# **Collection Systems Conference 2013**

Gold Nuggets of Knowledge

Sacramento, California, USA 9 – 12 June 2013

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### Session 1: Private Property Inflow/Infiltration

Monday, June 10, 2013 Room: 306 1:30pm – 4:45pm 2.5 PDHs Moderators: Gary Moore, Metropolitan St. Louis Sewer District Mirza Rabbaig, Detroit Water and Sewerage Department 01A 1:30pm Pressure Sewer System Review & I/I Study, APIA, SAMOA Paul Edwards, Urban Water Solutions 01B 2:00pm **Decennial Flow Monitoring Project - Installing and** Maintaining 235 Flow Monitoring Locations in Support of King County Conveyance System Improvement Program Abraham Araya, Janice Johnson, Jenny Ho, King County DNRP 01C 2:30pm **Convey Your Storm Water and Plug Your Holes! A Proven** Means of I/I Reduction with Private Property Improvements and Trenchless Sewer Rehabilitation John P. Schroeder, CDM Smith; C. Timothy Fallara, City of Columbus 3:00pm **Networking Break** 01D 3:45pm Cost Effective and Reliable Inlfow-Infiltration Reduction -Have They Got it Right Down Under? Stephen C. Carne, GHD Limited Making Sense of I/I Reduction Case Studies: We're 01E 4:15pm Swimming In Data, But What Does It All Mean? Heidi G. Oriol, Jenny H. Tran, Jacqueline T. Kepke, East Bay Municipal Utility District; Richard Cunningham, East Bay **Collection Systems Advisory Committee** 4:45pm Adjourn

### Alternate Sewer Lateral Lining By CIPP Method Muminu Badmus, Dunbar Regis, <u>Hiram Tanner</u>, DC Water

### Networking Reception – Exhibit Hall A

Immediately following the conclusion of this session, please join us for the Networking Reception held in Exhibit Hall A from 5:00pm – 6:30pm.

### **Session 2: Getting Projects Done California Style**

Monday, June 10, 2013 1:30pm – 4:45pm Room: 307 2.5 PDHs

**Moderators:** Christoph Dobson, Sacramento Area Sewer District Jody Allen, South Placer Municipal Utility District

- 02A 1:30pm Septic to Sewer Finally Becoming Reality Bruce J. Corwin, CDM Smith; John Waddell, San Luis Obispo County
- 02B 2:00pm Addressing Difficult Access Reach Sewers (DARS) <u>Gary N. Skipper</u>, Brown and Caldwell; Fernando Gonzalez, City of Los Angeles, CA
- 02C 2:30pm SASD'S Pipe Dream = Data Accuracy & Big \$\$ Savings! <u>Dave Pitts</u>, <u>Chris Penales</u>, Marva Thompson, Sacramento Area Sewer District (SASD)

3:00pm Networking Break

- 02D 3:45pm Yes, In Your Backyard: Backyard Sewer Main Replacements Benefit from Approach that CombinesTrenchless Technologies and Focused Homeowner Outreach Nancy McWilliams, John Goodwin, West Yost Associates
- 02E 4:15pm Wait !! Should We Design a Pump Station or Pipeline? -Case Study Michael Fisher, Jigar D. Shah, Waterworks Engineers
  - 4:45pm Adjourn

Alternate Dig that Creek or Tunnel that Creek? Case Study of Crossing San Tomas Aquino Creek with an Inverted Sewer Siphon in Santa Clara, California <u>Glenn Hermanson</u>, RMC Water & Environment; <u>Falguni Amin</u>, City of Santa Clara Public Works

#### Networking Reception – Exhibit Hall A

Immediately following the conclusion of this session, please join us for the Networking Reception held in Exhibit Hall A from 5:00pm – 6:30pm.

