



Program topics and times are tentative and subject to change. Visit uctonline.com for detailed and updated session information.

I Tutorials

These standing room only tutorials are tailored for the beginner and advanced professional who are looking for basic information and techniques or more detailed, specific information.

- Introduction to Sewer & Water Rehabilitation Technologies
- Effective Use of Mud Mixing/Recycling Systems

II Sewer Construction & Rehabilitation

If you're looking for new technologies and methodologies involved in meeting the increased demands on sewer and water systems, in one of these sessions are for you.

III Coatings & Non-Structural Linings

Learn about long term corrosion protection for large diameter water, wastewater and storm structures.

IV Pipe Bursting: View From the Field *(presented by the International Pipe Bursting Association, a division of NASSCO)*

Get a real world view of pipe bursting and its applications from the experts in the field.

V WaterWorks Conference *(presented by the Gulf Coast Trenchless Association)*

Learn about the construction/rehab of water transmission and distribution systems; examine issues and problems and explore solutions regarding this limited resource.

VI Asset Management

Learn about recent developments for assisting utilities in achieving water asset management objectives.

VII CIPP: Myths & Realities of Styrene

Get the real facts about styrenated resins and its use in CIPP.

VIII Laser/Sonar Profiling Technology for Wastewater

Find out how laser profile measurement is now paying sizeable and measurable dividends to multiple contractors and municipal authorities. The benefits of laser profiling system designed for evaluating pipe ovality, absolute mean diameters and inclination will be explored.

IX Horizontal Directional Drilling: Operations & Summits

These sessions will look at new markets opening up; offer survival information, provide facts and figures; and engage in panel discussions that will keep your company involved in HDD for years.

X Underground Utilities

Explore new technologies and hear panel discussions on issues important to the utility industry.

XI Trenchless Technical Symposium

Interact with industry experts who will feature studies and information, and their value to the trenchless market.

XII Green Construction

Everything is going green – even underground construction. Learn about new green construction products and practices.

UCT EDUCATIONAL PROGRAM

TUESDAY, JANUARY 20

Track I-A = Tutorials: Introduction to Sewer & Water Rehabilitation Technologies

8:30 - 8:55 a.m.

Internal Joint Seals

Speaker: Terry Bell, Miller Pipeline
Stopping leaks and preventing future problems in existing pipe joints can be effectively and economically accomplished utilizing internal joint seals.

9 - 9:25 a.m.

Cured-In-Place-Pipe

Speaker: Keith Alexander, Visu-Sewer Clean & Seal
The applications, economics and benefits of cured-in-place-pipe will be discussed.

9:30 - 9:55 a.m.

Pipe Renewal with Folded Pipe Liners

Speaker: Grant Whittle, Ultraliner
This session will provide an overview on all folded pipe technologies utilized for rehabilitating the underground sewer and water infrastructure.

10 - 10:25 a.m.

Grout-In-Place-Pipe

Speaker: George McAlpine, Danby of North America
GIPP is the generic term for a thermoplastic form used to provide long-term corrosion resistance; the annulus between the form and the host pipe is filled with structural grout.

10:30 - 10:55 a.m.

Sliplining

Speaker: Rick Turkopp, HOBAS Pipe USA
Sliplining can be an extremely effective and economical method to reline pipes.

11 - 11:25 a.m.

Lateral Lining

Repairing laterals can be a cost-efficient solution to the problems inherent to I/I.

1 - 1:25 p.m.

Controlling Root Infiltration with Chemicals

Speaker: Brian Conroy, Duke's Root Control
This presentation will address current chemical control methods for sewer line root control.

1:30 - 1:55 p.m.

Sectional Point Repairs

Speaker: Travis Bohm, Perma-Liner
Modern methods make repairing small sections of pipe both effective and economical.

2 - 2:25 p.m.

By-Pass Pumping

Speaker: Joe Abbott, Gowin Pumps
An important element on many rehab jobs that can't be overlooked; an effective by-pass pumping design can make or break your project.

2:30 - 3:25 p.m.

Pipe Bursting: Static, Hydraulic, Splitting & Laterals

Speaker: Eric Nicholson, HammerHead
This pipe replacement and/or enlarge technique has proven a viable rehab method with a broad spectrum of applications, proving to be diverse and cost effective.





Track II-A = Sewer Construction & Rehabilitation

8:30 - 9:25 a.m.

Find-It Fix-It ... Why Didn't I Think of That? San Antonio Water System's Approach to Renewing Wastewater Collection Infrastructure

Speaker: Jerome Iltis, P.E., San Antonio Water System

Other utilities have successfully used the Find-It Fix-It approach to renew their wastewater collection infrastructure. SAWS has developed its own Find-It Fix-It approach, beginning with 34 miles of small diameter wastewater collection mains in one of the oldest parts of the city where the worst I/I exists.

9:30 - 10:25 a.m.

PACP and Long Term Sewer, Pipeline Condition Management

Speaker: Rod Thornhill, P.E., Whiterock Consultants

Asset management, standardized condition assessment and infrastructure sustainability are a few of the new business practices utilities are implementing to better manage resources now and in the future. How each of these practices can work together in a utility to improve long term operations will be discussed. New techniques that combine standardized PACP condition assessment with engineering knowledge and analytical models are used to better understand historic deterioration rates and to estimate change in pipe conditions in the future.

10:30 - 11:25 a.m.

Getting Geared for Growth: City of Rockport, TX Sanitary Sewer Rehabilitation Program

Speaker: Billy Dick, City of Rockport, TX
Rockport and Aransas County, TX have experienced significant growth over the past two

decades resulting in increased in sewer connections, adding stress on the infrastructure. The city pulled together the most efficient uses of financing, project delivery and rehab technology to establish a new benchmark on how a popular little city can get things done.

1 - 1:55 p.m.

Large Diameter Pipeline Rehabilitation at a Wastewater Treatment Facility: Project Hurdles and Results

Speaker: Lynn Osborn, P.E., Insituform Technologies

The Camden County Municipal Authority presented Insituform Technologies with a unique project at their Wastewater Treatment Plant. The project, completed in the second half of 2007, had numerous challenges and consisted of the cured-in-place-pipe lining of two outfalls greater than 48 inches each. A description of the product used and best practices of project planning when working with a client on large diameter projects will be discussed.

