

# Collection Systems 2013 Gold Nuggets of Knowledge

June 9 – 12, 2013 Sacramento Convention Center Sacramento, California



#### **OPENING GENERAL SESSION**

Monday, June 10, 2013 8:30am – 12:00pm

8:30am Introduction: (WEF CS Committee)

Bruce Corwin, Specialty Conference Chair

C. Dobson, CWEA President and Conference Co-Chair

8:45am Welcome

John F. Shirey, City Manager, Sacramento City

8:55 am Agency Perspective – Dealing with California's Waste Discharge

Requirements (WDR) Program Stan Dean, SRCSD District Engineer

9:20am State Perspective - WDR Program

W. Russell Norman, State Water Resources Control Board (SWRCB)

10:00am Networking Break

10:45am Title TBD

Sandra Ralston, President Elect, WEF

11:00am History and Flavor of Sacramento Area

Marcia Eymann, Historian, Center for Sacramento History

11:50am Conference Chair 2014

12:00pm Adjourn

# **Session 1: Private Property Inflow/Infiltration**

Monday, June 10, 2013 1:30pm - 4:45pm

01A	1:30pm	Pressure Sewer System Review & I/I Study 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, King County /WTD
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
01E	4:15pm	Making Sense of I/I Reduction Case Studies: We're 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, City of Albany, CA

**Sewer Lateral Lining By CIPP Method** A. Badmus, DC Water **Alternate** 

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

Monday, June 10, 2013 1:30pm – 4:45pm

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) Gary N. Skipper, Brown and Caldwell; Fernando Gonzalez, City of Los Angeles, CA
02C	2:30pm	SASD'S Pipe Dream = Data Accuracy & Big \$\$ Savings!  Dave Pitts, Chris Penales, Marva Thompson, Sacramento Area Sewer District (SASD)
	3:00pm	Networking Break
02D	3:00pm 3:45pm	Yes, In Your Backyard Backyard Sewer Main Replacements Benefit from Approach that Combines Trenchless Technologies and Focused Homeowner Outreach Nancy McWilliams, West Yost Associates; Ian Pietz, Yuba City
02D 02E	•	Yes, In Your Backyard Backyard Sewer Main Replacements Benefit from Approach that Combines Trenchless Technologies and Focused Homeowner Outreach

Alternate Dig that Creek or Tunnel that Creek? Case Study of Crossing San Tomas Aquino Creek with 27-inch Trunk Sewer in Santa Clara, California

Glenn Hermanson, RMC Water & Environment; Falguni Amin, City of Santa

Clara

# Session 3: Assest Management - Yesterday's Buzzword, Today's Business Practice

Monday, June 10, 2013 1:30pm – 4:45pm

03A	1:30pm	Defending Rehabilitation and Replacement (R&R) Budgets Using KANEW Analyses S W. Miles, CDM Smith; Terry McCue, Seminole County, FL; James Carolan, CDM Smith
03B	2:00pm	Developing a Sustainable Training Solution James McPherson, Union Sanitary District
03C	2:30pm	The Tri-Angular Flow of Sewers- SD1's Proactive Approach to Asset Management Kyle J. Boyle, Rich McGillis, Sanitation District #1 of Northern Kentucky
	3:00pm	Networking Break
03D	3:45pm	Why Adopting Asset Management is really about Sustainability and Leveraging not New Business Practices Claire R. Baldwin, Meha Patel, CDM Smith
03E	4:15pm	Victor Valley Interceptor Emergency Condition Assessment and Rehab Design/Construction Michael A. Fleury, Carollo Engineers; Latif Laari, Gina Cloutier, Gilbert Perez, Greg Gould, Carollo Engineers, Inc.

