

MUNICIPAL FORUM ON TRENCHLESS TECHNOLOGY

2800 US Hwy 281N, Customer Tower (2nd Building) Room CR-C145
San Antonio, TX 78212

Thursday, December 7, 2017
8:30 AM – 4:00 PM

Participants may obtain 0.5 CEUs for attending this program

Municipal Host: Jeff Haby, Vice President, *San Antonio Water System (SAWS)*

TTC Host: John Matthews, Ph.D., Director, *Trenchless Technology Center (TTC)*



TRENCHLESS
TECHNOLOGY
CENTER

AGENDA

Sessions Open to All Attendees				
8:30 AM	to	9:00 AM	Coffee and Refreshments	
9:00 AM	to	9:30 AM	(1) Welcome and Overview of TTC	Dr. John Matthews <i>Trenchless Technology Center (TTC)</i>
9:30 AM	to	10:15 AM	(2) Approaches to Cast Iron Pipeline Condition Assessment	Lisa Douglas, P.E. <i>Ace Pipe Cleaning</i>
10:15 AM	to	10:30 AM	BREAK	
10:30 AM	to	11:15 AM	(3) CIPP – Is it Safe?	Kaleel Rahaim <i>Interplastic</i>
11:15 AM	to	12:00 PM	(4) Geopolymer Linings Systems	Collis Parrish <i>Milliken/IPR</i>
12:00 PM	to	12:45 PM	LUNCH	
12:45 PM	to	1:30 PM	(5) CIPP Lateral Rehabilitation	Tommy Trapp <i>BLD Services</i>
1:30 PM	to	2:15 PM	(6) Trenchless Methods for New Gravity System Construction	Andrew Finney, P.E. <i>CH2M</i>
2:15 PM	to	2:30 PM	BREAK	
2:30 PM	to	3:15 PM	(7) A Brief History of Hydraulic Modeling, and How It's Added Value to SAWS	Bobby Johnson, P.E. <i>SAWS</i>
Municipal Participants Only Session				
3:15 PM	to	4:00 PM	Discussion and information sharing	

BIOS & ABSTRACTS

(1) Welcome and Overview of TTC

Dr. John Matthews *Trenchless Technology Center (TTC)*

Dr. Matthews has 14 years of experience in rehabilitation and inspection of infrastructure systems. He is the Director of the Trenchless Technology Center (TTC) and as an Associate Professor of Civil Engineering and Construction Engineering Technology at Louisiana Tech University. Prior to returning to the TTC, he served as Water Market Sector and Pipe Renewal Service Line Manager at Pure Technologies. Prior to Pure, he served as Battelle's Water Infrastructure Management Lead, leading numerous water infrastructure studies. Prior to Battelle, he led multiple projects while at the TTC as a Research Associate relating to the development of automated decision support systems. He has also been a field inspector on several rehabilitation construction projects. He has given more than 100 conference presentations and authored more than 150 publications. He is active in North American Society for Trenchless Technology (NASTT), American Society of Civil Engineers (ASCE), and American Water Works Association (AWWA). His presentation will focus on recent developments and initiatives at the TTC including research activities and technology transfer opportunities.

(2) Approaches to Cast Iron Pipeline Condition Assessment

Lisa Douglas, P.E. *ACE Pipe Cleaning*

Lisa S. Douglas, P.E. is the Division Manager of the Carylton Water Group, which includes Ace Pipe Cleaning Company. Ace Pipe Cleaning provides cities, municipalities, and water utilities with cost effective, technology-based solutions to equip condition assessment programs and asset managers with actionable data as well as provide water main cleaning and rehabilitation. For more than 17 years Lisa has specialized in pipeline condition assessment technologies and consulting for both gravity and pressure pipe. She is a licensed civil engineer and a graduate of Missouri University of Science and Technology.

Abstract: Over the last five years there has been considerable and important developments in metallic (and more specifically cast iron) pressure pipe condition assessments for pipes larger than 20-inches in diameter. This would include water and transmission and distribution mains as well as wastewater force mains. The research has specifically with dealt with: (1) understanding how metallic pressure pipes fail; (2) assessing for those failure risks specific to metallic pressure pipe; and (3) modeling the deterioration rates of metallic pressure pipe. The purpose of this presentation is to present the current research that has provided the understanding of cast iron pressure pipe failure mechanics as well as the current methodologies to understand the mechanics of the pipeline failures and to apply current technologies to provide a reliable and cost-effective condition assessment. If you know how a pipeline will deteriorate and fail, you can pinpoint with accuracy the current state of condition for a linear asset.

(3) CIPP – Is it Safe?