Session 3: Asset Management - Yesterday's Buzzword, Today's Business Practice				
Monday, June 10, 2013 1:30pm – 4:45pm		Room: 308 2.5 PDHs		
Moderators:	Dianne Sumego, Black & Veatch Luis R. Leon, CDM Smith			
03A 1:30pm	<b>Defending Rehabilitation and Replacement (</b> <b>Using KANEW Analyses</b> S. Wayne Miles, CDM Smith; Terry McCue, Ser FL; <u>James Carolan</u> , CDM Smith	, C		
03B 2:00pm	<b>Developing a Sustainable Training Solution</b> <u>James McPherson</u> , Union Sanitary District			
03C 2:30pm	The Tri-Angular Flow of Sewers- SD1's Proad to Asset Management Rich McGillis, <u>Kyle Boyle</u> , Debbie Rizzo, Sanitat Northern Kentucky			
3:00pm	Networking Break			
03D 3:45pm	Why Adopting Asset Management is Really A Organizational Change Claire R. Baldwin, <u>Meha Patel</u> , CDM Smith	About Managing		
03E 4:15pm	Victor Valley Interceptor Condition Assessm Emergency Rehab Design/Construction Michael A. Fleury, Greg Gould, Carollo Enginee Gina Cloutier, Gilbert Perez, Victor Valley Waste	ers; Latif Laari,		

4:45pm Adjourn

### Networking Reception – Exhibit Hall A

**Reclamation Authority** 

Immediately following the conclusion of this session, please join us for the Networking Reception held in Exhibit Hall A from 5:00pm – 6:30pm.

### Session 4: Northern California Collection Systems Compliance

Tuesday, June 11, 2013 8:30am – 11:45am		Room: 306 2.5 PDHs
Moderators:	Keith McCormack, Hubbell, Roth & Clark Phil Brenner, Hach	
04A 8:30am	Sanitary Sewer Overflow Estimation Technica Station Shawn Nesgis, Jose Rodrigues, Union Sanitary I	-
04B 9:00am	Effective Traceable Natural Gas Crossbore In Greg Scoby, Frontline Energy Services	vestigations
04C 9:30am	Clean Water Act Citizen Suits and the Public A Legal and Operations Perspective Roberta Larson, California Association of Sanitat Vickie Caulfield, El Dorado Irrigation District	
10:00am	Networking Break	
04D 10:45am	Implementing 21st Century Solutions to a 19th System: Integrated Combined Sewer System Achieves Regulatory Compliance in the City of David M. Wood, AECOM; Brett Grant, City of Sac Department of Utilities	Planning of Sacramento
04E 11:15am	Lights. Camera. Action! Who Knew Sewers W	ere so

- 04E 11:15am Lights. Camera. Action! Who Knew Sewers Were so Glamorous? Sharon Perlstein, City of West Hollywood, CA; Gary Skipper, Brown and Caldwell
  - 11:45am Adjourn

### Session 5: Green Infrastructure and Integrated Wet Weather Management

Tuesday, June 11, 2013 8:30am – 11:45am Room: 307 2.5 PDHs

- **Moderators:** Mirza Rabbaig, Detroit Water and Sewerage Department Greg Heath, AECOM
- 05A 8:30am Green Infrastructure Opportunities in Gray Wet Weather Plans Lawrence J. Lennon, Lennon, Smith, Souleret Engineering, Inc.; Uzair Shamsi, Michael Baker Corp; Anthony Igwe, Wade Trim Inc.; John Schombert, Three Rivers Wet Weather; John Maslanik, Chester Engineers Inc.
- 05B 9:00am Simplifying Bioretention Monitoring and Maintenance Jonathan Ondracek, City of Fort Wayne-City Utilities; Kristen Buell, Malcolm Pirnie, The Water Division of ARCADIS
- 05C 9:30am Wilmington's LTCP Story: Proven Track Record Of Addressing CSOs Bryan Lennon, Sean Duffy, City of Wilmington; Diana Tao, Luc Robitaille, Tetra Tech