2 - 2:25 p.m.

Line & Grade HDD Becoming Practical

Speaker: Richard Levings, The Charles Machine Works

This session will compare methods of installing new sewer infrastructure with trenchless technology. It will highlight the emerging need for using HDD to install product on line and on grade.

2:30 - 2:55 p.m.

Tunneling Keeps Traffic Flowing While Piping to Laser Accuracy

Speakers: Breffni Cooling, BRH-Garver Construction; Joe Smith, P.E., City of Houston Public Works/Eng.
This microtunneling session will cover the pre-

ferred option to keep traffic flowing and lower impact on the nearby elementary school, removing the need to dewater the entire length of pipe alignment and delivering required accuracy of grade in rapidly changing ground conditions.

3 - 3:25 p.m.

Modern Methods To Effectively Seal Storm Water Pipe Leaks

Speaker: Steve Henning, SSCI Environmental and Consulting Services

Leaking storm pipe is now under increased scrutiny from various federal and local governments. Chemical grouting and internal mechanical seals have a proven track record in sealing storm pipe in sizes ranging from 24 -120 inches in diameter. Chemical grouting is especially useful in sealing box culverts. This presentation will include projects successfully completed with both of these repair techniques.

Track III = Coatings & Non-Structural Linings

Track Moderator: Gerhard Muenchmeyer, P.E., Muenchmeyer Associates

8:30 - 9:25 a.m.

Design and Application Considerations for Long-Term Corrosion Protection of Underground Concrete Sewer Structures and Pipe Using Cementitious Liners

Speaker: William Shook, Action Products Marketing Corp.

This session will cover the materials, design considerations and verification testing available for the long-term corrosion protection of cementitious liners used in sewer structures and pipe. A large diameter pipe project will be examined.

9:30 - 10:25 a.m.

Pre & Post QA/QC - HDPE Renewal Systems

Speaker: Keith Oxner, P.E., Insituform Technologies

When choosing an HDPE product, it is essential for customers to understand pre- and post-quality control measures and best practices in the industry. This includes every step of the HDPE lining process from pre-installation materials selection and cleaning to post-installation pressure testing. Specific case studies will be discussed.

10:30 - 11:25 a.m.

A Practical Approach to Selection, Application & Inspection of Organic and Inorganic Wastewater Linings Utilizing Unique Field Applications

Speakers: David Snider and Lake Barrett, Sauereisen

This session reviews organic and inorganic linings for collection and plant systems from an actual field application perspective. The dynamic nature of corrosion, pre-job inspections, specification development, application challenges and inspection techniques are reviewed utilizing pictures and case histories.

1 - 1:45 p.m.

The Application of Polyurethane as a Rehabilitation Method in the Sanitary and Storm Sewer Industry

Speaker: E.F. Chip Johnson, Sprayroq
The presentation will address the inherent

strengths of the properties of polyurethane, its application process and its corrosion resistance properties. The distribution network of trained applicators and the proper preparation of the substrate will also be discussed. Two projects will be highlighted: a new lift station wet well and the rehabilitation of an existing lift station.

1:50 - 2:35 p.m.

Protective Coatings Lessons Learned - Failures Happen; How to Prevent Them Through Selection, Specification & Installation

Speaker: Rick Bower, RLS Solutions

The diverse and aggressive environmental conditions existing within wastewater systems expose many construction and rehabilitation materials to corrosive elements. In a matter of months, corrosion can deteriorate a previously sound concrete structure resulting in infiltration, partial and full structural failure. Although coatings have been used for decades for corrosion protection, every applied coating has experienced failure, regardless of the type of coating, application process, or the surface coated. It is critical to know how to identify failures, how to repair them, and steps that can be taken to identify potential failures to prevent their occurrence. The city of Fayetteville, AR, identified an effective program for the evaluation of potential materials; analyzing failures with these materials; and set installation and maintenance guidelines to achieve long-term performance expectations.

2:40 - 3:25 p.m.

Deep Shafts and Tunnels Lining: The Ultimate Confined Space Safety Challenge

Speaker: Danny Warren, Warren Environmental

This session will discuss why a project foreman must ensure that all workmen entering a confined space understands the potential hazards of each specific job and what must be dealt with during a confined space emergency.

Track IV = Pipe Bursting: View From The Field

(presented by the International Pipe Bursting Association, a division of NASSCO)

8:30 - 8:40 a.m.

State-of-the-Art in Pipe Bursting

Speaker: Collins Orton, TT Technologies

The state-of-art in pipe bursting (splitting) capabilities available today for engineers and contractors will be reviewed.

8:40 - 9:20 a.m.

Asbestos Cement Pipe: What are the Real Rules?

Speaker: Kent Von Aspern, HDR Inc.

Due to health concerns associated with the manufacturing process, production of asbestos pipe ceased in the U.S. in the early 1970s and is now beyond or approaching their design lives. However, existing regulations limit the use of some of our most popular pipeline replacement methods. This session will examine those regulations, evaluate the impacts of the restrictions, discuss the current position of the regulators, and recommend actions we can take to help craft responsible, reasonable legislation.

9:20 - 10 a.m.

Pipe Bursting Using Vitrified Clay Replacement Pipe in Phoenix

Speaker: Collins Orton, TT Technologies

Pipe bursting has evolved over the years with the use of new replacement pipe materials. The problems and successes of a key project in Phoenix, where the existing pipe was replaced successfully with new vitrified clay "no-dig" pipe will be discussed.

10 - 10:30 a.m.

Examination of Lateral Replacement Program, Municipal Perspective for the City of Santa Rosa, CA

Speaker: Collins Orton, TT Technologies

This presentation will examine the steps taken by the city of Santa Rosa to develop a lateral replacement program. Topics include: I&I flow monitoring, legal issues, cost breakdowns, equipment considerations, the bidding process, training and safety.

10:30 - 11 a.m.

Carbon Calculator: What Does This do for Utilities, Rate Payers, Contractors and Engineers?



