

SOUTHERN CALIFORNIA FORUM ON TRENCHLESS TECHNOLOGY

Tuesday, 05/23/2017

Long Beach Water Department Treatment Plant, 2950 Redondo Ave., Long Beach, CA 90806

Hosts:

Jinny C. Huang, Long Beach Water Department
Edward Arrington, City of Los Angeles

8:30 A.M. – 4:00 P.M.

NOTE:

Attendees can earn up to 4.5 PDHs.

AGENDA

(Subject to slight modifications)

8:30 Coffee and reception

8:30 MINI-EXHIBITION OPENS

9:00 – 9:10 WELCOME AND INTRODUCTIONS

TECHNICAL PRESENTATIONS

9:10 – 9:50 #1 **Sewer Tunnel through Dangerous Terrain...** Russell Vakharia, LA County

9:50 – 10:15 #2 **Challenges of Lining Large Dia. Gravity Sewers with CIPP...** Christian Alarcon, LA County

10:15 - 10:25 Break

10:25 – 10:50 #3 **Trenchless Rehabilitation of Curve Sections for Large Diameter Sewers...** Benét Gardner, City of Los Angeles

10:50 – 11:15 #4 **Sinkhole! Laurel Canyon & Woodbridge Sewer Emergency Response...** Elvin Yeck, City of Los Angeles

11:15 - 11:20 Break

11:20 – 12:00 #5 **New Technologies for Collection System Asset Management...** Michelle Beason, National Plant Services, a Carylton Company

12:00 – 12:30 LUNCH

12:30 – 1:10 #6 **The Future of Cured-in-Place Pipe for Pipeline Remediation...** Kaleel Rahaim, Interplastic Corporation

1:10 – 2:00 #7 **UV CIPP- Now and Future with Discussions on Standards...** Mike Burkhard, Reline America

2:00 – 2:05 Break

2:05 – 2:45 #8 **Risk Based Condition Assessment of Downtown Interceptor Phase 2...** Mike Fleury and Tim Taylor, Carollo Engineers

“MUNICIPAL PARTICIPANTS ONLY” SESSION

2:45 – 3:30 Discussion and information sharing

4:00 MINI-EXHIBITION CLOSSES

4:00 pm Adjourn

Technical Presentations

- Title:** Sewer Tunnel through Dangerous Terrain
Presenter: Russell Vakharia, Los Angeles County Sanitation Districts - Field Engineering
Duration: 35 min + Q/A
Abstract: This presentation will discuss tunneling methods and challenges of a 2.5 mile long, 12 foot diameter, shallow sewer tunnel that included several horizontal and vertical curves, went under busy streets, landfills, an active oil refinery and active oil lines. Other challenges included: relocating numerous oil and utility lines, community issues resulting in major alignment changes, encountering water and oil saturated squeezing ground, hitting gasoline contaminated material resulting in OSHA requiring the tunnel machine to be retrofitted and made explosion proof. Other topics include a discussion of the pros and cons of the tunnel machine used, real-time web-based ground settlement monitoring and installation of a short liner plate tunnel in an area where conflicting utilities were encountered.
- Title:** Challenges of Lining Large Diameter Gravity Sewers with Cured-In-Place Pipe (CIPP)
Presenter: Christian Alarcon, Senior Engineer, Los Angeles County Sanitation Districts – Sewer Design
Duration: 20 min + Q/A
Abstract: This presentation will discuss the challenges the Districts have faced while CIPP lining large diameter gravity sewers. Installing CIPP for large diameter sewers involves special problems such as onsite wetout, sewer access for CIPP installation access, equipment layout, long installation and curing time and diversion and/or bypass of large sewage flows. Additionally, the Districts have contended with Potholes challenges including lining of siphons on long, steep slopes with severe elevation changes, problems due to excess resin or improper impregnation, and liners lengths that have come up short.
- Title:** Trenchless Rehabilitation of Curve Sections for Large Diameter Sewers
Presenter: Benét Gardner, City of Los Angeles
Duration: 20 min + Q/A
Abstract: This presentation will show case studies of City of Los Angeles projects requiring sliplining along curved portions of sewer alignment. While the use of segmented sliplining has become a well-known trenchless method of rehabilitation, curved portions of an alignment present unique challenges that are neither easily apparent during design nor easy to handle during construction. For each study presented, installation method, challenges encountered, solutions achieved, and lessons learned, will be presented. The cases will address, using different pipe products, of different sizes.
- Title:** Sinkhole! Laurel Canyon & Woodbridge Sewer Emergency Response
Presenter: Elvin Yeck, City of Los Angeles
Duration: 20 min + Q/A
Abstract: This presentation describes the emergency responses in late February 2017 when a large diameter sewer collapsed and the large sinkhole swallowed two passenger cars on Woodbridge Avenue next to Laurel Canyon Blvd in the City of Los Angeles. In addition to a brief discussion of City's Sewer Emergency Repair On-Call procedures, the presentation will discuss challenges with the repair of this sinkhole, including securing the site, implementing sewer bypass, traffic control, odor control, sliplining the non-circular sewer, and outreaching the neighborhood.