# **Session 4: Northern California Collection Systems Compliance**

Tuesday, June 11, 2013 8:30am – 11:45am

04A	8:30am	SSO Estimation System Shawn Nesgis, Jose Rodrigues, Union Sanitary District
04B	9:00am	Effective Traceable Natural Gas Crossbore Investigations Greg Scoby, Frontline Energy Services
04C	9:30am	Citizen Suits and the Public Agency; Both a Legal and Operations Perspective Victoria L. Caulfield, El Dorado Irrigation District; Bobbi Larson, California Association of Sanitation Agencies
	10:00am	Networking Break
04D	10:00am 10:45am	Implementing 21st Century Solutions to a 19th Century System: Integrated Combined Sewer System Planning Achieves Regulatory Compliance in the City of Sacramento David M. Wood, AECOM; Brett Grant, Sherrill Hunn, City of Sacramento, CA Department of Utilities

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

Tuesday, June 11, 2013 8:30am – 11:45am

05A	8:30am	Green Infrastructure Opportunities in Gray Wet Weather Plans Lawrence J. Lennon, Lennon, Smith, Souleret Engineering, Inc.; Sam Shamsi, Michael Baker Corp; Anthony Igwe, Wade Trim Inc.; John Schombert, Three Rivers Wet Weather
05B	9:00am	Simplifying Bioretention Monitoring and Maintenace Kristen E. Buell, Malcolm Pirnie/ARCADIS-US; Jonathan Ondracek, City of Fort Wayne-City Utilities
05C	9:30am	Wilmington's LTCP Story: Proven Track Record Of Addressing CSOs Colleen Arnold, Sean Duffy, City of Wilmington; Diana Qing Tao, Tetra Tech; 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, Carollo Engineers
05E	11:15am	North Street Reconstruction & Integrated Stormwater Management System Neil Myers, Williams Creek Consulting

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

**Alternate** 

06A	8:30am	Off-Line Wastewater Storage Facility O&M: Lessons Learned from Knoxville Utilities Board's First Six Years of Operation Craig S. Parker, Gresham Smith & Partners; Brad Brummett, Knoxville Utilities Board
06B	9:00am	Assessment of WSSC's Maintenance Effectiveness for Preventing SSOs and Backups and Recommended Enhancements Carlos G. Cuneo, Black and Veatch
06C	9:30am	Virginia Beach Sewer Operations Performance Measures Daren Williams, City of VA Beach Public Utilities Operation
	10:00am	Networking Break
06D	10:00am 10:45am	Networking Break  Work Order Planning for Wastewater Force Main Condition Assessment Phil Hubbard, Hampton Roads Sanitation District (HRSD); Paul C. Wilson, Brown & Caldwell

**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

07A 1:30pm Infiltration & Inflow -- How Much Do Collection Systems Degrade in

**10 Years? Results From Monitoring and Modeling 235 Basins**Robert E. Swarner, King County Wastewater Treatment Division

07B 2:00pm Simulate Your Way out of a Difficult Real Time Control Problem

Maxym Lachance, Tetra Tech; Sid Lodewyk, City of Edmonton

07C 2:30pm Developing More Representative Design Storms for Collection

**System Modeling** 

Baxter E. Vieux, Vieux & Associates, Inc.; Eric Saylor, Metropolitan Sewer District of Greater Cincinnati; Susan Moisio, CH2MHILL

Alternate Catch and Release Strategies: Using Available in-Plant Storage for

**Wastewater Peak Flow Attenuation** 

Fernando F. Gonzalez, C. B. Trussell, Ali Poosti, Adel H. Hagekhalil, Al Bazzi,

City of Los Angeles

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

Tuesday, June 11, 2013 1:30pm – 3:00pm

08A 1:30pm A Hitchhiker's Guide to Private I/I: Innovative GIS, Modeling and

Field Techniques for Achieving Cost-Effective I/I Reductions from

**Private Laterals and Sewers** 

Jeff Scarano, Brown and Caldwell; Phil Hubbard, Hampton Roads Sanitation District; Richard Stahr, Andy Lukas, Brown and Caldwell