Speaker: David O'Sullivan, PW Trenchless Construction

The British Columbia branch of NASTT is working on a program that will allow an owner to calculate the carbon output of a particular project and compare an open-cut method of construction with a trenchless option. The initial indications are a reduction of better than 80% carbon outputs in both the traffic and the actual construction methodologies.

11 - 11:30 a.m.

Water Main Distribution System Replacement with Pipe Bursting

Speaker: Todd Grafenauer, Murphy Pipelines
In Big Spring, TX pipe bursting was used to reconnect services and fire hydrants, and valves were replaced including 16,000 lf of cast iron water mains. This case study will examine how pipelines with numerous service connections can be cost effective using pipe bursting.

1:30 - 2:10 p.m.

Municipality Implements Own Water Rehabilitation Program

Speakers: Matt Carter, WaterOne; Alan Goodman, HammerHead Mole
This session will review the current methods of water main replacement by means of pipe bursting with an emphasis on in-house rehabilitation programs. Also, a case study of pipe bursting water mains with WaterOne in Johnson County, KS will be presented.

2:10 - 2:50 p.m.

An Example of Teamwork

Speakers: Terry Moy, P.E., Clayton County Water Authority, Morrow, GA; Eddie Ward, TT Technologies
Experience and fostering a partnership attitude between owners, engineers, contractors, equipment manufacturers and pipe material suppliers are a key to success. A case study of one utility's approach to addressing an emergency, capacity related problem with an industrial sewer system that included SSOs, and implementing an accelerated evaluation, design and construction plan to provide additional capacity will be presented.

2:50 - 3: 15 p.m.

The Development of a Field Inspector Training Program for Pipe Bursting

Speaker: Gerhard Muenchmeyer, P.E., NASSCO
NASSCO is preparing its Inspector Training & Certification Program (ITCP). This session will discuss the need for the education and certification of field inspectors who inspect the installation of a variety of pipe bursting projects using replacement programs. It will also outline the different elements to be included in the program.

3:15 - 3:30 p.m.

Question & Answer Interactive Session



Track V-A = WaterWorks Conference
(presented by the Gulf Coast Trenchless Association)

8:30 - 8:55 a.m.

State of the Water Industry

Moderator: Rafael Ortega, P.E., Lockwood, Andrews & Newnam

9 - 9:55 a.m.

Unaccounted Water - Find & Fix Is Paramount

Moderator: J. Tom Ray, P.E., Lockwood, Andrews & Newnam, Chair Federal Affairs Committee, TWCA
Millions of dollars are squandered annually due to leaking water pipes. As water continues to become a precious commodity, the need to locate and repair our water systems have become more serious business in terms of both wasted assets and funds.

10 - 10:25 a.m.

SAWS Program for Solving Water Issues, Concerns

This session will outline the program that the San Antonio Water System (SAWS) has undertaken to deal with a variety of area water problems and needs.

10:30 - 10:55 a.m.

Sahara Vs. Smartball Leak Detection - A Head to Head Comparison in Denver, CO

Moderator: Russ Ford, Lockwood, Andrews & Newnam
Speaker: Matthew Turney, Denver Water Board
In 2008, the Denver Water department deployed both the Sahara (The Pressure Pipe Company) and Smartball (Pure Technologies) leak detection systems into an 11 mile stretch of 60-in reinforced concrete cylinder pipe. Leaks unknown to the contractors were simulated by the owner during the testing. This presentation will cover the preparation required, implementation and inspection results for each system.

11 - 11:25 a.m.

Internal Reinstatement of Service Connections for Potable Water Lines - Case Study on Renewal and Reinstatement

Moderator: Russ Ford, Lockwood, Andrews & Newnam

Speaker: Matt Wassam, Insituform Blue
Two recent projects in the northern Midwest included not only the renewal over 13,000 ft of 8-in drinking water pipeline, but also over 200 service connections to residences without added digging. The lines were cleaned and then renewed using the Thermopipe product from Insituform Blue. Thermopipe is a polyester-reinforced polyethylene lining solution with a fully-structural internal design. An AWWA certified Class IV product, the material provided a leak-free solution, able to withstand pressures from 170 psi to 230 psi. Each service connection was restored without having to dig an individual hole at the service.

1 - 1:25 a.m.

The St. Johns Water Company Water System Improvement Project: Utilizing PVC in Difficult HDD Projects

Speakers: Richard "Bo" Botteicher, Underground Solutions Inc.; Colleen Schild, St. John's Water Company; Frank Iwanicki, BP Barber
In February 2008, the St. Johns Water Company set a new record for the longest single HDD project using large diameter thermoplastic pipe with the successful pull-in of 24-in Fusible C-905 pipe under the Stono River near Charleston, SC. The crossing of the river by HDD technique required 4,400 lf of pipe to be installed in a single pull with no casing. The project included more than 19,300 lf of HDD work, and a total of over 55,000 lf of pipe for the entire project.

1:30 - 1:55 a.m.

Rehabilitation of a 60-Year Old Cast Iron Water Pipe

Moderator: Mark Boyer, Boyer Inc.
Speaker: Gregory Henry, P.E., Lockwood, Andrews & Newnam
A case study of the trenchless rehabilitation of a 60-year old 24-, 30- and 36-in cast iron water line while at the same time maintaining service to customers will be presented. A condition assessment of the line determined that the pipe was in sound structural condition; however, failed lead-caulked joints were becoming a major maintenance burden, which could be solved using internal joint seals.

2 - 2:25

Rehabilitation of Major Water Artery in Dallas

Moderator: Mark Boyer, Boyer Inc
Speaker: Ricardo Galceran, Dallas Water Utilities

2:30 - 2:55 p.m.

Water Infrastructure Replacement Prioritization

Moderator: Dale Kornegay, BorTunCo
Speaker: Derek St. John, Lockwood, Andrews & Newnam
The city of Houston's Water Infrastructure Replacement Prioritization program leverages its investment in geographic information systems (GIS) and Enterprise Infrastructure Asset Management Systems, to support the systematic prioritization of small diameter waterlines replacement projects within the city's existing system. The WIRP program is based on 18 waterline and historical water repair categories.

3 - 3:25 p.m.

