Describe the problems happening with grease and wipes
2. Analyze each problem individually, then together
3. Quantify the problems related to cost to the industry
4. Explain how we can help to correct these problems

Code: MO09
Course Title: Lateral and Building Repair Technologies
Date: Monday, 2/21/2022
Time: 10:30am-12:00pm

With the quickly evolving rehabilitation market for private-side and building sewer renewal, this presentation overviews the available technologies in the United States and possible advancements that may be introduced to the US market. Videos and hands-on interaction with the rehab techniques will be part of this presentation. The presentation will not include any sales oriented information that may provide a market advantage to a vendor.

1. Discuss available renewal technologies for lateral and building sewers, with a cost-benefit relationship for educating potential clients
2. Draw direct relationships between LACP codes and the application of the renewal technologies
3. State the standard of care for the design, installation and testing of the technologies
4. Recognize and mitigate risks with the technologies from standard of care

Code: MO10
Course Title: Principles in Design of OWTS
Date: Monday, 2/21/2022
Time: 10:30am-12:00pm

The first stage of an OWTS lifecycle is the Design stage. There are many basic principles that can be applied to for Onsite Wastewater Systems Designs. Each local, county or permitting agency will have specific regulations, which make up the "ingredients" of the design, but the principles do not change. We want to avoid the "cookbook" mentality of creating an OWTS design. We will be covering the purpose and why these principles are an important and vital component to the lifecycle of an OWTS.

1. Define the basic principles that apply to all OWTS designs regardless of location
2. Identify the complexity of the types of systems available and apply the skills to determine the best design for the site
3. Define your purpose as a designer and communicate your objectives effectively to the other practitioners dealing with the lifecycle of an OWTS system

Code: MO11
Course Title: Alternative Sewer Collection System Options
Date: Monday, 2/21/2022
Time: 10:30am-12:00pm

Community sewer collection systems have traditionally utilized the standard gravity sewer pipe and manhole construction with the occasional intermediate pump station to move wastewater from multiple connections to a wastewater treatment facility. Gravity systems require larger diameter pipe, expensive manholes, and sufficient elevation change and/or sometimes frequent "lift" stations. Today there are options that allow for smaller

2022 WWETT Education Program Course Codes, Title, Day, Time

diameter pipe and shallower installations that work with a variety of terrains. This class will describe four options for alternate methods of wastewater collection: 1) Grinder pumps to a low-pressure pipe system; 2) Septic tank effluent pumped to a low- pressure pipe system; 3) Screened septic tank effluent discharged to a gravity sewer; and 4) Vacuum collection systems. A general description of each method, the primary components used in each, primary design factors to be considered, and the pros/cons for each type of collection system will be presented.

1. Describe the four options for alternative community sewer collection systems
2. Explain the advantages and disadvantages of each type of alternative sewer collection system.
3. Discuss the primary design features of each sewer collection system type.
4. Understand the factors that are used to design a successful alternative sewer collection system.

Code: MO13
Course Title: Overview of Trenchless Pipe Lining and Recent Advancements in Technology
Date: Monday, 2/21/2022
Time: 10:30am-12:00pm

Collection systems are the wastewater utilities largest investment. The EPA estimates that \$271 billion dollars will be needed for repair the wastewater systems over the next 25 years. Trenchless technologies have become a major alternative to traditional digging for replacement for pipelines and maintenance holes. This session will cover problems such as: infiltration, exfiltration, roots, corrosion, and structural defects. We will discuss where trenchless technologies can be used along with advancements in robotic cleaning tools. The five basic styles of technology used for replacement and rehabilitation of pipelines will be examined including: 1. Dig & replace; 2. Trenchless spot repairs & magnesium hydroxide large diameter pipeline crown spraying. Slip liners including continuous, sectional, and spiral wound liners; 3. Cured-in-place pipe liners; 4. Advancements in UV Cured pipe liners and 5. Folded and Re-formed pipe liners. We will also discuss some of the techniques and equipment that will help reduce the formation of H₂s gas, odors, and FOG, that damage the existing pipes and structures.

1. Discover the conditions that increase costs of maintenance and shorten the life of pipelines & manholes
2. Recognize the applications that require dig and replace, and which are candidates for trenchless rehabilitation technology
3. Discuss the trenchless technology options available for pipeline & manhole rehabilitation. rehabilitation
4. Analyze the unique equipment required for different trenchless rehabilitation methods

Code: MO14
Course Title: Pump Sizing for LPP and Mound Systems
Date: Monday, 2/21/2022
Time: 10:30am-12:00pm

This Presentation is an advanced pump sizing course specifically catered to low pressure pipe systems used in subsurface disposal of effluent. It addresses how to calculate flow rates and total dynamic head as well as design considerations to combat high pressures, flow deviation, or excessive design flows to provide the most efficient and economical design.

1. The benefits of LPP over typical drainfields
2. How to calculate flow and TDH for a low-pressure distribution system
3. What flow deviation is and how to correct it
4. How valves can reduce pump requirements and increase benefits of an enhanced flow system

Code: MO15
Course Title: Time to Eliminate Flat Rate Frustration
Date: Monday, 2/21/2022
Time: 10:30am-12:00pm

2022 WWETT Education Program Course Codes, Title, Day, Time

If you're looking for a diplomatic mincing of words, this is NOT the talk for you. Your techs aren't selling, and you're not rich. Let's fix it. Retailers are all about finding the margins so they can offer better products to their existing base - retailers grow their base by exciting and enticing the consumer. Wholesalers build their brand by giving away the farm - which one are you? Many service companies are so desperate for customers that they'll give away the farm to get a cow. In this witty, engaging, and candid talk, Rodney Koop puts retailers, Fortune 500 companies, and contracting companies under the microscope for a blunt explanation on how pricing could be holding your company back in more ways than you might realize. Walk away from this talk with a stitch in your side from laughing as well as a concrete understanding of how your pricing could be stabbing you in the back. Plus, enjoy a free giveaway so you can experience firsthand how retail pricing could change your life.

1. Explain how pricing can hold your company back
2. Understand pricing logic for the trades
3. Discuss how Fortune 500 companies price
4. Define a pricing system that can work for you

Code: MO16
Course Title: Successful Networking Strategies followed by Ask the Expert Panel Anything
Date: Monday, 2/21/2022
Time: 10:30am-12:00pm

"Networking" is a commonly used term that, in reality, is difficult to properly execute, especially if you are new to a community, prefer an introverted evening at home over a night on the town, or are otherwise feeling insecure about your ability to meaningfully connect with others. This insightful 30-minute presentation will provide you with the skills to put those networking blues in your past and build confidence to mix and mingle successfully. The last 60 minutes will be dedicated to Ask the Expert Panel Anything. This is a popular session for those new to the industry. Come prepared with your questions. The panel is anxiously ready to assist!

1. Identify the key people with whom to connect that will most greatly influence your success
2. Ask insightful questions to always start and maintain interesting conversations that facilitate the exchange of useful business information
3. Effectively follow-up post-event to transition new connections into long-lasting business partners, mentors, and referral sources
- 4 Gain insight into the wastewater industry through the Q&A panel session

Code: MO17
Course Title: Laterals and Grouting
Date: Monday, 2/21/2022
Time: 1:00pm-2:30pm

Though grouting technology has been in the market for decades, it is having a renaissance to meet the value-based market for eliminating I/I from sewer systems. NASSCO has been developing tools for contractors to meet this new demand for services by developing updates to specifications, standards and research to support the market and provide new opportunities for contractors.

1. Define the grouting process for sewers and its market potential for contractors
2. Summarize the applicability of grouting as a stand alone rehabilitation process and as an integral part of other rehabilitation technologies
3. The How To's of grouting for laterals connections to mains and manholes
4. Implement a strategy for training and certification

Code: MO18
Course Title: Principles in O&M of OWTS
Date: Monday, 2/21/2022
Time: 1:00pm-2:30pm

2022 WWETT Education Program Course Codes, Title, Day, Time

The Operations and Maintenance sector of the industry is a fast growing sector. As OWT Systems become more complex, the need for oversight and maintenance is becoming crucial. This stage in the lifecycle for an OWTS is probably the largest and longest. Understanding the principles behind providing good professional Operations and Maintenance of all systems will be covered. And understanding that there is more to advanced systems than just a proprietary unit that needs to be monitored, serviced and maintained is an important aspect of O&M.

1. Describe the lifecycle of an OWTS and the importance of applied O&M
2. Describe the principles that are applied to this sector of the onsite industry and the importance of communications and education with homeowners
3. Describe the importance of O&M for all levels of OWTS
4. Recognize the importance of proper training and certification of O&M providers for the entire system and the life of an OWTS

Code: MO19
Course Title: Design and Installation of Drip Distribution Systems
Date: Monday, 2/21/2022
Time: 1:00pm-2:30pm

A drip dispersal system is a form of pressurized distribution that utilizes drip irrigation technologies to place effluent below the soil surface. This method is a best available technology to ensure uniform effluent application, especially in shallow soils where it is essential that the effluent comes into contact with the maximum volume of soil. This session will provide a brief introduction to drip dispersal and then provide detailed design guidance. We will review the operation of a drip dispersal system and discuss the hydraulic principles that must be addressed in the design. Finally, we will focus on system installation. There are many details that must be accounted for in the installation in order for the system to provide satisfactory service for many years into the future.

1. Learn the hydraulic principles used to design a drip dispersal system
2. Select the pump, filter, and pipes needed to complete the drip dispersal system
3. Install a drip distribution system with confidence

Code: MO20
Course Title: When to Sell and How to Do It Well
Date: Monday, 2/21/2022
Time: 1:00pm-2:30pm

Timing is one of the most crucial variables to maximize the return of investment on the sale of your business. We will explore your reasons for selling and take positions that affect your employees, potential buyers and your own needs. One of the biggest mistakes a business owner can make is overvaluing or undervaluing their business. How should you determine the value of your business and how can you defend that price during negotiations? We will discuss important documents and records required to defend your sales price to potential buyers looking to devalue your business.

1. Sell at the right time
2. Prepare to answer tough questions
3. Realize what your business is worth
4. Defend your asking price

Code: MO21
Course Title: How Aggressive Cleaning Methods Affects Different Types of Sewer Materials
Date: Monday, 2/21/2022
Time: 1:00pm-2:30pm

2022 WWETT Education Program Course Codes, Title, Day, Time

Preventing sewer overflows is a national enforcement priority for the EPA. All sewer pipe materials are susceptible to SSOs due to the accumulation of FOG, roots, debris, and structural anomalies. Certain types of sewer pipe materials are limited on the type of cleaning processes that can be used without damaging the pipe. Municipalities nationwide are taking a preventative approach to sewer maintenance by implementing a CMOM Program that includes aggressive sewer cleaning methods. Learn how these guidelines can reduce frequency of cleaning and SSOs.