### 10:00am Networking Break

- 05D 10:45am Master Planning Collection Systems in a Time of Uncertainty: Climate Change, Adaptive Management, and Defining New Levels of Service Shawn A. Dent, Sarah Deslauriers, Carollo Engineers
- 05E 11:15am North Street Reconstruction and Integrated Stormwater Management System Design and Construction – Delivering Capital Projects Neil Myers, Williams Creek Consulting

### 11:45am Adjourn

Alternate Green Stormwater Infrastructure Design: Lessons Learned in Philadelphia Stephen C. Maakestad, Hatch Mott MacDonald

### Session 6: Operations and Maintenance – The Core Business

Tuesday, June 11, 2013 8:30am – 11:45am		Room: 308 2.5 PDHs		
Moderators:	Jim Hewitt, City of Akron, OH Gary Moore, Metropolitan St. Louis Sewer Distr	ict		
06A 8:30am	Operation and Maintenance of Off-line Waster Facilities Lessons Learned From KUB's First Operation Craig Parker, Gresham Smith and Partners	<b>U</b>		
06B 9:00am	Assessment of Maintenance Effectiveness for SSOs & Backups and Recommended Enhan Carlos Cuneo, Black & Veatch; Calvin Farr, WS	cements		
06C 9:30am	Virginia Beach Sewer Operations Performan Daren Williams, Brad Law, William Roberson, J City of VA Beach Public Utilities Operation			
10:00am	Networking Break			
06D 10:45am	Work Order Planning for Wastewater Force I Assessment Phil Hubbard, Hampton Roads Sanitation Distri- Brown and Caldwell			
06E 11:15am	Improved Proactive Asset Renewal: Targetin Micromonitoring Rich McGillis, Sanitation District No.1, Northern Kamalesh, John Barton, Stantec Consulting Se Isaacs, Sanitation District No.1, Northern KY	KY; Joseph		
11:45am	Adjourn			
Alternate Anatomy of Microbially Induced Corrosion of Concrete Lined				

Alternate Anatomy of Microbially Induced Corrosion of Concrete Lined Sewers Harry Price, John Kosnak; NTH Consultants, Ltd.

### Session 7: Modeling

Tuesday, June 11, 2013 1:30pm – 3:00pm Room: 307 1.5 PDHs

Moderators: Bruce Corwin, CDM Smith

- 07A 1:30pm Infiltration & Inflow Degradation of Collection Systems Over 9 Years; Results From Monitoring and Modeling 150 Basins Robert E. Swarner, King County DNRP
- 07B 2:00pm Simulate Your Way out of a Difficult Real Time Control Problem Maxym Lachance, <u>Diana Tao</u>,Tetra Tech; Sid Lodewyk, City of Edmonton
- 07C 2:30pm Developing More Representative Storms for Collection System Operations, Modeling, Planning, and Design Baxter E. Vieux, Vieux & Associates, Inc.; Eric Saylor, Metropolitan Sewer District of Greater Cincinnati; Susan Moisio, CH2M HILL
  - 3:00pm Networking Break
  - **3:45pm Technical Discussion and Committee Meeting Room 308** All attendees are invited and encouraged to participate in this meeting which will provide information about WEF's Collection Systems Committee (CSC) and how to get involved. The meeting is intended to be an overview of how the WEF CSC functions and will also include a discussion of technical issues important to those in the industry.

### Session 8: Legal and Regulatory - The Rules and How to Change Them

Tuesday, June 11, 2013 1:30pm – 3:00pm		Room: 306 1.5 PDHs
Moderators:	Rudy Fernandez, Parsons Brinkerhoff Jim Shelton, Malcolm Pirnie, The Water Divisior	of ARCADIS
08A 1:30pm	A Hitchhiker's Guide to Private I/I: Innovative and Field Techniques for Achieving Cost-Eff Reductions from Private Laterals and Sewers Jeff Scarano, Brown and Caldwell; Phil Hubbard Roads Sanitation District; Andy Lukas, Richard Caldwell	ective I/I s d, Hampton
08B 2:00pm	Baltimore City Area Management Approach - Construction Management in an Urban Area Samuel Atolaiye, City of Baltimore; <u>Arthur A. Jon</u> Berger Water Services	
08C 2:30pm	How My Hydraulic Retention Time Affects Oc Corrosion Kevin A. Jacobs, Inken Mello, ECO Oxygen Teo	
3:00pm	Networking Break	
3:45pm	Technical Discussion and Committee Meetin	-

All attendees are invited and encouraged to participate in this meeting which will provide information about WEF's Collection Systems Committee (CSC) and how to get involved. The meeting is intended to be an overview of how the WEF CSC functions and will also include a discussion of technical issues important to those in the industry.