\$10 M Water Emergency Solved - 90 Days From Concept to Customer Service

Moderator: Dale Kornegay, BorTunCo

Speaker: Buddy Barnes, Jacobs-NAI

Bexar Metropolitan Water District had a water service emergency in the Hill Country Service Area in March 2007. With summer coming and a commitment to provide drinking water to the customers, projects expected to be completed were delayed. Carter & Burgess provided an innovative solution and completed the planning, design, permitting and construction management to complete the \$10 million project in 90 days.

3:30 - 3:55 p.m.

Having the Right Tools to Prevent Failure of PCCP

Speaker: John Galleher Jr., P.E., San Diego County Water Authority

The presentation will cover important tools for prestressed concrete cylinder pipeline users. The limitations to inspection and assessment procedures and important lessons learned by the San Diego County Water Authority on the application of these technologies will be shared.

Track VI = Asset Management

Sponsored by the ASCE PLD UPAM Committee & the Buried Asset Management Institute - International

8:30 - 9:55 a.m.

Establishing a Pathway for Achieving Water Utility Infrastructure Management Excellence

Sponsor: Buried Asset Management Institute-International (BAMI-I)

Track Moderator: Dr. Tom Iseley, P.E., Professor/Director, Construction Engineering Management Technology, IUPUI-Purdue School of Engineering & Technology

Speakers: Tom Iseley, President, BAMI-I Board of Directors; Olga Lamanna, Graduate Student, IUPUI

BAMI-I is in the final phase of completing EPA Cooperative Agreement (CA)-CP 83 282901. This CA investigated what U.S. water utilities felt they needed to achieve excellent infrastructure management; developed an online asset management certification program; and developed a virtual center of excellence to demonstrate how the Internet can best be used as a resource. This session will explain how four universities and two major owner related non-profit associations worked together to achieve results. The dynamics that occurred during the execution of the project and final project deliverables will be demonstrated.

10 - 11:25 a.m.

E-Learning Shapes Future Direction for Asset Management

Sponsor: Underground Infrastructures Training and Competence Center (UNITRACC)

Speaker: Robert Stein, S&P Consult GmbH

This session will demonstrate the resources available through UNITRACC for developing and maintaining utility asset management programs. It will address how to quantify upcoming needs for rehabilitation/renewal. It will explain how short, medium and long-term action plans can be developed for an effective maintenance strategy.

1 - 1:55 p.m.

Underground Pipeline Asset Management (UPAM) Status Report

Sponsor: ASCE (American Society of Civil Engineers) Pipeline Division (PLD)-UPAM Committee

Speakers: Tom Iseley, Chair, UPAM Committee & Professor at IUPUI; George Ruchti, Sales Manager-Southern Region, American SpiralWeld Pipe Co., Chair of UPAM Water-PCA (Pipeline Condition Assessment) Task Committee; Dennis Doherty, Project Manager-Jacobs Engineering, Chair, UPAM Sewer-PCA Task Committee

The main objective of the ASCE Pipeline Division UPAM (Underground Pipeline Asset Management) committee will be to develop guidelines, manuals of practice (MOP), etc. to provide support for the members of ASCE and the water utility industry. Two MOPs are being developed for water pipeline condition assessment (PCA) and for sewer PCA. This session will seek out explain the developments and seek out input from utilities, engineers and contractors.



Track VII = CIPP: Myths & Realities of Styrene
9 - 9:55 a.m.

A Review of the Virginia DOT's Study on the Use of Styrenated Resins on Culvert Rehabilitation Work

Speaker: Ed Kampbell, Rehabilitation Resource Solutions

A look at the report generated by the Virginia Department of Transportation's environmental group regarding styrene and the resultant actions taken by the VDOT's engineering group.

10 - 10:25 a.m.

NASSCO's Guideline for Safe Use and Handling of Styrenated Resins in CIPP

Speakers: Lynn Osborn, Insituform Technologies; Ed Kampbell, Rehabilitation Resource Solutions
NASSCO's new guideline for CIPP contractors using styrenated resin systems will be discussed. This guideline was produced specifically for the CIPP industry and its site specific requirements.

10:30 - 11:25 a.m.

Interim Report: Study of Styrene Concentrations in CIPP Process Water

Speaker: Ed Kampbell, Rehabilitation Resource Solutions

This session will look at the investigation begun by the NASSCO CIPP Committee into the styrene that escapes the liners during installation. The study is aimed at producing definitive information on the concentrations in the processing water (when hot water cures are done) and in the condensate (when hot air curing is done using steam as the heat source).

Track VIII = Laser/Sonar Profiling Technology for Wastewater

1 - 1:55 p.m.

Virtual Mandrel: A Case Study Using 3-D Lidar to Verify New Construction in Georgetown, TX

Speakers: Scott Thayer, Red Zone Robotics; Wayne Brown, Compliance Environmental Services

Traditional new construction verification techniques involve pulling a mandrel through pipes to ensure that they are installed properly and ovalities do not exceed design specifications. While this technique does identify and locate potential defects, it can only identify one defect per inspection pass since the mandrel will not pass defects that exceed specifications. This session describes a new single pass inspection technique that enables direct measurement of geometry defects, including ovalities, using 3-D LIDAR. A case study is presented where 30,000 ft of 30-, 36- and 42-in HOBAS pipe was inspected using this technique after installation in Georgetown, TX.

2 - 2:55 p.m.

Life Cycle of a Laser Profile Inspection Project, From Concept to Report

Speakers: Dick Schantz, P.E., and Joe Vanniewenhoven, Aries Industries

This presentation follows the operational life cycle of a laser profiling system designed for evaluating pipe ovality, absolute mean diameters and inclination. Starting with the basic equipment design criteria and production unit you will follow the equipment qualification process

including calibration and certification into field applications, inspection data gathering, data processing and inspection data management and reporting. Three completed projects will be summarized demonstrating application of the technology to new drain pipe inspection, existing pipe evaluation and pre- and post-pipe lining inspections for liner wall thickness selection and evaluation of liner deployment.

3 - 3:55 p.m.

Benefits of Pipeline Laser Measurement Profiling

Speaker: Doc Bennett, CUES Inc.