Title: **New Technologies for Collection System Asset Management**
Presenter: Michelle Beason, *National Plant Services, a Carylon Company*
Duration: 30 min + Q/A
Abstract: This presentation will touch on the steps necessary to create an asset management program, and then focus on new technologies that are now available to assist in our on-going asset management efforts. These new technologies include: Recycling Jet Vacs that can save over 10,000 gallons of drinking water EVERY DAY; multi-sensor inspections using laser and sonar to more accurately quantify pipe degradation; acoustical testing of sewers to more quickly inspect a system and prevent overflows; trenchless lateral lining processes that will reduce I&I into a system; and centrifugally cast concrete lining which restores any pipeline to a new structurally sound pipe.

Title: **The Future of Cured-in-Place Pipe for Pipeline Remediation**
Presenter: Kaleel Rahaim, *Interplastic Corporation*
Duration: 30 min + Q/A
Abstract: The cured-in-place pipe (CIPP) process has been successfully used to renovate gravity pipelines for over 40 years. The process has a proven track record for installing a new pipe in situ and in many cases preventing further deterioration of the host pipe. With the advent of new fabrics to construct tubes, new resins to compliment the new fabrics and processes with better quality controls, the CIPP process can now be used as a method for successfully renovating deteriorated pressure pipelines.

Title: **UV CIPP – Now and Tomorrow with Discussions on Standards**
Presenter: Mike Burkhard, *Reline America*
Duration: 30 min + Q/A
Abstract: This presentation will include an overview of the types of UV-cured CIPP products available on the market today. Focus will be on the latest technical advances and current applicability of these systems in large diameters, round & non-round shapes, and both short and long reaches. Testing and monitoring during installation will be discussed. A case study of a large diameter installation will be presented. Lastly, the challenges with the existing standard and proposed changes to ASTM F2019 will be outlined.

Title: **Risk Based Condition Assessment of Downtown Interceptor Phase 2**
Presenter: Mike Fleury and Tim Taylor, *Carollo Engineers*
Duration: 30 min + Q/A
Abstract: This presentation covers a risk-based condition assessment that validates the rehabilitation strategy, estimated construction cost, and provided the City of Las Vegas with a cost-effective rehabilitation project. The City of Las Vegas Downtown Interceptor Sewer was constructed in the early 1980's in two phases and consists of approximately 23,000 feet of 42- to 54-inch unlined and T-Lock lined reinforced concrete pipe (RCP). The Interceptor is a critical asset for the City of Las Vegas. A fast track rehabilitation design for the unlined portion was completed approximately five years ago. The Phase 2 project condition assessment consists of approximately 7,000 feet of 48- to 54-inch T-Lock lined RCP and the Sahara Ave. Interceptor which includes approximately 27,000 feet of cured-in-place-pipe (CIPP) rehabilitation of vitrified clay pipe (VCP) and approximately 100 manholes. Based on risk, a rehabilitation strategy was developed for the final design that included, not only the Grade 4 and 5 areas, but adjacent areas that would be difficult to rehabilitate in the future due to large traffic volumes and/or business disruption on Sahara Avenue a Nevada Department of Transportation (NDOT) corridor.

Mini-Exhibition: Selected Vendors