### **Session 9: Combined Sewer Overflows**

Tuesday, June 11, 2013 1:30pm – 3:00pm Room: 308 1.5 PDHs

**Moderators:** Jody Allen, South Placer Municipal Utility District Tim Ruggaber, EMNET

09A 1:30pm The Metropolitan St. Louis Sewer District Strikes Gold with Strapped Plumbing <u>Michael F. Lorenzo</u>, Gary Toribio, Jennifer Obertino, URS Corporation; Gary Moore, Robert A. Miller, Metropolitan St. Louis Sewer District

- 09B 2:00pm Taking up the Challenge of CSO Monitoring: The City of Winnipeg Experience in Setting up an Ambitious Program Alain Charron, Tetra Tech; Cynthia Wiebe, City of Winnipeg; Diana Tao, Tetra Tech
- 09C 2:30pm South Bend CSO Long Term Control Plan Optimization: Comparison of Grey-Only vs. Grey-Green Infrastructure Least-Cost Solutions Jeffery Frey, Optimatics; Joel Wilson, WCS Engineering; Patrick Henthorn, Gary Gilot, City of South Bend, Indiana; Rebecca Schaefer,Greeley and Hansen; Luis Montestruque, Tim Ruggaber, EmNet;Michelle LaRose, Scott Dierks, Cardno JFNew
  - 3:00pm Networking Break
  - **3:45pm Technical Discussion and Committee Meeting Room 308** All attendees are invited and encouraged to participate in this meeting which will provide information about WEF's Collection Systems Committee (CSC) and how to get involved. The meeting is intended to be an overview of how the WEF CSC functions and will also include a discussion of technical issues important to those in the industry.
- Alternate Force Main Condition Assessment is an Iterative Process Derek M. Wurst, V&A Consulting Engineers

### Session 10: Planning - How to Stay Ahead of the Game

Wednesday, June 12, 2013 8:30am – 11:45am Room: 306 2.5 PDHs

Moderators: Hiram Tanner, DC Water Christy Wilson, Metropolitan St. Louis Sewer District

- 10A 8:30am Evaluation of Life-Cycle Costs and Cost/Benefit Analysis in Comparing Sewer Replacement vs. Sewer Rehabilitation John Killips, Tetra Tech; Chad Gamble, City of Lansing
- 10B 9:00am City of San José Sewer Capacity Planning: Moving Beyond the Master Plan <u>Catherine Greenman</u>, RMC Water & Environment; Shelley Guo, City of San Jose
- **10C 9:30am What Is The Capacity Of That Force Main?** James Tomaine, Wyoming Valley Sanitary Authority; <u>Thomas Walski</u>, Bentley Systems
  - 10:00am Networking Break
- 10D10:15amUse of Acoustic Inspection for Prioritizing Renewal and<br/>Replacement Projects at Ft. Jackson, SC<br/>George Selembo, InfoSense, Inc.; Jeffery Johnson, Richard<br/>Brady & Associates; Ivan Howitt, Alex Churchill, InfoSense, Inc.