Laser profile measurement is now paying sizeable and measurable dividends to multiple contractors and municipal authorities. Many municipal, state and federal authorities, including the IKT of Germany, WRc of the UK, and the FDOT of Florida require laser profiling measurement before rehabilitation of existing lines or the acceptance of a newly installed lines. This presentation covers the basic operation and applications of profiling, case studies of defects not detectable during a video inspection, the failure in a new CIPP liner, ovality deformation in newly laid flexible pipes, and hydrogen sulfide erosion of existing concrete pipe.

Track IX-A = Horizontal Directional Drilling: Operations & Summits

8:30 - 9:55 a.m.

HDD SUMMIT: Preventing Crossbores - Progress or Pending Disasters?

(sponsored by the Distribution Contractors Association)

Discussion Leaders: Dr. Samuel Ariaratnam, P.E., Del E. Webb School of Construction-Arizona State University; Kevin Miller, President, Miller Pipeline; Dan Weaklend; Chief Officer of Safety, NPL Construction; Walt Kelly, Industry Consultant, Walt Kelly Enterprises

The dangers of boring through sewer laterals continues to be a hot topic among contractors and sewer/water system owners, but is any progress being made toward solving the problem? This roundtable will update developments and encourage audience discussion.

10 - 10:25 a.m.

Understanding Magnetic Steering Tools: When, What and How Much

Speaker: John English, Horizontal Technology
Many HDD contractors avoid using wire-line magnetic steering tools due to uncertainty and misinformation. It may take a different mindset, but with proper planning and application, any contractor can - and should - be comfortable using such systems.

10:30 - 11:25 a.m.

Evaluating the Used Rig Market

Speaker: Bob Martin, HDD Broker

This session will look at the state of the used equipment industry, its challenges and opportunities. Included will be a look at last year's historical data, current market trends and thoughts for the future of the used HDD marketplace, including emerging products lines from Asia that are now entering the North American markets.

1 - 1:55 p.m.

Ten Myths About HDD

(presented by the Distribution Contractors Association)

Speaker: Grady Bell, Laney Directional Drilling
A discussion of some of the issues that face the horizontal directional drilling industry today: including; mud disposal, annular grouting, on grade sewage lines, PVC & DI pipe installations and side bends.

2 - 2:55 p.m.

Surveying and Pressure Monitoring in HDD

(presented by the Distribution Contractors Association)

Panelists: Grady Bell, Laney Directional Drilling; David Hayes, Mears Group; Dr. Sam Ariaratnam, Arizona State University

This panel will review current permit requirements, needs and uses of accurate pilot hole surveying techniques and annular pressure monitoring during pilot hole and reaming phases of HDD installations.

3 - 3:55 p.m.

HDD SUMMIT: Contractors & Consulting Engineers - Communications Key to Working Together

Discussion Leaders: Brian Dorwart, P.E., P.G., Vice President, Haley & Aldrich; Eric Skonberg, P.E., Trenchless Engineering Group; Mark Crowson, Vice President, Henkels & McCoy
Communications between consulting engineers and contractors solves project problems and issues for the benefit of all parties, including the project owner. The second of two summits, these roundtable discussions are designed to encourage audience participation.

Track X = Underground Utilities

9 - 9:55 a.m.

Potholing Without Potholes: A Core Strategy for Utility Cut Repairs

Speaker: E. Marshall Pollock, Utilicor Technologies

This session discusses keyhole technology and the coring and reinstatement process that enables utility crews to cost-effectively perform repair or maintenance work on underground pipe or other buried plant from the road surface through an 18-in diameter "keyhole" cored through the pavement thereby avoiding more costly, disruptive and inherently more dangerous excavation methods.

10 - 10:25 a.m.

Pipe Ramming for HDD, Oil & Gas Pipeline Applications

Speaker: Bryan Bachmann, TT Technologies
With several significant natural gas and oil pipeline projects underway throughout North America, the pneumatic pipe ramming method is being utilized by pipeline contractors in a variety of ways. The slick bore method of ramming has been used successfully and pipe rammers are being used to install conductor barrel casings on several large diameter gas and oil HDD pipeline projects and provide other HDD Assist applications in difficult drilling conditions.



10:30 - 10:55 a.m.
Small Boring Unit (SBU) – Ground-Breaking Alternative to Hand-Dig Installations in Hard, Rocky Soil Conditions

Speaker: Arvid Veidmark III, Specialized Services Co.

The SBU is a small diameter cutter-head and thrust bearing assembly that extends the capabilities of the Auger Boring Machine and can easily cut through hard rock faster in small diameter drives. SBUs were recently put to the test in Arizona, known to host the most extreme soils in the world. This session discusses typical utility installations in hard rock, caliche and cemented cobbles and compares in four case studies the benefits of SBU over the longstanding hand-dig method. Equipment and labor costs are considered, as well as increases in daily production, drive limitations, and adaptation with the standard boring machines.

11 - 11:25 a.m.
Can Wireless Technology Help Reduce Your Fleet's Idling Problem?

Speaker: John Hinds, Earthwave Technologies
 With the price of fuel increasing to record levels, construction companies are seeing their profit margins erode away to nothing. By incorporating wireless technology and good old fashioned training and motivation, construction companies can dramatically reduce excessive idling in



their fleet. This is good for the bottom line, good for the environment and good for production.

1 - 1:55 p.m.
Private Fiber Systems Bring Broadband Where Big Carriers Won't Go

Speaker: Mike Render, RVA Market Research & Consulting

Much of the deployment of fiber networks today is being done by independent telecoms and municipal agencies in rural areas. Find out how they are bringing state-of-the-art connections to areas the big carriers don't serve.

2 - 2:55 p.m.
State Investigates Feasibility of Converting Aerial to Underground; Major Utility has Ambitious Program in Place

Speaker: Andrew Tevington, Public Utility Division, Oklahoma Corporation Commission
 After a December 2007 ice storm left more than 600,000 residents without power, the Oklahoma Corporation Commission initiated a study to determine the feasibility of placing existing aerial cable underground. The deputy director will report on the results of that study.