1. Explain the differences between “Passive” and “Aggressive” Cleaning
2. Discuss how the EPA guidelines drive our cleaning strategies
3. Discover how pipe materials and tool designs limit cleaning effectiveness in different pipe types
4. Identify how to reduce frequency of cleaning and SSOs

Code: MO22
Course Title: Communication Technology As It Relates To System Monitoring
Date: Monday, 2/21/2022
Time: 1:00pm-2:30pm

More and more we are seeing communication and system monitoring being a factor in new system designs. Whether this be via an internet connection, cloud based, or cellular based technology, the installer's options are opening up for more extensive system monitoring. This helps them to react faster to problems that are occurring, in real time, and adds value to their customer base. This session reviews and explains the related processes as well as their implementation and impact.

1. Discuss how system monitoring can help protect the installer, and the homeowner/business owner's property
2. Explain what options are out there for residential and light commercial system monitoring
3. Review how these devices work and how you decide what to use
4. Demonstrate how communication can streamline pumping and system service scheduling

Code: MO23
Course Title: The Laws and Regulations Surrounding PPE and Coronavirus
Date: Monday, 2/21/2022
Time: 1:00pm-2:30pm

Employers have a general duty to furnish workplaces free from recognized hazards. Part of that obligation is providing employees with personal protective equipment (PPE). This leads to a series of questions, such as: What types of PPE are employers required to provide? How are they to determine what PPE is required at a particular worksite? Do they even have to provide PPE? During the second half of this class we will discuss The 2020 novel coronavirus's impact on the economy, and developments that will continue to occur on a daily basis for years to come. Congress passed three relief laws – the Emergency Paid Sick Leave Act (EPSLA), the Emergency Family and Medical Leave Act (EFMLA), and the CARES Act – any or all of which may be extended and impact your business in a variety of ways. Additionally, states enacted shelter-at-home orders, exempting “essential” business activities such as water and wastewater service providers. OSHA issued guidance to employers regarding how to protect employees. By no stretch of the imagination is this issue over.

1. Conduct a hazard and PPE assessment for each workplace
2. Review training requirements for using PPE and requirements for providing PPE to employees
3. Provide an updated assessment of the state of the coronavirus and legal implications for your workplace
4. Discuss OSHA and CDC guidance regarding safe work practices

Code: MO24
Course Title: Successful Marketing & Selling Strategies in the New Virtual Business World
Date: Monday, 2/21/2022
Time: 1:00pm-2:30pm

2022 WWETT Education Program Course Codes, Title, Day, Time

In order to THRIVE and not merely survive in this rapidly changing economic climate, business owners need to make a shift now and quickly transition their marketing, business development and sales efforts online. In this presentation we will cover key strategies for successfully changing the way your business must go to market and how to implement tactics that create increased market awareness, generate leads, nurture relationships, and win clients in a virtual environment.

1. Create a winning content strategy and set up a system for consistent publishing and presence
2. Establish yourself as a thought leader and trusted advisor for your customers and prospects
3. Increase key social media connections, generate leads and engage effectively with prospects virtually
4. Implement online tools, apps, resources and strategies to help you be efficient and effective with virtual marketing and selling in a digital age

Code: MO25
Course Title: How Do You Know if a House Service Lateral Passes Inspection?
Date: Monday, 2/21/2022
Time: 3:00pm-4:00pm

NASSCO has formed a workgroup that focuses on the development of standards and training for private side lateral and building sewer inspection and repair. This workgroup was formed in response to questions about lateral pass/fail criteria when local governments require lateral inspections before a house can be sold. The presentation will provide an overview of the workgroup objectives, the training programs and partnerships and how these objectives integrate with other industry standards and regulations.

1. Define the market potential for contractors
2. Recognize the standards and regulations that may affect qualifications and standard of care
3. Provide a framework for training opportunities
4. Summarize advancement in inspection technologies and AI

Code: MO26
Course Title: Principles in Installation of OWTS
Date: Monday, 2/21/2022
Time: 3:00pm-4:00pm

The Installation stage in the lifecycle of an OWTS is more complicated than is realized. With a better understanding of wastewater treatment over disposal; systems have become more complex. The installer is in a unique position and requires skills of understanding regulations, designs, operations and service. The level of communication skills for these professionals is critical for the health of the system.

1. Describe the basic principles of installation
2. Recognize the importance of their understanding of the lifecycle of an OWTS and the importance of training and education
3. Recognize your role in the lifecycle and the importance of being able to communicate up and down the line with regulators, designers, O&M practitioners, pumpers and homeowners

Code: MO27
Course Title: Design of Timed Dosing and Flow Equalization
Date: Monday, 2/21/2022
Time: 3:00pm-4:00pm

Time dosing is used to control pump "off" and "on" times so wastewater is sent to the next downstream component evenly throughout the day, When activated during high-flow events, a peak enable sensor shortens the rest period between doses to allow the system liquid level to gradually return to normal levels. Flow equalization is a management concept that can help reduce stress on system performance due to high variation in flows. In flow equalization, the peak flows are stored for a period of time to be delivered to the next downstream component over a longer time period.

2022 WWETT Education Program Course Codes, Title, Day, Time

1. State the objective of timed dosing
2. Compare the function of demand dosing to timed dosing
3. Name at least two facility types where incorporating flow equalization could substantially improve system performance
4. Discuss whether these two ways of controlling flows can be used in the same system or not

Code: MO28
Course Title: Maintenance Hole, Pump & Lift Station Rehabilitation Technologies
Date: Monday, 2/21/2022
Time: 3:00pm-4:00pm

Collection systems are the wastewater utilities largest investment. The EPA estimates that \$271 billion dollars will be needed for repair the wastewater systems over the next 25 years. Trenchless technologies have become a major alternative to traditional digging for replacement for pipelines and maintenance holes. This session will cover problems such as: infiltration, exfiltration, inflow, roots, corrosion, and structural defects. We will discuss where trenchless technologies can be used along with advancements in robotic cleaning tools. The four basic styles of technology used for replacement and rehabilitation of maintenance holes & structures will be examined including: 1. Spray or trowel on nonstructural coatings; 2. Ridged Exposed, flexible Polyurethanes; 3. CA Calcium Aluminate structural lines; and 4. Fiberglass reinforced epoxy CIPP Cured-in-Place structural liners. We will also discuss some of the techniques and equipment that will help reduce infiltration & inflow, and the formation of H₂s gas, odors, and FOG, that damage the existing pipes and structures.

1. Discover the conditions that increase costs of maintenance and shorten the life of manholes & structures
2. Recognize the applications that require dig and replace, and which are candidates for trenchless rehabilitation

Code: MO29
Course Title: Wastewater Liquid Level Controls and Remote Monitoring Overview
Date: Monday, 2/21/2022
Time: 3:00pm-4:00pm

This class will identify and discuss alternative liquid level controls for water and wastewater pumping applications. We will cover existing and new level control technology including remote monitoring, and how it applies to various installations and system applications.

1. Demonstrate a general understanding of current water and wastewater liquid level pump controls
2. Identify the advantages and disadvantages of each different level control
3. Discuss how the alternative liquid level control operates specific to pump control
4. Reference and understand basic and advanced levels of remote monitoring

Code: MO30
Course Title: It's Getting Hot in Here: Heat Illness Prevention and OSHA Requirements
Date: Monday, 2/21/2022
Time: 3:00pm-4:00pm

Summer is just around the corner, and temperatures across the country are heating up. Will your employees be exposed to the summer heat, either by working outside or in non-climate-controlled buildings? If so, your company needs to consider ways to prevent heat illness among employees and stay compliant with any applicable occupational safety and health laws. This presentation will provide a discussion of the following topics to keep you cool and compliant:

1. Discuss heat illnesses
2. Explain federal OSHA or other federal legal requirements regarding heat illnesses in the workplace
3. Explain state OSHA or other state legal requirements
4. Review best practices for keeping your employees cool, preventing heat illnesses, and complying with legal requirements

2022 WWETT Education Program Course Codes, Title, Day, Time

Code: MO31
Course Title: They're Managers - Now What?
Date: Monday, 2/21/2022
Time: 3:00pm-4:00pm

Research and professional observations show that 60% of managers fail within 24 months. The resulting replacement cost to businesses runs between 3x and 15x the manager's salary. The cost is much higher if you lose your best customer or crew. None of these events has to happen. Understanding why managers fail and what business leaders can do to alleviate turnover and related expenses is critical to profitability and ultimately to a business's success.

1. Analyze the position you are filling
2. Identify best candidates to fill the position
3. Recognize where managers and supervisors need help
4. Create a framework for performance reviews to increase success

Code: MO32
Course Title: Kicking Anxiety & Exhaustion to the Curb: Avoid, Overcome & Recover from Burnout
Date: Monday, 2/21/2022
Time: 3:00pm-4:00pm

"It's a marathon, not a sprint!" Although you may have heard this phrase or something similar from your manager or mentor, the real and perceived demands of our fast-paced lives often leave us with a different impression fueled by America's reputation as the most over-worked nation. Such mentality and work habits lead to emotional, physical and mental exhaustion; prolonged periods of stress; feelings of overwhelm, anxiety, inadequacy, cynicism and depression; and declining mental and physical health. The good news is that "burnout" is not a medical diagnosis or life-long sentence. Rather, burnout is a condition over which you can take control.

1. Discover that regardless of the number of items on your to-do list, you are worthy of rest
2. Prioritize your well-being and happiness in your life
3. Analyze your goals and priorities to use as guideposts to determine when to accept new opportunities and when to say, "no!"
4. Abandon perfection and become more productive by learning advanced delegation and time management tools that schedule your day for success

Code: MO33
Course Title: CIPP & Styrene Emissions: Research Findings, Safety Recommendations and PID Requirements
Date: Monday, 2/21/2022
Time: 4:30pm-5:30pm

Based on information regarding the assessment and renewal of lateral and building sewers, a program of health and safety recommendations for protecting worker and public safety will be presented. The session will encompass: 1) An overview of the safety recommendations per the Emissions Phase 2 Study, with an eye towards effective implementation for laterals; 2) Evaluation of the role laterals play during mainline rehab, and their role as a pathway for emissions into buildings; and 3) Practical safety recommendations to protect homeowners and workers during the rehabilitation of laterals and building sewers.

1. Describe the top 3 to 5 homeowner and worker safety risks for lateral and building inspection
2. Promote mitigation actions from defined risks to protect workers and the public
3. Promote science-based approaches to the CIPP emissions issue
4. Summarize the existing regulatory requirements and state one major regulatory proposed for the near future

2022 WWETT Education Program Course Codes, Title, Day, Time

Code: MO34
Course Title: Principles in Inspection of OWTS and Summary
Date: Monday, 2/21/2022
Time: 4:30pm-5:30pm

Onsite Wastewater Systems are often neglected due to ignorance of the homeowner as to the proper care and maintenance. OWTS Inspections are an intermittent stage in the lifecycle of an OWTS and may occur more than once during that lifecycle. We will be discussing what constitutes a system and the importance of evaluating the entire system, not just a single component when completing an OWTS Inspection, whatever the reason the inspection was. We will cover why the OWTS Inspector needs to understand not only how they function and how to evaluate systems, but how to communicate and report the results effectively and consistently to all parties.