Kaleel Rahaim *Interplastic Corporation*

Kaleel Rahaim received his Chemical Engineer degree from Mississippi State University. He has experience in many different aspects of Engineering such as project and process engineering, in both Chemical and Civil Engineering. He has been involved in the thermoset polymer industry for over 30 years. His experience includes process improvements for many thermoset resin applications including cured-in-place pipe (CIPP). His current position is Business Manager Remediation Polymers for Interplastic Corporation. Mr. Rahaim is a former Board of Directors member and Treasurer for the NASTT and involved in other trade organizations for the trenchless remediation industry. He was recently voted into the No Dig Hall of Fame for 2015. He is a voting member of ASTM and a member of NASSCO. Mr. Rahaim is also a coauthor of the published NASTT Manual for CIPP Good Practices. His presentation will focus on the safety of using CIPP, which has been called into question by some recently.

(4) Geopolymer Lining Systems

Collis Parrish *Milliken/IPR*

Collis Parrish, a native Houstonian, is the Regional Manager of Business Development for IPR - South Central. IPR is the largest, privately held, trenchless pipe rehabilitation company in the U.S. Collis began working for IPR in October of 2012, and immediately assumed the role of developing opportunities for IPR, in each of their core

rehabilitation technologies, including Cured-in-Place Pipe, Pipe Bursting, and EcoCast (geopolymer applied coating). Collis graduated from Texas A&M University in College Station, with a Marketing Degree from the Mays Business School in 2002. He currently resides in Houston, TX, with his wife Sarah, and their daughter Reese. Collis has been a board member for the Gulf Coast Chapter of the UCTA since 2013, and President of the Gulf Coast Chapter of the UCTA since 2016. His presentation will focus on geopolymer lining systems and will include two case histories from some recent installations.

(5) CIPP Lateral Rehabilitation

Tommy Trapp *BLD Services*

Tommy has been in the cured-in-place pipe (CIPP) industry for 32 years. He was with Insituform Technologies for 24 years, involved with mainline construction and management of CIPP projects primarily in the Southeastern U.S., although he has worked on projects all over the country. He has lined some of the first “clam shell pipes” used for long-term creep test for the TTC at Louisiana Tech back in the late 1980s. While at Insituform, he also worked with the development and field trials of the first lateral CIPP installations undertaken by Insituform. For the last 8 years he has been with BLD, focusing specifically on CIPP lateral lining, managing projects and personnel while continuing to develop and implement processes to improve the products they provide their customers. BLD Services specializes in CIPP lateral lining, with all work able to be performed from the main, without the need of a clean out access point. With 25 crews located across the Eastern United States, they are the largest lateral contractor in the U.S. His presentation will discuss the challenges laterals present to municipalities, starting with ownership of the lateral, CCTV of the lateral and alternatives to rehabilitating the lateral. The presentation will focus on the CIPP method of rehabilitating service laterals of a municipal sewer system.

(6) Trenchless Methods for New Gravity System Construction

Andrew Finney, P.E. *CH2M*

Andrew has an undergraduate degree in engineering from Bucknell University and a Masters in geotechnical engineering from the University of Washington. He has 25 years of tunneling and trenchless design experience for water, transportation, and mining projects and has worked in Africa, Asia, and across North America. Currently Andrew is leading a stormwater tunnel design in Winnipeg, Manitoba and has recently served as the trenchless lead for the SAWS C13 project in San Antonio.

(7) A Brief History of Hydraulic Modeling and How its Added Value to SAWS

Bobby Johnson, P.E. *SAWS*

Mr. Johnson is the Manager of Master Planning for San Antonio Water System (SAWS). As Manager of the Water and Wastewater Master Planning Division, he is responsible for the planning of future water and wastewater infrastructure to support the rapidly growing San Antonio community. He has more than 20 years of experience in the areas of water and wastewater modeling, trenchless pipeline rehabilitation, development engineering services and capital improvement program management. He also served in the United States Army Reserves as an Environmental Science and Engineering Officer. He has a Civil Engineering Degree from University of Texas at San Antonio. He is married to Angelic Johnson and is father to daughters Frances and Cruz, and son Christopher.

Abstract: Water has been central to the City of San Antonio from its beginning and is vital to its growth. The wastewater collection system has been the logical and necessary companion to the expanding water system and has experienced growth proportionally. SAWS hydraulic water and wastewater model networks have evolved along with the respective physical distribution and collection networks. SAWS benefitted from hydraulic modeling particularly in last 20 years for the planning of future infrastructure throughout its systems. SAWS staff within this time period in collaboration with the consulting community has gained the expertise in hydraulic modeling and related tasks ranging from flow monitoring, modeling building, as well as demand forecasting. These tasks have enabled SAWS to predict future needs and capital improvement projects. The hydraulic modeling capability available to SAWS provides a tool for addressing such challenges as integrating future water supplies into the core of a system that was sustained historically on groundwater. For the wastewater system, it provides a tool for specifying bypass pumping needs as well as aiding in the design of a major interceptor such as the E-19/20 projects located in the SAWS Eastern Sewershed.