3 - 3:25 p.m.
Wind Power Industry Growth

More and more wind farms are appearing across the country's landscape, but harnessing the



wind to product power requires more than the big wind turbines. Collection systems of cable – many underground – route power generated by the big turbines to substations. This session provides an overview of this emerging industry.

Track XI-A = Trenchless Technical Symposium

8:30 - 9:55 a.m.

NASTT Forum: Benefits of Trenchless vs. Open Cut

10 - 11:25 a.m.

State of the U.S. Trenchless Industry

(presented by the Gulf Coast Trenchless Association)

Moderator: Ravi Kaleyatodi, P.E., Assistant Director-Wastewater Operations, City of Houston

Panelists: Dale Kornegay, BorTunCo; Mark Boyer Boyer Inc.; Patrick Mann, Magnum Tunneling; Grady Bell, Laney Directional Drilling; Brent Keller, PM Construction & Rehab; Tim Naylor, Insituform Technologies; Mike Garver, BRH Garver Construction

Hosted by the Gulf Coast Trenchless Association, this session will highlight the five segments of the trenchless industry – where the industry is today and where it is headed. Topics to be covered include: pipe bursting, HDD, microtunneling, pipejacking, sliplining and CIPP.

1 - 1:25 p.m.

Prediction of Pulling Loads for Fusible PVC Pipe Installed by HDD

Speakers: Dr. Samuel Ariaratnam, Ira A Fulton School of Engineering, Arizona State University; Richard (Bo) Botteicher, Underground Solutions Inc.; Siggie Finsson, Digital Control Inc.

A practical approach for evaluation of Safe Pull Force determination methodology and other associated research is presented in this session that includes basic engineering principles in Safe Pull Force evaluation and how these are applied to Fusible PVC. Also presented is a design model for use in aiding municipal engineers with HDD project layout and requirements, calibrated by field verified data, that will allow a more accurate determination of required Safe Pull Force for HDD installations that can then be compared to the maximum allowable values.

1:30 - 1:55 p.m.

Proposed Revision of WRc Sewer Rehabilitation Design Method

Speaker: George McAlpine, Danby of North America

In the U.S., most sewer pipe rehabilitation design follows methods prescribed in the various ASTM standards. These design standards apply almost exclusively to circular pipes. Rehabilitation design for non circular (and often large brick circular) sewers follow the Water Research Council's (WRc/UK) Sewer Rehabilitation Manual (SRM) methods. The WRc design method is simple and straightforward and very easy to use. It is also fundamentally flawed, i.e., WRONG! This design method and its conceptual errors will be reviewed and ways of correcting these shortcomings using well established engineering practices will be proposed. A design example using both the original WRc design method and the proposed revision illustrating the flaws (and serious consequences) in the existing design method will be presented.

2 - 2:25 p.m.

Private Property Virtual Library – Where We've Been and Where We're Going

Speaker: Bruce Cohen, CSL Services

Since private property continues to be at the forefront of issues that public utilities are facing, the development and maintenance of the private property virtual library (PPVL) will be an on-going effort for the Water Environment Federation's Collections Systems Committee. This session will present the PPVL collection built to date and an overview of the work that has been completed and information that has been gathered since the 2007 workshop. Also included will be case studies of utilities that have developed successful private property programs, a demonstration on navigating the PPVL website, and an outline of the CSC project team's plan for sustaining these efforts in the future.

2:30 - 2:55 p.m.

Correlation of Geological Mapping for Trenchless Suitability with Risk and Consequence in the Geotechnical Baseline Report: Removing Geologic Uncertainty from Bore Planning and Bidding

Speaker: George Davis, R.G., C.P.G., Missouri Department of Transportation

The probability of encountering of difficult conditions or obstruction may be quantified if a skillful geologist or geotechnical engineer completes a geotechnical investigation in advance of the bore. A geologic map for trenchless suitability is an important tool in completion of the geotechnical investigation. There are two valid schools of thought regarding mapping for trenchless suitability – the British school and the American school of thought have generated different perspectives regarding when a geotechnical baseline report (GBR) should be completed in the planning process – both sides will be discussed.

3 - 3:25 p.m.

Minimum Wall Thickness: A Constructability Controlled Design Method for Pipe Liners

Speakers: Grant Whittle, and Dr. Wei (Zack) Zhao, Ultraliner

Close-fit, plastic pipe liners are subject to various construction-induced imperfections. Controlling liner imperfections. In this session, the need and feasibility of controlling the influences of imperfections during the pipe liner design phase are investigated. The Iowa Deflection Formula is introduced to the direct burial flexible pipe design to prevent over-deflection during pipe handling and installation. A minimum thickness design is proposed as the constructability controlled design method for the pipe liner design to control the influences of imperfections. Also, the asset management benefits of this method are discussed.

WEDNESDAY, JANUARY 21

Track II-B = Sewer Construction & Rehabilitation: New Technology

8:30 - 10:25 a.m.

This session will feature several new technologies and methods that could potentially impact the sewer/water industry in the near future.

Track Moderator: Terry Anderson, Future Pipe Industries

Part 1: Line & Grade: Ditch Witch

Speaker: Richard Levings, The Charles

Machine Works

New methods of installing sewer on-line and on-grade will be discussed as new products are being developed.

Part 2: GIPL – The 3S Segmental Panel Rehabilitation System

Speaker: Ed Kampbell, Rehabilitation Resource Solutions

The 3S Segmental Panel System is a lightweight, injection-molded PVC GIPL that is field assembled using simple stainless steel fasteners. The panels are made semi-translucent to allow for positive confirmation of the grouting of the annulus. The technology is applicable to round pipe in sizes from 40-157 inches in diameter; and box culverts from 40-in by 40-in to 197-in by 197-in. Other shapes can be accommodated as well. The panel pieces are sized so that they can be installed without the need for a shaft (or removal of the manhole cone).

Part 3: Vacuum Microtunneling

Speaker: Stuart Harrison, Drillit Intl.

Vacuum microtunneling technology for the on-grade installation of small diameter water and sewer lines. The system is best known for accuracy, versatility and performance.

Part 4:

Speaker: Kevan Taylor, Spiniello Companies-Southern Div.