1. Identify the importance of comprehending the lifecycle of an OWTS
2. Recognize the importance of understanding the components of an OWTS and the need for a complete and thorough evaluation of a system during an inspection
3. Conclude the importance of operating under ethical principles and providing correct and unbiased information regarding the OWTS
4. Summarize the different stages in the lifecycle of an OWTS and the importance of appropriate training for each stage of the life of an OWTS

Code: MO35
Course Title: Gravity Soil Dispersal Systems
Date: Monday, 2/21/2022
Time: 4:30pm-5:30pm

An onsite wastewater treatment system is a very effective means of treating wastewater and protecting the environment. Gravity dispersal systems, such as gravel trenches, offer an energy free means for dispersal as well as low maintenance and low cost. Gravity dispersal systems represent the most prominent number of installations in the U.S. and Canada and dispersal via gravity will continue to be the most prominent.

1. Recognize the benefits and drawbacks of gravity dispersals systems
2. Discuss the fundamentals of the mechanics of gravity distribution
3. Recognize the role of Biomat
4. Discuss the differing system types (beds, trenches, etc.)

Code: MO36
Course Title: Drones: Endless Opportunities
Date: Monday, 2/21/2022
Time: 4:30pm-5:30pm

As we have seen flying drones emerge over the past decade, many of us tend to assume that it is a technology that does not have a direct impact on our industry. Most people look at drones as platforms for aerial photography and video. However, there are growing applications in nearly every segment of our society. There is a wide range of opportunities in drone usage that just may be the growth opportunity you've been looking for. There are numerous businesses and government agencies that currently use drone services in one capacity or another.

In this class we will look at drone technology, not only from an aerial perspective, but from an underground and underwater viewpoint as well. Some of the usages we will focus on will be in pipeline inspections, easement and remote area mapping, infrastructure inspection of roofs, tanks, bridges and dams, aerial mapping and evaluation of storm channels, river beds and wetlands, aerial documentation of worksites, sewer overflows and emergency situations, to just name a few. We will look at the various types of drones that are available on the market today, the laws governing their use, what is required in obtain a pilot's license and the cost of entering this emerging market.

2022 WWETT Education Program Course Codes, Title, Day, Time

The opportunities in drone usage are truly limited by only one's imagination and ingenuity.

1. Analyze the various drone technologies available
2. Recognize the laws governing drone usage
3. Identify markets within your area where drones can be utilized
4. Explore the cost and commitment to entering these markets

Code: MO37
Course Title: Opioids/Cannabis Workplace Drug Testing: What Should Employers Know?
Date: Monday, 2/21/2022
Time: 4:30pm-5:30pm

The opioid crisis has escalated dramatically in the past decade across the country, and those affected may also be your employees. At the same time, the marijuana legalization movement has grown, and a number of states now not only permit medical marijuana but also recreational marijuana. With the potential for more employees to be under the influence of both legal and illegal drugs, what can employers do to maintain a safe workplace? What restrictions are there for testing employees for drug use? This presentation will explore this issue and cover the following topics:

1. Discuss the rise of the opioid epidemic and its effect on the American workplace
2. State the restrictions for conducting drug tests for employees, review best practices and review how to manage the results
3. Discover whether there are any OSHA implications regarding drug testing
4. Explain the role of the Americans with Disabilities Act

Code: MO38
Course Title: Fostering Innovation in the New Workplace
Date: Monday, 2/21/2022
Time: 4:30pm-5:30pm

Disruption is a key driver of change for organizations of all sizes and industries. It starts with an organization's core values and principles and then leading by example. Knowing each other's roles and the ability to relate and understand in terms of communication are vitally important to foster innovation as part of the disruption process over time. It is about leveraging the strengths of your team members along with aligning their core values and principles to the organization to motivate from within innovative ideas to interdependently grow together. Organizations that understand their core values and how this relates to their people will separate them from others in terms of growth. Innovation is a result of people that understand their roles and duties with the ability to come together through specific and clear communication for delivering results. People who feel related too and understood go out of their way to contribute at a higher level. Core values that relate to people on similar levels bring them together to solve problems and create solutions. It's a foundation from core values that communication with one another even using effective virtual communication platforms leads to building an interdependent work culture. These platforms are only good as people use them to communicate effectively.

1. Discuss the importance of core values for building or revamping a diverse workplace culture
2. Explain the five most effective ways to foster innovation that leads to solving problems and creating solutions
3. Define the process how to foster innovation through an interdependent work environment
4. Sustain innovation by discussing the advantages of leading from example

Code: MO39
Course Title: New to the Industry Mixer
Date: Monday, 2/21/2022
Time: 4:30pm-5:30pm

This is the perfect networking opportunity to gather with others who are new to the industry.

2022 WWETT Education Program Course Codes, Title, Day, Time

Code: MO40
Course Title: Women in the Industry Mixer
Date: Monday, 2/21/2022
Time: 4:30pm-5:30pm

This is the perfect opportunity to gather with other women in the industry to learn from each other, share successes, network, etc.

Code: MO41
Course Title: Evolving Standards: Preparing for and Implementing Changes Required at Events and Worksites
Date: Monday, 2/21/2022
Time: 4:30pm-5:30pm

The PSAI is the ANSI-accredited standards developing organization for portable sanitation. The standards are often cited by companies, government agencies, and other customers who need an unbiased resource for understanding how to equip their worksites and event venues with clean, safe sanitation options.

Since early 2021, the PSAI and a consensus body of materially affected stakeholders have been hard at work updating the two standards that most impact portable sanitation. They cover (1) minimum requirements for nonsewered waste disposal systems on work sites and (2) minimum requirements for nonsewered waste disposal systems on non-worksites. The scope of the second standard has been expanded to include standards for special events, parks/recreational sites, camping and disaster relief venues, temporary labor camps, displaced person camps, and anywhere else portable sanitation is used by the general public. The standards are routinely reviewed every 5 years. This time, with the impact of the recent pandemic and the vast changes in expectations across user groups, the standards have been significantly amended to reflect the changes required by users and health agencies in the post-pandemic environment.

The stakeholders involved in updating the standards have studied a wide array of topics and built a consensus around what the minimum standards for portable sanitation equipment, service, safety, and placement should be in the post-COVID world. The new standards cover:

- requirements for equipment on these sites
- minimum number of units per worker hours or attendee hours
- minimum number of sinks/sanitizer uses per attendee hour
- service requirements and frequency
- lighting and ventilation
- disposal of wastewater
- spill containment
- records of service

By the time of the WWETT Show, these new standards will either already have been adopted or will be in the finalization process. Attendees will be among the first to learn about the contents of the standards, what the changes mean for our industry, and how to go about introducing them to your customers.

1. Explain the relevance of an ANSI standard and the relationship of these standards to the requirements of OSHA, MSHA, and other related regulatory bodies
2. Articulate the basic requirements for meeting standards on work sites and all other sites, and to explain why the changes were made
3. Recognize the key factors involved in applying each of the standards to their customer situation
4. Problem-solve around resistance from customers in accepting recommendations based on the standards

Code: TU01
Course Title: NASSCO PACP Codes for Pressure Pipeline Infrastructure
Date: Tuesday, 2/22/2022
Time: 12:00pm-1:00pm

2022 WWETT Education Program Course Codes, Title, Day, Time

This presentation will provide a general overview of the recent efforts by NASSCO and a subcommittee of practitioners within the water conveyance industry to create a unique set of standards and codes for pressure pipelines. These recently developed codes expand and augment current PACP and MACP codes that are already established for gravity pipelines in wastewater systems. This means that these new codes, uniquely developed for pressurized pipelines will also be directly applicable to water distribution systems for use by water utilities, engineers, contractors and system managers.

1. Understand the new codes, recently developed by NASSCO, to help plan, operate, manage, and improve pressurized, buried pipelines
2. Discuss how these codes can be used to assess asset characterizations, condition, and needs for preventative maintenance for pressurized water and wastewater pipelines.
3. Discuss how these codes can be used to assess asset characterizations, condition, and needs for renewal (rehabilitation or replacement) for pressurized water and wastewater pipelines.
4. Explain next steps by NASSCO for certification in the use of these new codes for pressurized pipelines

Code: TU02
Course Title: Small Diameter Pipe Lining – What You Need to Know to Start Lining Inside the Building
Date: Tuesday, 2/22/2022
Time: 12:00pm-1:00pm

Would you like to learn how to market your business to residential and commercial customers looking to rehabilitate their residential and business drainage systems in the walls and under the foundation? This session will teach the basics of how to price and deliver the work with minimal risk and with confidence. It is designed for existing plumbing contractors as well as drain cleaning and lateral pipe lining contractors that work outside the building. This seminar is geared toward education and training that will give you the confidence needed to start lining inside the building.

1. Discover how to market to residential and commercial customers with needs inside the home or office
2. Price the work with confidence
3. Minimize the risk when working inside the building
4. Add a new and highly profitable line of business

Code: TU03
Course Title: Step Cleaning Methodology
Date: Tuesday, 2/22/2022
Time: 12:00pm-1:00pm

Explore step cleaning and the method behind it in our Step Cleaning Methodology class! Using real-world examples with our Pipe Cleaning Calculator, our expert trainer, Ed Fitzgerald, discusses how to implement step cleaning into your sewer program while reviewing the selection of proper nozzles for all sewer technicians.

1. Discuss Step Cleaning Methodology
2. Explain why Step Cleaning can boost efficiency
3. Implement Step Cleaning in your sewer program
4. Selection of proper or nozzles capacities

Code: TU04
Course Title: Equipment Financing Tips for Business Owners
Date: Tuesday, 2/22/2022
Time: 12:30pm-1:30pm

This presentation will be an overview of various equipment financing products available to business owners from financing to leasing, including Sale Leasebacks, working capital products and Lease to Own products. It will review a typical sales and financing process all the way from a quote, pre-approval, final approval to funding. Additionally, it will cover tips like how to evaluate a proposal, an approval letter and how to determine which is

2022 WWETT Education Program Course Codes, Title, Day, Time

the best financing option for your business. This presentation will also talk about typical myths of financing and suggestions to make the best decision for your particular business situation.

1. Evaluate competing equipment financing products to determine which financing option is best for your business
2. Compare the positives and also the down sides between various financial products
3. Explain the financial approval process and required documentation on equipment financing transactions
4. Discuss various financing myths

Code: TU05
Course Title: Optimizing Grease Interceptor Performance
Date: Tuesday, 2/22/2022
Time: 12:30pm-1:30pm

Food Service Establishments must have properly designed, installed and maintained grease interceptors to release treatable wastewater to the next downstream component of the system (e.g. lift station, septic tank or commercial wastewater treatment unit installed in a septic tank). This presentation will focus on how grease interceptors can be optimized to prevent the release of Fats Oils and Grease (FOG). Those companies that specialize in designing, installing and maintaining grease interceptors have learned valuable lessons along the way. Many tips and tricks will be shared during the presentation.