10E 10:45am Sewer Corrective Action Recommendations an Automated Product of Northern Kentucky Sanitation District One's Asset Management Process Rich McGillis, Northern Kentucky Sanitation District One; Reggie Rowe, Susan Moisio, CH2M HILL; Courtney Kennedy, Ccall Solutions

10F11:15amMSD St. Louis - Bonfils I/I Removal Pilot Study - Bust or<br/>Lucky Strike?<br/>Gary S. Beck, GBA Architects and Engineers; Gary Moore,<br/>Metropolitan St. Louis Sewer District

Alternate City of Baltimore Design Management of CD Wet Weather Program - Need for Standardization <u>Wazir Qadri</u>, City of Baltimore; Arthur Jones-Dove, <u>Muhammad Tak</u>, Sherif Naoum, Louis Berger Water Services

### Session 11: Design and Construction - Delivering Capital Projects

Wednesday, June 12, 2013	
8:30am – 11:45am	

Room: 307 2.5 PDHs

- **Moderators:** Jim Shelton, Malcolm Pirnie, The Water Division of ARCADIS Brett Grant, City of Sacramento, CA
- **11A 8:30am Utilizing New Technologies to Protect Old Assets** Brian Houston, Ahmad Habibian, Phil Hannan, Black & Veatch
- 11B 9:00am Rehabilitating Early 20th Century Bricks and Mortar Sewer with 21st Century Technology <u>Timothy Sumner</u>, Crawford, Murphy and Tilly Inc.
- 11C 9:30am
   From Concept to Practice: South Bend, IN's Intelligent

   Collection System
   Gary Gilot, Patrick Henthorn, City of South Bend, IN;

   Timothy Ruggaber, Emnet LLC;
   Timothy Ruggaber, Emnet LLC;
  - 10:00am Networking Break
- 11D 10:15am Clean as a Whistle: Evaluation of Brick Sewers and Siphons Robert Curti, Hatch Mott MacDonald
- **11E 10:45am \$225 Million Investment in Infrastructure Demands Comprehensive Planning** David Y. Coleman, <u>Matthew Winkelman</u>, GHD Inc.
- 11F 11:15am Historic Civil War Era 48" Outfall Sewers Fully Renewed Using CIPP Technology in Hoboken, NJ Mark G. Wade, Mark Wade, John Tobia, Rob McKim, Mike Wilson, CH2M HILL; Fred Pocci, NHSA; <u>Gene Camali</u>, En-Tech
  - 11:45am Adjourn

### Session 12: Modeling II

Wednesday, June 12, 2013 8:30am – 11:45am Room: 308 2.5 PDHs

- Moderators: Joe Strauch, Gannett Fleming Bruce Corwin, CDM Smith
- 12A 8:30am Models for Capacity Assessment: More than Just Pretty Pictures! David Powell, Dudley C. Smith, Woolpert; Jason Mitchell, City of Hampton, VA; Deva Borah, ENDESCO, Inc.; Michael Kirby, Woolpert
- 12B 9:00am The Tale Of Two Solutions 1D vs. 2D Solution For Combined Sewer System Modeling <u>Mira Chokshi</u>, AECOM; <u>Nicholas Birth</u>, San Francisco Public Utilities Commission
- 12C 9:30am Steady-State, Semi-Dynamic or Fully Dynamic Choosing a Hydraulic Model that is Most Appropriate for Your Needs Alison Hill, Paul Giguere, RMC Water and Environment
  - 10:00am Networking Break
- 12D 10:15am Case Study: Fort Wayne's Hydraulic Model Recalibration and its Application for Real Time Control Evaluations <u>Wendy Reust</u>, City of Fort Wayne, Indiana; <u>Srinivas Vallabhaneni</u>, Carl Chan, Patrick Flynn, Daniel Lexsa, CDM Smith
- 12E 10:45am Catch and Release Strategies: Using Available in-Plant Storage for Wastewater Peak Flow Attenuation <u>Fernando F. Gonzalez</u>, David Moering, Regidia Mayrena, Rowena Lau, Ali Poosti, Adel Hagekhalil, City of Los Angeles
- 12F 11:15am Where Vision Meets Dollars and Cents: Comprehensive Plan Impacts to a Sanitary Sewer System Stephen Maldonado, Jr, City of College Station Utilities; Sharon Miller, Tina Whitfield, HDR Engineering
  - 11:45am Adjourn