Outlined will be the scope of work capable using the new Aqua-Pipe technology, its application for solving solutions in the potable water market, and the design, size range and pressures.

Track II-C = Sewer Construction/Rehabilitation 8:30 - 9:25 a.m.

Exploring Pipe Options With Limited Budget, High Needs

Speakers: David Harris, City of Brownwood, TX; Steven Gross, P.E., CertainTeed

With a limited staff for constructing and maintaining their 100-year old wastewater collection system, the growing city of Brownwood, TX has begun to explore new pipe materials and different installation methods to improve their sewer mains. The presentation will also address cost considerations related to pipe bursting, and features and benefits of the PVC piping system.

9:30 - 10:25 a.m.

River Road Storm Sewer Outfall Pipe Rehabilitation Project

Speakers: Riazul Mia, P.E., CFM, City of Laredo; Temple Williamson, P.E. CFM and Russ Ford, Lockwood Andrews & Newnam

The city of Laredo, TX is using rehabilitation technology to repair a 114-in ID corrugated metal pipe storm sewer outfall into the Rio Grande. The host pipe was installed in the 1970s using open-cut through a landfill area. The host pipe had previously been repaired in one area by open-cut and prior to this project was beginning to fail in several areas. The project will use a combination of slipline with FRP and Spiral Wound HDPE.

Track V-B = WaterWorks Conference

(presented by the Gulf Coast Trenchless Association)

8:30 - 8:55 a.m.

Use of Plastic (HDPE) Pipe for Water Main Projects

Track Moderator: Peck Boswell; BRH Garver Construction

Speaker: Bruce Kuffer, Plastics Pipe Institute

A case history of a Midwestern community will illustrate not only the physical features that improved construction but also will reveal the benefits of the neighborhood residents and the city's bottom line political and financial gains.

9 - 9:25 a.m.

New Technology – Krah Pipe

Speaker: Rim Boltong

This session will cover new ID-controlled GF-HDPE Krah Pipe, available in both solid and profile wall, for pressure pipe projects.

9:30 - 10:25 a.m.

Explosive Growth of Trenchless Water Rehab Options

Speaker: Gerry Muenchmeyer, P.E., Muenchmeyer Associates

Trenchless methods have been available for water mains for many years including a number of coating techniques used to improve water quality. This session will cover these techniques as well as new technologies that are positioning to improve water tightness, and the hydraulic and structural characteristics of water mains.

Track IX-B = HDD Operations

8:30 - 8:55 a.m.

Impactor Technology: Expanding Drill Capabilities

Speaker: Eric Nicholson, HammerHead

Impactor technologies can enable a pullback

through a pilot bore utilizing percussive force and expansion versus the turning and cutting process of a traditional backream. In some instances, pull-back may be completed without using drilling fluids and risk of frac-out. Impactor technologies, initially developed for pipe bursting applications, have diversified several contractors abilities through use in multiple hybrid applications.

9 - 9:55 a.m.

Advancements in Gyro Steering Technologies

Speakers: Jim Cloud, SlimDril Intl.; Hans deBruin and Edgar Von Hinüber, Brownline BV

This session will cover the technical applications and advantages of the gyro steering tool in the HDD market.

Track XII = Green Construction

8:30 - 9:25 a.m.

Emission Calculators Document Benefits of Underground Technologies

Speakers: David O'Sullivan, PW Trenchless Construction, Ed Savage, Vermeer; Dr. Samuel Ariaratnam, P.E., Arizona State University

"Green" construction is becoming increasingly important to many project owners. Two innovative tools designed to document that trenchless construction releases significantly less harmful emissions than conventional open-cut construction will be discussed.

9:30 - 10:25 a.m.

Trenchless Technology: Environmentally Friendly Green Construction

Speaker: Collins Orton, TT Technologies

This presentation will examine the environmental benefits of various trenchless technologies, including pipe ramming, pipe bursting, directional drilling and horizontal boring, as well as provide contractors and municipalities insight into promoting the environmental angle of utilizing these trenchless techniques and include a review of significant case study examples.

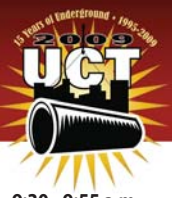
Track XI-B = Trenchless Technical Symposium

9 - 9:25 a.m.

Better Asset Management Using Lessons From Improved Condition Assessment Tools and Transporters

Speaker: Dr. Jey Jeyapalan, P.E.

What would an inspection tool of the future need to look like and be capable of if it were to be able to scan for integrity of the weld, corrosion, wall dimensions and material properties, pressure surges, leaks, and other problems? Would more of our condition assessment efforts use distributed optical fiber sensors and wireless sensors that are as tiny as dust particles? This session will provide a comprehensive account of where we have come from and where we need to go in condition assessment tools and transporters to keep up with the demands in pipe network asset management in the next two decades.



9:30 - 9:55 a.m.

Performance of Water and Gas Pipes in Past Earthquake and Hurricane Events

Speaker: Camille George Rubeiz, P.E., Plastics Pipe Institute

In light of the May 12, 2008 earthquake in China and the devastating effect on its people and resources, this session will document the performance of water and gas piping systems during 5 earthquakes in the U.S., Japan, Thailand and Columbia. Also, the performance of pipes in the Katrina Hurricane will be touched on. The session will assist pipe designers and owners in making more educated decisions about the use of different piping systems to protect society from future disasters.

THURSDAY, JANUARY 22

Track I-B = Tutorial: Effective Use of Mud Mixing/Recycling Systems

8:30 - 10:30 a.m.

This session explores proper techniques for mixing and cleaning drilling fluids and the critical need to match the right fluid additives and using the correct mud system with the drill rig being used.

Track I-C = Tutorial: Introduction to Sewer Rehabilitation Technologies

8:30 - 8:55 a.m.

Sliplining

Speaker: Bijan Khamanian, HOBAS Pipe USA
Sliplining can be an extremely effective and economical method to reline pipes.

9 - 9:25 a.m.

Sectional Point Repairs

Speaker: Travis Bohm, Perma-Liner
Modern methods make repairing small sections of pipe both effective and economical.

9:30 - 9:55 a.m.