1. List three major categories of grease interceptors
2. Compare and contrast the physical properties of the two types of lipids most often found in food service wastewater
3. List the three Ts of Gravity Grease Interceptor performance
4. State what range of frequency should grease interceptors be cleaned

Code: TU06
Course Title: Secrets of Wastewater Bacteria Production
Date: Tuesday, 2/22/2022
Time: 12:30pm-1:30pm

Microscopic microbes have been in our environment for over 1.5 billion years. They play a vital role in our industry of wastewater treatment and especially septic and drainfield systems. There are good bacteria and bad bacteria. When strong bacteria join together they are a force to recon with. However in today's world we are creating a tougher environment for them to carry on their duties. Augmentation of high quality bacteria is vital to successful wastewater treatment in all of it's forms. This seminar will focus your attention on knowing the secrets behind science based bacteria production. Join us to discover the specialized equipment used for producing the strongest microbes and gain knowledge of the different types and uses of bacteria in wastewater treatment. Warning, as a contractor you don't want to recommend poorly produced bacteria which could have tainted strains. Sir Francis Bacon said, "Knowledge itself is power". Education gained in this talk will empower you to come up with valuable solutions to difficult wastewater treatment problems, along with expert knowledge to help educate your customers.

1. Recognize the different levels of production and how it affects the final product.
2. Discuss with a customer the advantages to using a bacteria treatment program.
3. Define which microbes can be used for certain solutions.
4. Explaining to customers how microbes actual work in their systems.

Code: TU07
Course Title: UV Light- A Valuable Weapon in the Battle Against Pathogens
Date: Tuesday, 2/22/2022
Time: 12:30pm-1:30pm

2022 WWETT Education Program Course Codes, Title, Day, Time

Viral pandemics and increases in antibiotic resistant bacteria (superbugs) have re-awakened the need for disinfection. Being a physical disinfection method, rather than a chemical one, eg chlorine, UV light is very fast, and it does not generate toxic byproducts. This presentation will compare the two techniques, and present data on relative disinfection effectiveness. While the principal application is now treated wastewater effluent, disinfection of air (including air with suspended water droplets) is being increasingly used. This cost effective method can greatly improve air quality in buildings, airplane cabins, and other systems that recirculate air.

1. Identify the urgent need for better disinfection
2. Explain the relative merits of UV versus Chlorine disinfection
3. Discuss wastewater disinfection in regard to superbugs
4. Describe use of UV to purify air circulating systems

Code: TU08
Course Title: Best Practices to Reach 100% Enrollment after the FOG Digital Transformation
Date: Tuesday, 2/22/2022
Time: 1:30pm-2:30pm

You will learn how the alignment of regulations, stakeholders and collaborative online tools enable a successful launch and management of FOG programs. We will share how digital transformation in FOG programs changed the scope of activities for wastewater professionals and impacted the level of engagement of Food Services Establishments and Grease Haulers. We will examine how several changes implemented during Covid 19 will last beyond the pandemic to better manage FOG program in the field and office. The presentation will equip the audience with a summary of proven best practices around the country to take away and implement locally.

1. Review the benefits of digital transformation for the FOG program
2. Learn how new online capabilities drive changes and alignment of the local ordinance and field activity
3. Define the fundamentals of future - post-pandemic FOG program

Code: TU09
Course Title: Service Plumber Training Part 1: Building a Strong Foundation
Date: Tuesday, 2/22/2022
Time: 1:30pm-2:30pm

Service plumbing is grueling, complicated and often demanding yet it is vital for our communities. This session will teach you why it's hard to find service technician talent, how to develop a strong training program, how to create a learning culture and how to retain the technicians you've trained. When your team is more talented than you are, you can accomplish more than you've imagined and grow in ways you didn't think were possible.

1. Define why service plumbing is so complicated
2. Discuss why there is a lack of talent in the industry
3. Explain steps to develop a great service technician
4. Discuss steps to develop a training / learning culture

Code: TU10
Course Title: Don't Blow the Commode
Date: Tuesday, 2/22/2022
Time: 1:30pm-2:30pm

Did you know that toilets can explode during improper mainline sewer cleaning? Learn why this happens (and how to avoid it) in our Don't Blow the Commode class! Our expert trainer offers real-world examples of preventative maintenance (spray patterns, reduction of GPM, etc.) all while discussing past and present operator codes.

1. Explain the techniques of pipe cleaning
2. Understanding airflow in the cleaning process

2022 WWETT Education Program Course Codes, Title, Day, Time

3. Understanding the venting systems on homes
4. Understanding proper nozzle selection

Code: TU11
Course Title: Process Building in 20 Seconds
Date: Tuesday, 2/22/2022
Time: 2:00pm-3:00pm

The less you do, the more you make when you automate. Complicated and intricate business processes do not mean better systems. In this talk, Danielle Putnam lays the groundwork for creating simplicity and success in your business so your energy converts to revenue. Learn the three systems of 1) Process writing 2) Process implementation 3) Value building and how to implement them in 20 seconds. Just as simple machines like pulleys, ramps, and levers are used to accomplish hard work for us, simple processes and systems can turn your business into an automatic money machine by investing only a few minutes a week. With intentional process writing and implementation, instead of wishful hoping, build the company you love so when you eventually exit, you'll be made an offer you can't refuse because you run it in its most valuable form. You'll walk away from this talk with a free, easy-to-use process development system and a handful of simple processes already done for you.

1. Lay the groundwork for creating simplicity in your business so your energy converts to revenue
2. Discuss the process writing system
3. Explain the value of implementing previous processes in 20 seconds
4. Recognize that complicated processes can be simplified to help create revenue

Code: TU12
Course Title: Overcoming the Challenges of High Strength Waste in OSTDS - Panel Discussion
Date: Tuesday, 2/22/2022
Time: 2:00pm-3:30pm

Onsite sewage treatment and disposal systems (OSTDS) are much more than a conventional septic tank and drainfield. Join us for a lively discussion on overcoming the challenges of high strength waste as it relates to OSTDS. Small towns mean big business for the entrepreneur. See how the industry has adapted to meeting the needs of waste streams that go FAR beyond domestic and embrace the niche market of local distilleries, breweries, and anything else today's small business owners can "throw at and IN them"!

1. Be creative when finding solutions for unconventional wastewater needs
2. Encourage to "think outside the box and become innovators"
3. Become proactive with difficult OSTDS situations
4. Realize it's about more than just conventional systems

Code: TU13
Course Title: When the Going Got Tough, The Tough Got Going -- Processing Liquid Transportable Waste
Date: Tuesday, 2/22/2022
Time: 2:00pm-3:30pm

2020 was an exceptional year for all of us. Many parts of the pumper businesses increased with the changes in our social lifestyles. Plans for Processing Liquid Transportable waste increased greater than we could have ever imagined. We will be discussing the challenges of generating permits for disposal of solids and liquids. Changes that needed to be considered to create these facilities, by phone, email and text. We will highlight the greater success stories and how we did it despite the challenges of many of us working from home offices. Come and enjoy the tour of some of the greatest success stories of 2020-2021!

1. Gain an understanding of what it takes to become a liquid waste processor
2. Begin the evaluation process determining what finances will be considered to build a processing facility
3. Understand the typical components of a processing facility

2022 WWETT Education Program Course Codes, Title, Day, Time

Code: TU14
Course Title: Asset Management from the Engineering and Municipal Point of Views
Date: Tuesday, 2/22/2022
Time: 3:00pm-4:00pm

We will have a discussion of Asset Management, using PACP as likelihood of failure from the Engineering and Municipal Points of view. We will go through the need for an Asset Management Program and what needs to be included from a small community to a large Municipality.

1. Discuss why you should do Asset Management
2. Explain how to do Asset Management
3. Discover the benefits of Asset Management

Code: TU15
Course Title: Service Plumber Training Part 2: Cultivating a Healthy Culture
Date: Tuesday, 2/22/2022
Time: 3:00pm-4:00pm

Service plumbing is complex has many layers and takes years of experience to succeed in. Many have completed our Level 1 Service Plumber Training where we laid the foundational elements of what is needed to train well rounded technicians and build a health business culture that breeds retention. In this session expedite the learning process to become a vibrant service plumbing company with talented technicians. We will dive deeper into practical applications to training, metric giving and culture building. You will learn exactly what a strong training program looks like, how employees can succeed and grow within the organization and howto establish a culture that will have people knocking at the door to join your team.

1. Create a Practical Service Technician Training Program
2. Implement Metrics of Success
3. Develop Growth Paths: Developing Departments
4. Create a Business Culture that Draws in Talent

Code: TU16
Course Title: Excavation Safety: Protecting Workers, Protecting Utilities
Date: Tuesday, 2/22/2022
Time: 3:00pm-4:00pm

This presentation will include discoveries from a trench safety survey, conducted by CPWR-The Center for Construction Research and Training, created to reveal potential factors that may contribute to the alarming rise in trench fatalities. As we consider those results we will review the responsibilities of the Competent Person and what they need to manage on a project with regard to soils, underground installations and worker safety. We will conclude this session with common and uncommon solutions for protecting workers and underground installations alike.

- 1, Gain insight from the results of a trench safety survey conducted in response to the rise in trench fatalities
2. Recognize the importance of a properly trained and well-appointed Competent Person
3. Understand the responsibilities of a Competent Person regarding soil testing, inspections and protective system selection
4. Identify protective system solutions for which best provides protection for utilities and personnel when working underground

Code: TU17
Course Title: Ask a Clean & CCTV Expert Anything
Date: Tuesday, 2/22/2022
Time: 3:00pm-4:30pm

2022 WWETT Education Program Course Codes, Title, Day, Time

If you have ever wondered anything about cleaning and televising sewers, then this panel may be the most important time you spend at the WWETT Show this year. The panel of experts assembled for this session have a combined 80 years of experience in cleaning and televising sewer mains & laterals, purchasing equipment, responding to RFP's, repairing equipment, hiring and retaining field employees, project tracking and so much more. Please prepare your questions in advance, because an hour and a half this valuable time will go by quickly. In addition to David Hamberlin, who is the moderator, this group will also include Steve Williams from Key Equipment, Kris Cook from ACE Pipe Cleaning and JT Burden from Hydromax USA.

1. Understand how to approach any cleaning and CCTV project
2. Absorb the years of knowledge that will be shared
3. Engage with industry experts
4. Strengthen your mental library for sewer collection system projects

Code: TU18
Course Title: Google My Business: Driving Revenue to Your Bottom Line
Date: Tuesday, 2/22/2022
Time: 3:30pm-4:30pm

The session will quickly breakdown the three areas your business can show up on the first page of Google. Then we will do a deeper dive on the free listing on the Google My Business or "map section" of Google. "Google My Business" is entirely free! BUT, most business owners get roped into paying thousands for it when they could learn to use it themselves for free in about 20 minutes. We will help business owners and managers gain clarity on how the listing works, and what you can do to make it drive more service calls and more revenue to your business' bottom line.

1. Identify the three places your business can show up on the first page of Google
2. Review how your business listing works on Google
3. Drive more service calls and revenue with the free business listing on Google
4. Discuss addressing individual business owner questions and challenges with Google

Code: TU19
Course Title: Biological Nutrient Reduction in a Media Filter
Date: Tuesday, 2/22/2022
Time: 4:00pm-5:00pm

Concerns about wastewater nitrogen and phosphorus enrichment of surface and groundwaters are growing around the world. Fortunately, the well understood wastewater treatment process Biological Nutrient Reduction successfully addresses these concerns. The BNR process uses microorganisms growing in three distinct environments within the system. Each environment is unique and consequently encourage the growth of distinct groups of microorganisms in them. The wastewater must move from one environment to the next in a specific order to operate properly. In the case of treating small volume wastewater flows, such as from a residence or small business, care must be taken to optimize the BNR process for specific usage characteristics. Media filters use selected media either naturally occurring or man-made to provide both physical and biological treatment to wastewater. This presentation will focus on how the BNR process occurs in a recirculating artificial media filter. Tricks and tips in optimizing the BNR process in a media filter will be shared with the audience.

- 1.State three physical properties that are prized in a media filter
2. What are the names of the two sequential processes responsible for nitrogen reduction under BNR
- 3 Select an example of a "nitrifying bacteria" from a list of four bacteria genera
4. Describe the optimal environment for a thriving colony of denitrifying bacteria

Code: TU20
Course Title: Setting Up a State Approved Disposal Facility
Date: Tuesday, 2/22/2022
Time: 4:00pm-5:00pm

2022 WWETT Education Program Course Codes, Title, Day, Time

A lively conversation with highly qualified individuals who are able to answer questions and give insights as to what is involved in becoming a licensed disposal facility. There will be drawings and a flowchart as to how the process works and what is required to make a simple and efficient disposal operation.

1. Review requirements required by regulators to operate a disposal facility
2. Discuss possible options to meet state regulations
3. Analyze the benefits and cost savings that a private disposal facility can have
4. Explain how IN THE ROUND DEWATERING system works and how to apply to users specific needs

Code: TU21
Course Title: Technologies for Locating Underground Pipe and Buried Objects
Date: Tuesday, 2/22/2022
Time: 4:30pm-5:30pm

This presentation will cover equipment and techniques for detecting and locating underground pipe and cables, and buried objects such as valve and curb boxes, meter covers, cables, and tanks. We will cover locating both metallic and non-metallic objects. Equipment discussed will be pipe and cable locators, metal detectors, ferromagnetic locators, acoustic locating, ground penetrating radar and other systems. Some detail will be covered on the theory of pipe and cable locators with tips and tricks. We will also discuss integrating locating with GIS mapping and physical marking of located objects.

1. We will introduce a variety of locating technologies and their advantages and disadvantages
2. The theory of traditional pipe locators will be defined in detail so that users can intelligently select equipment
3. We will discuss several methods to locate non-metallic pipe uses may not be aware of
4. Integration of locating with GIS mapping, and marking will be explained

Code: TU22
Course Title: Stopping Flow Economically and Safely
Date: Tuesday, 2/22/2022
Time: 4:30pm-5:30pm

Safety is at the top of mind for all involved in a pipeline or tunnel repair. Petersen Products, over 100 years young, has extensive experience designing and manufacturing solutions for highly challenging repair jobs while also being budget-friendly. Our team will share considerations and best practices for completing a pipeline repair safely and effectively. We will walk through essentials of partner communication, site risk assessment, tool selection, test runs and job initiation to completion. There will be a Q&A throughout the presentation.

1. Use effective communication methods
2. Analyze site risks
3. Make a case for tool selection
4. Plan for safe job completion

Code: TU23
Course Title: Resilient Wastewater Solutions: Building for the Future
Date: Tuesday, 2/22/2022
Time: 4:30pm-5:30pm

Our nation's aging infrastructure is a common theme in the news. We hear about deteriorating roads, high-risk dams, and old and undersized treatment plants. Wastewater infrastructure is critical to society's daily functions, health, and safety, yet it is one of the lowest-rated aspects of our country's framework. Improving wastewater infrastructure involves billions of dollars of repair, rehabilitation, and new construction work. A key to long-term success is to select quality and resilient construction solutions. During this session we will investigate what resilience is and why resilient construction has become a focal point in both centralized and decentralized wastewater projects across the country. We will discuss what factors contribute to resilience and how resilient

2022 WWETT Education Program Course Codes, Title, Day, Time

construction is changing the way wastewater solutions are developed. We will also investigate how resilient wastewater solutions can improve safety, reduce construction time, reduce costs, and extend service life.

1. Explain what resilience is and why resilient construction has become a focal point in wastewater projects
2. Describe what factors contribute to resilience
3. Explain how resilient construction is changing how wastewater storage, treatment, and conveyance structures are developed
4. Describe how resilient wastewater solutions can improve safety, reduce construction time, reduce costs, and extend service life

Code: WE01
Course Title: Compete on Awesome, Not on Price
Date: Wednesday, 2/23/2022
Time: 7:30am-8:30am

By delighting its customers, Sunshine Plumbing, Heating & Air grew 535% in just one year.. The company accomplished this growth using a strategic, laser-focused marketing plan and "12 Points of Love" with its customers. Come and learn Sunshine's "secret sauce". and how you can apply it in your business today. This session will give you step-by-step instructions on how to capture reviews, delight your customers and go above on beyond creating the PUFFERFISH EFFECT (and higher tickets!) and start Competing on Awesome and not on price. Susan will give you the "how to" step=by=step to achieve this in any company.

- 1- Create a personalized Compete on Awesome strategy for any business
- 2- Define how to separate yourself from your competition and stop competing on price
- 3- Walk away with insights and knowledge to impact attendees business immediately
- 4-Create teachable steps to communicate to your team at home to have everyone focused on "Competing on Awesome"

Code: WE02
Course Title: Creating a Municipal Fats, Oils, & Grease Program From Scratch
Date: Wednesday, 2/23/2022
Time: 7:30am-8:30am

The majority of the time pretreatment or environmental professionals are tasked with creating a FOG program, they have little to no experience in this area. This is naturally because no program previously existed within their municipalities and they will be creating the entire program from scratch. This presentation will guide attendees through the process of creating a municipal FOG program from start to finish. We will first review why municipal FOG programs exist in the first place and discuss the benefits of operating a thorough program as well as the downside to not having a FOG program in place. We will then step-by-step go through the entire process and we will actually create an actual mock municipal FOG program (small scale) with the audience during the presentation. By the end of he presentation, we will look back at the program we have created as a whole and review how it operates.

1. Define what a municipal fats, oils, & grease program is and what it consists of
2. Discuss the advantages of various methods available for achieving municipal oversight and organization within a FOG Program
3. Analyze actual examples of FOG program components that we created together during the presentation
4. Recognize how each component of a FOG program plays a role overall and how to bring all the components together working as one.

Code: WE03
Course Title: 25 Products & Tools That Will Get You Out of a Jam!
Date: Wednesday, 2/23/2022
Time: 7:30am-8:30am

2022 WWETT Education Program Course Codes, Title, Day, Time

Septic system repair jobs are the worst! Ever stand over a problem scratching your head and saying, "How am I gonna fix that?!" I've struggled with those jobs in tight spots, with less than ideal conditions, and with piping and equipment that is no longer in a position to be maintained or repaired easily. Let me show you 25 of the best items I've come across that make those repairs or service jobs SO MUCH EASIER! Perhaps you can share a couple of items that you've come across that I haven't found yet.

1. Identify the conditions that make a repair job so difficult
2. Determine what the critical factors are in finding the correct fitting or tool for the job
3. Demonstrate 25 items as to how they can get you out of a real pickle
4. Share and network your great ideas and discoveries with the other professionals in our industry

Code: WE04
Course Title: JETTING NOZZLE "LOGIC"; a Common Sense Approach to Choosing the Right Jetting Nozzles
Date: Wednesday, 2/23/2022
Time: 7:30am-8:30am

In this "Jetting Nozzle Logic" session Steve "Jonesie" Jones from JETTERS NORTHWEST will present a "common-sense approach" to choosing the right nozzle for the various drain & sewer jetting jobs that you & your techs encounter. With literally thousands of nozzles available in hundreds of styles, using "Nozzle Logic" can boil them down to a few functional types, enabling you to make better nozzle choices for your inventory of Jetting-Nozzles and for best jetting-efficiency per each job.

1. Understand how the Nozzle has TOTAL CONTROL of your Jetter's GPM and PSI output into the pipe to be cleaned
2. Define the 3 primary PURPOSES of Nozzles in Hydro-Jet cleaning work and the importance of those 3 purposes
3. Compare "STATIC" Nozzles versus "ROTATING" Nozzles and the reasons for choosing each type
4. Analyze various Water-Jet "ANGLES" & the reasons for choosing them

Code: WE05
Course Title: Real Business Solutions for Managing Your Fleet
Date: Wednesday, 2/23/2022
Time: 7:30am-8:30am

This session will offer real world examples of how best to gain true ROI from your Telematics solution. We will look beyond just functions & features and discuss why many companies are not getting true return and how to turn this around

1. Look past the novelty features and identify real solutions to your business challenges
2. Discover how to make 1 + 1 = 3 through integrated partners
3. Learn vertical specific tips and tricks
4. Discuss the ins and outs of next level support and training

Code: WE06
Course Title: How to Calculate Route Profitability for Your Company
Date: Wednesday, 2/23/2022
Time: 9:00am-10:00am

For any company that relies on routes to complete service, it is important to validate how well the routes perform in terms of profitability. During this session, we will go through the structure for route profitability thinking. We will take into consideration driver cost, employee, overtime etc. The session will also discuss routing revenue, windshield time, max service time and breaking down the operational cost formula. A model spreadsheet will be included so attendees can take these principles and apply to their own operation. Once the basic structure and

2022 WWETT Education Program Course Codes, Title, Day, Time

ideas will be discussed, we will work through real case studies of how companies used route profitability to become more efficient.

1. Define the profitability formula and show how business managers and owners should use it
2. Explain what numbers your company needs to get your operational cost
3. Learn how to apply these formulas for your business operations by example

Code: WE07
Course Title: Using Acoustics to Enable Condition Based Maintenance in Gravity Sewer Systems
Date: Wednesday, 2/23/2022
Time: 9:00am-10:00am

Effectively deploying resources to reduce sanitary sewer overflows (SSOs) is a tricky challenge. If cleaning resources are deployed to pipes that are functioning properly, then time and money are wasted. But if a blocked pipe is overlooked, SSOs may occur. For the average utility, determining where the 10-35% of pipe segments with blockages in the entire network is difficult and results in cleaning already clean pipes. Rather than deploying resources blindly, hundreds of utilities are using transmissive acoustics to quickly assess where blockages are in their systems and improve maintenance efficiency. The technology called the Sewer Line Rapid Assessment Tool, or SL-RAT can provide an acoustic assessment in three minutes or less, meaning a two-person crew can inspect 10-20,000 ft/day. This very fast and low-cost method of assessment is a powerful tool for wastewater collection system managers to gain understanding of their entire system and transition to a condition-based maintenance approach. This presentation will discuss numerous utilities that have effectively implemented acoustic inspections and discuss implementation strategies, cost-savings analysis, and program results to demonstrate application. Furthermore, limitations of the technology will be discussed to give a comprehensive overlook of acoustic inspection technology.