Cured-In-Place Pipe

Cured-in-place-pipe is one of the oldest and most successful rehabilitation techniques. The applications, economics and benefits of CIPP will be discussed.

10 - 10:25 a.m.

Pipe Bursting: Static, Hydraulic,

Splitting & Laterals

Speaker: Dave Holcomb, TT Technologies
This pipe replacement and/or enlarge technique has proven a viable rehab method with a broad spectrum of applications. The technology has proven diverse and cost effective.

Track II-D = Sewer/Water: Engineering Ethics 9 - 9:55 a.m.

Ethics for Engineers

Speaker: Dr. C. Vipulanandan (Vipu), P.E., CIGMAT-Department of Civil and Environmental Engineering, University of Houston
Case studies related to ethics for engineers will be discussed from personal, impersonal and responsibility viewpoints. *This session will satisfy the engineering ethics requirement for the annual license renewal.*

Track II-E = Sewer Construction & Rehabilitation

9 - 9:55 a.m.

Deep in the Heart of Texas - Large, Deep

Diameter CIPP Using Only Air & Steam

Speaker: Kevan Taylor, Spiniello Companies-Southern Div.

This session relates to the installation of 33-in diameter lining project which was in a very environmentally sensitive area directly above the Edwards Aquifer Recharge zone and below the Lady Bird Lake, Austin, TX. Installation was 86 ft in length and total 1,564 ft in one continuous installation. The technology and the advantages of using air and steam as opposed to water as the means for inversion and curing of large and small diameter liners will be described.

HDD Summits Open Up Hot Topics For Interactive Discussion

by Jeff Griffin, Senior Editor

The educational program at the 2009 Underground Construction Technology (UCT) International Conference & Exhibition will again include two Horizontal Direction Drilling (HDD) Summits.

These specially designed, interactive HDD Summits enjoyed overwhelming success when introduced at UCT 2008. The 2009 sessions will focus on: the continuing crossbore issue; and improving communications among the design engineers and contractors for HDD projects.

The summit format was introduced to UCT at the 2008 show and proved to be highly popular, said Robert Carpenter, UCT educational program director. In each session, discussion leaders will moderate interactive dialogs among those attending with the goal of achieving an open exchange of ideas providing the opportunity to consider different points of view.

The crossbore summit is being sponsored by the Distribution Contractors Association (DCA).

"The problem of crossbores through sanitary sewer laterals continues to be a critical issue," said Walt Kelly, one of the four discussion leaders "We know there are a significant number of legacy crossbores – instances where powers cable and gas lines have been installed through sewer laterals," he continued.

"They are potential time bombs waiting to explode when a plumber cleans out the blockage. In addition, because many cities do not locate and market laterals in response to one-call tickets, new crossbores are occurring in sewer laterals every day. How we deal with legacy crossbores and reduce the number of new occurrences

are complex issues, and an open discussion at the summit can be beneficial to all stakeholders."

The session on communication between contractors and engineers offers an excellent opportunity to discuss a long-standing, but newly recognized issues, believes discussion leader Brian Dorwart.

"Lack of communication between engineers and contractors can be frustrating for all concerned and can negatively impact a construction project," said Dorwart. "As engineers, we have to know whether our drawings and plans are effectively communicating project requirements to contractors. And contractors must communicate questions and concerns back to the engineer. When communications are not clear or breakdowns in communications occur, they can lead to issues complicating construction of a project that meets the owner's requirements."

Summit sessions at the 2008 UCT in Atlanta were well attended and received high ratings from those who participated.

"In fact," said Carpenter, "some told us they were the best industry educational sessions they had ever attended."

UCT is the premier trade event focusing exclusively on underground construction and is the only annual industry event bringing together contractors, utilities, consulting engineers and manufacturers in a business and educational environment. The high-quality of UCT educational programs has played an important part in achieving this status.

Delegates completing sessions will be eligible for Continuing Education Units (CEUs and Professional Development

The HDD Summit schedules are:

Tuesday, Jan. 20

8:30 - 9:55 a.m.

Topic: Preventing Crossbores-Progress or Pending Disasters?

Discussion Leader: Dr. Samuel Ariaratnam, P.E., Professor, Arizona State University

Discussion Leader: Dan Weakland, Chief Officer of Safety, Quality & Regulatory Affairs, NPL Construction

Discussion Leader: Walt Kelly, Excavation Damage Prevention Consultant
Discussion Leader: Kevin Miller, President, Miller Pipeline Corp.

3 - 3:55 p.m.

Topic: For Contractors & Consulting Engineers - Communications Key to Working Together

Discussion Leader: Brian Dorwart, P.E. P.G., Vice President, Haley & Aldrich

Discussion Leader: Mark Crowson, Vice President - Alliances, Henkels & McCoy

Discussion Leader: Eric R. Skonberg, P.E., Trenchless Engineering

Hours (PDHs) offered in conjunction with (the University of Texas at Arlington). Conference registration and travel arrangements can be made on line at www.uctonline.com.

Tee Up For GCTA Golf Tournament

A round of golf at The Quarry Golf Club in San Antonio, TX is a true golf experience. The Gulf Coast Trenchless Association's 9th Annual Scholarship Golf Tournament will be held Monday, Jan. 19 at the Quarry with proceeds funding the GCTA's college scholarship program.

Major tournament sponsors are: Magnum Tunneling, BorTunCo, HOBAS Pipe USA, Jacobs Engineering, BRH Garver, American Commercial, LAN, and TT Technologies. Sponsorships include: Platinum (\$1,200 includes dinner, hole and foursome); Gold (\$800

includes lunch and hole); Patron (\$500 includes beverage and hole); and Hole (\$250). Mulligans are \$5 each.

The tournament is limited to the first 144 players. The shotgun start is at 12:30 p.m. Registration fees are \$125 per person or \$500 per team and include lunch, dinner and beverages. Clubs can be rented at the Pro-Shop.

Deadline for sponsorship and golf registration is Jan. 6, 2009. For more information or to register, contact committee chairman, Dale Kornegay of BorTunCo, at e3elf@bortunco.com or phone (713) 799-1200 ext. 6.