1. Recognize the advantages of a condition-based collection system maintenance approach
2. Explain how acoustic inspection technology works
3. Recognize considerations for designing and implementing an acoustic inspection program
4. Explain the different situations where acoustic technology can be beneficial as evidenced by case studies

Code: WE08
Course Title: Keeping What's In, In and What's Out, Out – Watertightness of Precast Concrete Tanks
Date: Wednesday, 2/23/2022
Time: 9:00am-10:00am

Strong, durable, and watertight tanks are an essential component of every onsite wastewater system. To achieve efficient and reliable treatment, each tank must be designed to excel in the unique service and exposure conditions during its service life. Watertightness is a characteristic that depends on the tank's joints and sealants, pipe connections, riser sections, bedding and installation, and the tank material quality. During this session we will examine each of these crucial areas and discuss what goes into making precast concrete tanks watertight. We will also touch on some basics of concrete, including its ingredients, how and why concrete hardens, and how it behaves over time. Lastly, we will discuss watertightness testing by the hydrostatic method and the vacuum method.

1. Describe basic concrete terminology, including concrete ingredients and why and how concrete gains strength
2. Identify the crucial areas in an onsite tank that impact watertightness
3. Explain how to achieve watertightness and what best practices to follow with respect to each of the aforementioned critical areas
4. Outline how to perform watertightness testing by the hydrostatic and vacuum methods

Code: WE09
Course Title: Improving Operations for You and Your Customer with Trenchless Technology
Date: Wednesday, 2/23/2022
Time: 9:00am-10:00am

2022 WWETT Education Program Course Codes, Title, Day, Time

Whether you are a plumber or in the maintenance division of a municipality, finding the fastest and most economical way to fix broken, offset, collapsed or leaking buried sewer pipe might be your recurring nightmare. Would you like to be able to offer cost-effective alternatives to open cut that actually make your business more profitable? This presentation delivers tell-tale lessons about having innovative trenchless technology tools in your toolbox that actually grows your business while minimizing cost and disruption in the lives and to the property of your customer. Success in the service industry ultimately comes from how well you understand your customer's needs and how well prepared you are to answer them. This presentation shares actual plans where municipalities and plumbers were successful in altering their approach to finding problems to include proactively fixing them before emergency repair or replacement was required. Trenchless technologies discussed provide an opportunity to fix pipe faster without jackhammering through a slab or driveway, killing the oak tree that has been there for 100 years, or destroying the beautiful landscaping that was just planted. This presentation will provide a road map that you can use to improve operations with minimal investment, making your "pipe dream" come true when using the trenchless tools in your toolbox.

1. Navigate a decision matrix for the repair or replacement of difficult access pipelines beyond open cut
2. Analyze current operations and identify path for improvement using trenchless technologies
3. Discuss the capabilities and evaluate the limitations of trenchless technologies for small diameter pipelines
4. Explain options to customers that may better meet their individual needs and your business objectives

Code: WE10
Course Title: Reliability, Performance, and Safety Benefits of CANbus Controlled Hydraulic Systems
Date: Wednesday, 2/23/2022
Time: 9:00am-10:00am

The intent of this session is to dispel the myth that CANbus controlled hydraulic systems create unnecessary complexity in sewer and hydro trucks. The reality is that every one of these trucks already has a CANbus on it whether you like it or not, to communicate with the engine. This system is what allows electronic diagnostics in engine systems, which has greatly reduced downtime due to ease of troubleshooting and fault indication to the operator. These same gains can be seen in hydraulic systems, turning something that was once very difficult to troubleshoot into the most reliable part of the truck. Furthermore, this technology can afford significant gains in efficiency, controllability, safety, and overall productivity.

1. Recognize the advantages in reduced downtime and improved productivity that have been attained by using CANbus technology in hydraulic systems
2. Acknowledge the improvements in operator safety that have been achieved thru the use of CANbus technology in hydraulic systems
3. Identify key benefits of CANbus hydraulic systems as they relate to sewer cleaning and hydro excavation markets
4. Describe the key components of a typical CANbus hydraulic system, the functions they perform, and how they differ from more traditional components

Code: WE11
Course Title: Bringing the Tax Laws Out of Hiding
Date: Wednesday, 2/23/2022
Time: 10:30am-11:30am

Are the tax laws that are currently in place and the proposed new tax laws worrying you about operating your business, or selling or transferring your company, or completing your estate plans? Business owners always have one question in mind while working through these issues: How much in taxes am I going to pay in the end and who can show me exactly how much that will be? Business Owners may have difficulty answering this question, so they choose to turn to a professional such as a tax attorney and/or CPA. This presentation will examine why professionals such as Roman Basi (Attorney and CPA) get involved in these issues and transactions, how they get involved, and then how Roman and his team work through a Tax Minimization Analysis (TMA) to show you the After-Tax Cash Flow impact of these decisions. Roman will also teach the participants how to best structure the transaction to meet the parties expectations, along with the normal

2022 WWETT Education Program Course Codes, Title, Day, Time

assistance in Due Diligence, Definitive Purchase Agreements, Closing Schedules, Closing Deliveries, and filing their final tax returns.

1. Have a better understanding of the current tax climate, and the timing of new tax legislation
2. Understand the process of retaining a tax professional that can help mitigate or even eliminate the tax problems of a small business owner
3. Review and understand the consequences of tax decisions made during a transaction
4. Explain the benefits of a Tax Minimization Analysis that evolves throughout the transaction

Code: WE12
Course Title: Monitoring the Health of a Pump with Control Systems and Analog Timer Operations
Date: Wednesday, 2/23/2022
Time: 10:30am-11:30am

Effluent and Sewage pumps are often at the heart of onsite systems and thus are important to a client's investment. Modern control systems can be used to monitor the health and performance of pumps via electronic means and data logging. This presentation will illustrate the control system functions and options that can help monitor pump performance, distribute load, and handle failure modes.

1. Define what pump performance attributes that can be monitored
2. Become familiar with common control system capabilities that can monitor pump performance
3. Understand the reach and limitations of pump performance monitoring

Code: WE13
Course Title: Where There Is Smoke, There Is I&I!!!!
Date: Wednesday, 2/23/2022
Time: 10:30am-11:30am

Smoke testing is one of the oldest methods used to determine the sources of inflow and infiltration issues impacting a sewer system. With the advance of CCTV cameras and other newer technologies, the benefits of smoke testing have often been overlooked. However, many system owners still utilize smoke testing in sewer system evaluation studies as it can identify inflow and infiltration issues in both the public sewer system and from private sources in one quick step. The presentation will begin with a description and differences between inflow and infiltration, and then describe typical sources. An explanation of the smoke testing process will then be demonstrated using video footage from a recent smoke testing project. Case studies will be presented to showcase the benefits of smoke testing, and how the results were used to reduce I&I into a sewer system. The NASSCO Operations & Maintenance committee has updated the Smoke Testing Specification Guidelines and Data Dictionary, and these updates will also be presented. The Smoke Testing Guideline will help Municipalities, Contractors and Engineering Firms smoke test sewer systems using an efficient, thorough, and consistent process. The Data Dictionary is designed to standardize codes for structures and defects to increase accuracy and consistency in reporting.

1. Define Infiltration and Inflow and it's sources
2. Demonstrate the proper smoke testing inspection process
3. Describe the results of smoke testing case studies and how they were used to analyze and reduce I&I
4. Explain the new NASSCO Smoke Test Specification Guidelines

Code: WE14
Course Title: Enlightened CIPP: Deciding When to Use Light-Based Cure Versus Thermal
Date: Wednesday, 2/23/2022
Time: 10:30am-11:30am

In this presentation, we compare the applications for light-cured CIPP to traditional heat-cure methods like steam and hot water. We examine productivity considerations, including abbreviated curing cycles, equipment footprint and speed of deployment. We also look at versatility, including the ability to line through bends, ease of

2022 WWETT Education Program Course Codes, Title, Day, Time

addressing vertical installations, and compatibility with both felt and GFRP substrates. In addition, we look at safety and public perception considerations, including elimination of styrene and amine odors, absence of thermal hazards from steam and hot water, and reduced traffic exposure/disruption due to shorter setup times and curing cycles. Finally, we look at convenience factors, which include the use of a single-part resin that requires no mixing, refrigeration or on-site wet-out. This presentation will include a discussion of the technology and process for each method, video footage from actual cures, and case studies from relining contractors who employ both technologies.

1. Participate in group discussion on technology
2. Review the processes for each method
3. Analyze real video footage from actual cures
4. Discuss revealing case studies from relining contractors

Code: WE15
Course Title: Installing and Mapping Underground Infrastructure While Capturing GPS
Date: Wednesday, 2/23/2022
Time: 10:30am-11:30am

In the underground construction world, we have an end goal of utilizing data, including GPS information and GIS systems, to create a more thorough awareness of asset location underground. Additionally, in the effort to help reduce future utility strikes, utility mapping with GPS and importing the data into GIS systems is becoming increasingly desired in the underground construction industry. In this session, attendees will learn about incorporating GPS information into their as-built reports and using GPS with their as-builts to win and/or add value to their jobs. Additionally, attendees will learn how product currently in the market answers the need for GPS integration and GIS import.

1. Define how GPS/GIS technology can impact the installation of underground infrastructure
2. Explain the proper techniques for mapping underground utility assets using GPS/GIS
3. Utilize as-built reports with GPS/GIS to win and/or add value to your jobs
4. Recognize technology currently available that answers the need for GPS integration and GIS import

Code: WE16
Course Title: Hydroexcavation Safety
Date: Wednesday, 2/23/2022
Time: 12:00pm-1:00pm

This presentation will cover safety tips, procedures and best practices for staying safe while hydroexcavating.

Code: WE17
Course Title: Rethinking Manhole Inspection: A New Way to Reduce I&I Quickly and Cost Effectively
Date: Wednesday, 2/23/2022
Time: 12:00pm-1:00pm

This presentation on the importance of manhole inspection will help attendees better understand why manhole inspection and rehabilitation is a cost-effective addition to many maintenance and I&I reduction programs. It will also provide details about some of the latest developments in automated manhole inspection technology, which are making it easier to complete this kind of work. In recent years, operators have come to realize that the inspection of manholes can be even more effective than pipeline evaluation for reducing costs associated with inflow and infiltration (I&I). Thanks to the new technologies available, inspecting all manholes in a network often costs less and is faster than inspecting the many miles of associated sewer pipeline in a network. Furthermore, in many systems, manhole inspection actually discovers more sources of I&I than are revealed by inspection of sewer pipelines. In some extreme situations, as much as 90% of revealed I&I sources have been found in manholes.

2022 WWETT Education Program Course Codes, Title, Day, Time

1. Discover why manhole inspection and rehabilitation is a cost-effective addition to many maintenance and I&I reduction programs
2. Discuss an often overlooked opportunity for cost reduction and shed light on new technology options for completing the work
3. Utilize modern, safer and more cost-effective solutions to inspect manholes
4. Recognize why modern inspection and rehab solutions for manholes is one of the most efficient and effective ways to rein in costs

Code: WE18
Course Title: Profit OR Pride?
Date: Wednesday, 2/23/2022
Time: 12:00pm-1:00pm

This class is designed to push and challenge the attendees. If you don't leave this class just a little irritated with Jeremiah, then he missed his mark! Every one of us has areas in our life where pride, and or the need to be right, gets in the way of what's most profitable for all parties involved. Jeremiah will share examples from his personal experience, along with tools and tips to support you in identifying how and where this is effective for your business.

1. Identify emotions attachment to an outcome
2. Discuss how to use the 3 "Q" technique: Quality, Quantity, and Quantifiable
3. Show how a Profitable company is beneficial for all parties
4. Identify what the next level is for your personal growth

Code: WE19
Course Title: Multiple Municipal Applications for Vacuum Excavators
Date: Wednesday, 2/23/2022
Time: 12:00pm-1:00pm

Vacuum excavation usage for municipality applications is on the rise. Crews are using vacuum excavators to help with everything from water line maintenance and repair work to utility installation and soft excavation. With all of the potential ways to use these versatile machines, many municipalities are adding multiple sizes and types of vacuum excavators to their equipment fleet. In this vacuum excavation focused session, you will discover the wide range of vacuum excavation applications, explore the different types and sizes of vacuum excavators that are on the market today, hear about new innovations that will help crews operate more efficient, and hear about how organization are strategical adding a combination of models to get to the most from their people and fleet.

1. Explore the common and unique ways municipalities are using vacuum excavator
2. Gain a better understanding of the different types of vacuum excavators that are on the market
3. Develop a fleet management strategy to get the most out of the vacuum excavators in your fleet
4. Discuss recent industry innovations that are expanding the potential uses of vacuum excavators

Code: WE20
Course Title: Successfully Designing for Greywater Reuse Systems
Date: Wednesday, 2/23/2022
Time: 12:00pm-1:00pm

Greywater represents a large percentage of combined wastewater flows. As the demands on our supply of freshwater increase, greywater reuse becomes an attractive option for conserving potable water, especially in areas that are prone to drought. In this one-hour presentation, we'll explain how greywater can be treated to levels that allow it to be used for toilet flushing, cooling towers, water features, and landscape irrigation (subject to local restrictions).

1. Define common reuse treatment limits for non-potable uses

2022 WWETT Education Program Course Codes, Title, Day, Time

2. Learn how to achieve target treatment levels for non-potable reuse applications
3. Understand the advantages and disadvantages of separating greywater from a primary waste stream.

Code: WE21
Course Title: Permanent Backup Lift Station Pumps
Date: Wednesday, 2/23/2022
Time: 1:30pm-2:30pm

This session will introduce attendees to the functionality of backup mounted pump(s) for sewage lift stations. Attendees will learn how backup surface mounted pumps can help prevent spills and work in conjunction with existing submersible pumps. Attendees will get information on the benefits and drawbacks of specifying either generators or backup mounted pumps for any lift station. The session will present items to consider when specifying a backup mounted pump and how to work with engineers, manufacturers, and contractors through all phases of lift station design and implementation.

1. Discuss the functionality and identify components of a lift station
2. Discuss the functionality and identify components of a backup surface mounted pump
3. Explain the advantages and disadvantages of a generator
4. Explain the advantages and disadvantages of a backup surface mounted pump1.

Code: WE22
Course Title: OSHA Confined Space Rules - Which One Is for You?
Date: Wednesday, 2/23/2022
Time: 1:30pm-2:30pm

Even though OSHA's construction industry-focused confined space regulations have been out since 2015, there is still much confusion as to exactly which Standard should be followed. This presentation will help to clarify and address the misunderstanding between when workers should follow the General Industry Standard, 1910.146, and the Construction Industry Standard, 1926 Subpart AA. Keeping those clarifications in mind, we will then address the importance of training your workers on the proper standard and provide ways to ensure everyone is compliant and safe.

1. Analyze and determine which OSHA Standard should be followed when working in a confined space
2. Recognize the importance of training employees on the proper standard
3. Describe the key differences between OSHA's Confined Space Standards (1910.146 & 1926 Subpart AA)
4. Identify the categories and key players of confined spaces

Code: WE23
Course Title: Arrowhead Ranch Water Reclamation Facility Waste Activated Sludge Rehabilitation CMAR
Date: Wednesday, 2/23/2022
Time: 1:30pm-2:30pm

A waste activated sludge line, running 3.5 miles from Arrowhead Wastewater Treatment Plant to its eventual discharge point, was 35 years old and experiencing internal corrosion and deterioration. The consultant for the project, GHD, found that this was primarily pitting and corrosion due to the hydrogen sulphide byproduct from the transported media. This was a uniquely difficult project to approach due to the high concentration of infrastructure and utilities, not only under the plant where the pipe began, but also outside of the facility grounds where the line ran under several busy roadways and even a freeway and overpass area. An additional aspect to overcome was the number of bends in the line, several of which were 45-degrees and in difficult to access locations. Fortunately, Construction Product Marketing (CPM), the Primus Line representative in Arizona, was able to offer the ideal solution to the end client, saving time, money, and greatly reducing the number of excavations from otherwise intrusive rehabilitation work.

1. Define the unique difficult project and how to approach due to the high concentration of infrastructure and utilities where the line requiring rehabilitation ran

2022 WWETT Education Program Course Codes, Title, Day, Time

2. Discuss the advantages of Primus Line in particular its ability to line multiple bends
3. Recognize that productivity will increase with less resources because of less pits required
4. Explain proper installation process including reduced installation times

Code: TH01
Course Title: How to Write a Large Diameter Sewer Cleaning Project Specification
Date: Thursday, 2/24/2022
Time: 7:30am-8:30am

This presentation is going to discuss how to create a large diameter cleaning project for sewers and storm lines based on NASSCO's Large Diameter Cleaning Specification Guideline. We will discuss determining what questions need to be asked and what information needs to be provided to the bidders prior to the bid as well as how to construct the bidding contract. This will cover how to do an RFQ to qualify people as well as an RFP for actually bidding on the project. At the end of this presentation you should know what equipment is available ; depending on the size of the pipe, the amount of debris in the pipe, and the depth of the pipe so you can have the proper cleaning described in the contract documents . It will also help you know what information is going to be needed to put together a good specification that will minimize the number of change orders throughout the contract duration. We will discuss how to write the proper scope as well as other details that need to be included in any contract specification or contract bid.

1. Determine what information is required for a good Large Diameter Cleaning Project
2. Determine the correct equipment used in Large Diameter Cleaning Projects
3. Determine the effects of Pipe Depth, size and debris levels will have on equipment and costs
4. Determine the steps needed to get a good contract that minimizes change orders and assures good results

Code: TH02
Course Title: Wastewater Recycling Pros and Cons and Economics
Date: Thursday, 2/24/2022
Time: 7:30am-8:30am

We will discuss the economics and pay back of Wastewater Recycling for sewer cleaning. Topics include added maintenance to the jetter pump and water system; dewatering of pay load; haul more debris and less water; make more money and pay due to less in disposal fees. In most applications you are able to clean 50% more lines a day. Less driving means less wear and tear on the chassis. You will experience less set up and breakdown time. Don't spend your day driving to hydrants, spend it cleaning sewers.

1. Discuss the advantages of WWR with the customers
2. Explain to your colleagues the ROI of WWR
3. Explain when and when not to use WWR
4. Discover how to maintain the system

Code: TH03
Course Title: Using Artificial Intelligence to Solve Infrastructure Problems
Date: Thursday, 2/24/2022
Time: 7:30am-8:30am

Artificial intelligence has paved the way to faster, more efficient processing of sewer inspection data. With AI, municipalities have the ability to digest massive amounts of data without spending time and money on coding defects. Having a more robust data set means having a more complete understanding of your infrastructure. Because AI can process data in the cloud, information can be sent directly to GIS platforms, helping to build out heat maps and create more accurate visuals of municipal sewer systems. AI helps to identify weaknesses in a system and inform infrastructure planning, reducing risk and cutting costs. Although reliable, autonomous AI products are still on the way, AI is already making a difference for inspection teams in the form of AI-powered defect coding services, a QA solution that helps shoulder inspection workloads.

2022 WWETT Education Program Course Codes, Title, Day, Time

1. Define how AI works
2. Identify how it can be applied to the market
3. Determine the efficiency and accuracy one can get from AI
4. Explore the future of AI and how it will change the way data is evaluated

Code: TH04
Course Title: Low Investment, High Return: Benefit of Injection Grouting for Flow Reduction
Date: Thursday, 2/24/2022
Time: 9:00am-10:00am

In 2019, the Town of Williamston, SC was experiencing severe spikes in WWTP flow after minor rain events. As the town experiences roughly 49" of rain a year equating to regular spikes in flow, it was clear there was an inflow or infiltration problem. The town reached out to Alliance Consulting Engineers, Inc. to assess the collection system's severity of their infiltration. Flow data showed the town's treatment plant was experiencing nearly a 100% increase in effluent flows during rain events which could be eliminated with the right rehabilitation application. After evaluating the issue and the possible solutions, Alliance reached out to Avanti International to learn more about injection grouting as a to mitigate the infiltration issue. It was determined AV-100 Chemical Grout would be the optimal solution, and Avanti knew just the team for the job at hand - Bio-Nomic Services. AV-100 is a chemically reactive gel designed to permanently stop water infiltration by creating an effective, long-lasting water barrier on the exterior of the structure. After town council meetings and discussions with teams from Alliance, Avanti and Bio-Nomic, the town agreed to implement a one-week injection grouting pilot phase for the Shirley Dr. Pump Station area mainlines. This system section was exhibiting high infiltration rates. In a 7-day period, 163-gallons of AV-100 was injected via remote packer equipment through the mainline pipe defects. The results? An overwhelming success with significantly reduced infiltration. The Town noted significantly reduced run times on the pumps at the Shirley Dr. Pump Station in just 7-days. The town and engineer were extremely pleased with the result of the pilot phase and planning to complete Phase 1 by end of 2021.

1. Discuss the benefits of injection grouting in structurally sound pipes
2. Analyze the immediate ROI on grouting when applied correctly
3. Define why injection grouting is the most cost-effective technology to stop infiltration
4. Explain how to qualify an injection grouting project

Code: TH05
Course Title: Jetter Hose Repair and Maintenance
Date: Thursday, 2/24/2022
Time: 9:00am-10:00am

This is a comprehensive class on hose diagnostics. From properly identifying the manufacturer of a sewer cleaning hose, to best practices for repair and replacement, instructor Ed Fitzgerald has the in-field, industry expertise you need to get the job done.

1. How to identify when to repair and replace Sewer Hose
2. Understand the Swage process (properly attaching the fitting to the hose)
3. Properly identify the manufacturer of a sewer cleaning hose
4. Understand the proper tools and techniques for repairing the sewer cleaning hose

Code: TH06
Course Title: Five Things You Must Know About a Sewer Cleaning Truck
Date: Thursday, 2/24/2022
Time: 9:00am-10:00am

We created this presentation and free report because of the horror stories we heard of municipalities and contractors buying the wrong equipment. We don't want anyone wasting, time, money, and resources so this is a passionate educational topic. We want to help you identify the most important things you must know before

2022 WWETT Education Program Course Codes, Title, Day, Time

purchasing a sewer cleaning truck. Unsure what sewer cleaning truck is the best solution for your situation? We want to help you find the right equipment for the right application.

1. Discuss the types of sewer cleaning trucks
2. Realize how to find the right product for your application
3. Explain the differences between main product types
4. Discover why the initial price isn't everything

Code: TH07

Course Title: Air Release Valve Monitoring to Prevent Leaks, Prioritize Maintenance, and Prevent SSOs and Force Main Breaks

Date: Thursday, 2/24/2022

Time: 10:30am-11:30am

Come listen to a presentation on a brand new technology in the market. ReignRMC has a battery operated Air Release Valve (ARV) Monitor: the ReignAir. This brand new technology helps out municipalities in a couple ways. The first thing is a leak detect sensor to let you know if an ARV is failing. The other thing the ReignAir does is provide a single point, battery operated, cellular connected pressure monitor. This allows municipalities to get pressure visibility to remote parts of their systems, like long runs of force main, where there isn't any power or internet available. We are able to use the data we collect to send out text message and email alerts and alarms, and can help detect failing or blocked ARVs, as well as hammer effect and pressure spikes to alert of blockages and prevent force main breaks. And while these systems deploy quickly and affordable for ARV's, they can be placed anywhere a 1/2" NPT port can be provided. The entire system operates on a secure cloud platform, and comes with GPS Mapping and a Dashboard that they can access from any phone, tablet, or PC, from anywhere in the world with their secure login credentials. This means your municipality gets a google map that shows exactly where every ARV in their system is located in real time and the current status of it (pressure and leaks). In an industry where truly new and revolutionary products are rare, the ReignAir is brand new technology that hasn't existed before, and has been needed in the industry, especially with the transition to smart systems and cities. Please join us for a fun and informative session and you can always learn more at www.reign-air.com.

1. Recognize the advantage of digitizing existing assets
2. Discuss how data can help prevent major real-world catastrophes and diagnose causes of problems after they happen
3. Review how blockages, flushable wipes, grease, and other contaminants can present themselves in systems in terms of real time PSI
4. Explore the advantages of gaining real time information into remote portions of the water and wastewater system that were previously inaccessible due to limitations in local power and/or connectivity

Code: TH08

Course Title: Addressing the Misconceptions of Single Conductor Inspection Systems

Date: Thursday, 2/24/2022

Time: 10:30am-11:30am

Sewer and utility inspection technology has certainly evolved over the years. Cameras are clearer and tractors more dependable. But one change that shouldn't be viewed as an advancement has been a shift in preference toward multiconductor systems rather than single conductor systems. While many municipalities are considering this alternative in inspection technology, the truth is that today's single conductor systems are just as advanced and can offer the same benefits as multiconductor technology – and in some cases can even be more advanced. This presentation will address several misconceptions around single conductor technology through technical and anecdotal information.

1. Discuss how single conductor systems are designed to allow inspection teams to conduct multiple tasks at once with only one wire
2. Explain how single conductor systems can be manufactured with stronger wire break strength and more durability than their multi conductor counterparts

2022 WWETT Education Program Course Codes, Title, Day, Time

3. Define why single conductor systems weigh less than their multiconductor counterparts, allowing operators to get further downhole and faster installation and removal of transport and camera
4. Describe how single conductor systems can be easily repaired in the field in 30 minutes

Code: TH09
Course Title: Development of the International Light Curing Technologies Association (ILCTA)
Date: Thursday, 2/24/2022
Time: 10:30am-11:30am

Cured in Place Pipe (CIPP) has been an exciting segment of the trenchless technology industry since its conception by inventor Eric Wood in the 1970s. It became a proven technical solution in the US during the late 1970s through the cooperation of the technology developers and providers and a progressive utility, the Washington Suburban Sanitation Commission (WSSC). CIPP was a game changer and a major milestone of accomplishment. The industry has seen the technology move from non-pressure applications to pressure; from small diameters to large diameters; from short distances to long distances; from circular shapes to non-circular shapes; and the list seems to go on and on. The same can be said for the curing process. It has expanded from hot water to steam and on to light curing including UV and LED.

On April 2, 2019 Light Curing (LC) CIPP industry responded to an invitation from Dr. Tom Iseley and Mike Burkhard to meet at Trenchless Technology Center (TTC) in Ruston, Louisiana. The intent of this meeting was the first step in developing a partnering relationship between academia and the LC leading organizations to address this industry segment's challenges and also to facilitate open discussions on issues facing the industry and not individual companies. This meeting was fascinating. One of the results of the meeting was forming the International Light Curing Technologies Association (ILCTA-formerly known as the Light Curing CIPP Working Group (LCCWG)). The ILCTA will be the entity to monitor the development and performance of the LC CIPP industry. The ILCTA will serve as an independent, non-commercial adviser to the LC CIPP industry by maintaining relationships with the end users such as municipalities, utilities, industries, departments of transportations, etc. ILCTA will be a resource to advance the industry through continuous improvement. This session will explain the necessary steps to improve the design, installation, and operation of the LC CIPP systems through the creation of partnerships among utilities, researchers, designers, contractors, and the LC CIPP industry. In this session a team of experts will advise the end users on issues related to LC CIPP systems.

1. Explain the necessary steps to improve the design, installation, and operation of the LC CIPP systems through the creation of partnerships among utilities, researchers, designers, contractors, and the LC CIPP industry.
2. Discuss the advantages of LC CIPP systems.
3. Explain the UV & LED Specifications
4. Identify the UV & LED Third Party Testing Platform

Code: WKSH1
Course Title: Revenue and Profit Accelerator Playbook
Date: Tuesday, 2/22/2022
Time: 8:00am-11:00am

This course is for Contractors and Service Providers who are wanting to accelerate their revenue growth and profit, financially thrive not just survive, and gain advantage over the competition.

Workshop Details:

Part 1: What Are the Numbers Really Saying

We will take a deep dive into the details and mechanics of job costing, reading and understanding the finer points of profit and loss statements, data mining the financial statements to locate new revenue and potential hidden drains and how to create positive company culture shift.

Part 2: 80/20 Rule

Learn how to use the information in your financial statements and historical trend data to pinpoint who are the most profitable clients and why, the common thread and how to replicate and retain them. The same data can be used to identify the most lucrative services offered or potential new services with the best margins. We will also discuss when to say no to business and how to be comfortable doing so.

2022 WWETT Education Program Course Codes, Title, Day, Time

Part 3: Generating Revenue Momentum

When business is good, there's a tendency to stop prospecting and selling—a costly mistake. We will review ways to keep the sales funnel full even when there's limited time to do so through relationships, social media engagement, content and virtual sales activities. With a shift to a virtual business environment, it is becoming critically important for businesses to establish themselves as a thought leader and one that can be trusted to help clients win.

Code: WKSH2
Course Title: I'm a Manager - Now What?
Date: Tuesday, 2/22/2022
Time: 8:00am-11:30am

Everyone wants to be a manager - until they are one. Then they ask, "How did I get myself into this mess?" The transition from labor to management is more than just a shift in physical environment. It's a mental shift from technical skills to social skills, and a shift in data types. And - it's a shift in thinking because workers are now leaders.

Research and professional observations show that 60% of managers fail within 24 months. That happens because managers and supervisors don't have the top pieces of information they need to be successful.

This interactive 3-1/2 hour workshop uses a combination of lecture, workbook exercises, storytelling, interactive breakout sessions, and Q&A. It is designed to help leaders at all levels understand the essential responsibilities and areas they need to focus on to succeed.

During the interactive session, attendees will discover and be able to identify the areas and skills leaders need to focus on, create objective measurements of success, and recognize what their team members need for their own success.

1. Identify areas and skills leaders need to focus on
2. Create objective measurements of their successes
3. Recognize what their team members need for success
4. Continue to refer to their work and workbooks moving forward and use it as a blueprint for success

Code: NAWT
Course Title: NAWT Vacuum Truck Technician Training Course
Date: Wednesday, 2/23/2022
Time: 8:00am-5:00pm

The Vacuum Truck Technician training course is targeted to those that own or operate a vacuum truck which is used to clean septic tanks, aerobic treatment units, holding tanks or grease traps. It is directed specifically at owners and employees who may just be starting in business and need a good solid base of information to work with to perform their daily tasks. At the same time this one-day training provides a good refresher and overview even for experienced operators.

1. Discuss governmental regulations regarding pumping and disposing of liquid waste
2. Review components of a vacuum pump truck, drive and control mechanisms
3. Explain the science of vacuum and pressurization and basic pump truck operation
4. Discuss safety and emergency response, and manifest and reporting

Code: NOWR
Course Title: NOWRA One-Day Installer Class
Date: Wednesday, 2/23/2022
Time: 8:00am-5:00pm

This Installer Training Program is designed to convey nationally focused best practice standards for onsite wastewater treatment system installation processes as identified by industry stakeholders through an intensive national review process. These materials describe the essential knowledge, skills, and abilities that

2022 WWETT Education Program Course Codes, Title, Day, Time

professionals who install onsite wastewater treatment systems should possess. The material will include an Introduction to onsite systems, safety, soil and site concepts, construction materials and techniques, planning, distribution, watertight piping and tanks, dosing systems and controls, advanced treatment and soil treatment areas.

1. Clarify the responsibilities of professional installers
2. Familiarize installers with standardized techniques and procedures for constructing or installing various onsite wastewater treatment system technologies
3. Promote uniform communication between professional installers and their clientele through the use of standardized terminology
4. Establish a benchmark for competency of installers and enhances the overall status of the onsite wastewater treatment profession

Code: PSAI
Course Title: Basic Service Technician Training Series and Certification Exam for Portable Sanitation Professionals
Date: Tuesday, 2/22/2022
Time: 8:00am-5:00pm

The PSAI is the go-to resource for best practices. Whether or not formal training is required in your area, having trained and certified team members can provide a competitive advantage for your company, help prevent avoidable mistakes and accidents, and save money.

Our series of three basic training courses for service personnel will ensure your team leaders and staff know how to do things according to industry standards, giving you peace of mind and a foundation on which to build. When taken together and followed by successful completion of the certification exam, these three courses will satisfy the licensing requirements in the states of Illinois and Georgia. They are also accepted for continuing education credit in many other states.

The day's learning includes the following courses:

Transportation and Logistics in Portable Sanitation. This 1.5-hour course is designed to address the major areas of competency required for portable sanitation professionals operating vehicles and setting up sites in the field. It covers preparing equipment for safe transport on public highways, the unique issues involved with transporting liquid waste, site selection and equipment placement, waste disposal, and vehicle maintenance protocols.

Servicing and Maintaining Portable Sanitation Equipment. This 2-hour course is designed to teach learners about the proper use of pumping equipment, techniques for cleaning equipment in the field and on the yard, and best practices for field repair. It covers the safe and effective operation of pumping equipment, cleaning and servicing standards in the field and on the yard, adjusting for weather extremes, and field repairs.

Health, Safety, and Professional Excellence in Portable Sanitation. This 2.5-hour course is designed to teach learners about the responsibilities of employers and workers for safety on the job, how to minimize the risk of illness or infection from job-related exposure, and how to approach the position of portable sanitation professional for maximum success. It covers personal protective equipment, materials handling, spill containment, accident/incident management, preventing infectious diseases, recordkeeping, and professional demeanor.

Participants can finish the day by sitting for the updated Portable Sanitation Professional Certification Exam or simply end the day after the last course. Passing the exam is required for licensure in Illinois and Georgia, as well as to be certified as a Portable Sanitation Apprentice or Professional. All attendees who sign up for the day will receive a free study guide which helps with note-taking and serves as a great resource once you get back home.