08B 2:00pm Baltimore City Area Management Approach - Proactive Construction

Management in an Urban Area

Samuel O. Atolaiye, Baltimore City; Arthur A. Jones-Dove, Louis Berger

Water Services

08C 2:30pm Challenges In Fats, Oils, and Grease (FOG) Measurement

Yi Wang, Joel J. Ducoste, North Carolina State University

Alternate How My Hydraulic Retention Time Affects Odors and Corrosion

Kevin A. Jacobs, ECO Oxygen Technologies, LLC

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

Tuesday, June 11, 2013 1:30pm - 3:00pm

09A 1:30pm The Metropolitan St. Louis Sewer District Strikes Gold with

"Strapped Plumbing"

Michael F. Lorenzo, URS Corporation

09B 2:00pm Taking up the Challenge of CSO Monitoring: The City of Winnipeg

**Experience in Setting up an Ambitious Program** 

Cynthia Wiebe, City of Winnipeg; Diana Tao, Alain Charron,

Tetra Tech

09C 2:30pm South Bend Long Term Control Plan Optimization of Conveyance,

Storage, Linear Transport/Storage, Green Infrastructure and Real

Time Control

Jeff Frey, Joel Wilson, Optimatics LLC; Patrick Henthorn, Gary Gilot, City of South Bend Public Works; Scott Girman, Rebecca Schaefer, Greeley

and Hansen; Luis Montestruque, Tim Ruggaber, EmNet; Michelle

LaRose, Scott Dierks, Cardno JFNew,

Alternate Force Main Condition Assessment is an Iterative Process

Derek M. Wurst, V&A

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

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

10A	8:30am	Evaluation of Life-Cycle Costs and Cost/Benefit Analysis in Comparing Sewer Replacement vs. Sewer Rehabilitation
		John Killips, Tetra Tech; Chad A. Gamble, City of Lansing
10B	9:00am	City of San José Sewer Capacity Planning: Moving Beyond the Master Plan Catherine Greenman, 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; Thomas M. Walski, Bentley Systems
	10:00am	Networking Break
10D	10:15am	Use of Acoustic Inspection for Prioritizing Renewal and Replacement Projects at Ft. Jackson, SC Ivan Howitt, InfoSense, Inc.; Jeffery C. Johnson, Brady Engineering; George Selembo, Alex Churchill, InfoSense, Inc.
10E	10:45am	Sewer Corrective Action Recommendations an Automated Product of Northern Kentucky Sanitation District On's Asset Management Process
		Rich McGillis, Northern Kentucky Sanitation District One; Reggie Rowe, Susan Moisio, CH2M HILL; Courtney C. Kennedy, Critigen
10F	11:15am	MSD St. Louis - Bonfils I/I Removal Pilot Study - Bust or Lucky Strike?
		Gary S. Beck, George Butler Associates; Gary T. Moore, Metropolitan St.

# Alternate City of Baltimore Design Management of Wet Weather Program - Need for Standardization

Wazir Qadri, City of Baltimore; Arthur Jones-Dove, Muhammad Tak, Louis Berger Water Services

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

Wednesday, June 12, 2013

8:30am - 11:45am

11A 8:30am **Utilizing New Technologies to Protect Old Assets** Ahmad Habibian, Phil Hannan, Black & Veatch Corporation 11B 9:00am Rehabilitating Early 20th Century Bricks and Mortar Sewer with 21st **Century Technology** Timothy F. Sumner, Crawford, Murphy and Tilly Inc. 11C 9:30am From Concept to Practice: South Bend, IN's Intelligent Collection System Timothy Ruggaber, Emnet LLC; Gary Gilot, City of South Bend, IN; Patrick Henthorn, City of South Bend, IN 10:00am **Networking Break** 11D 10:15am **Small Bore Sewer System in Developing Countries: Challenges** Ahmed Fadel, Mansoura University; Hatem A. Fadel, Misr Higher Institute for Engineering and Technology 11E 10:45am \$225 Million Investment in Infrastructure Demands Comprehensive Matthew J. Winkelman, David Y. Coleman, Yousra Tilden, GHD Inc.; Robert Donaldson, South Bayside System Authority; Roanne Ross,

11F 11:15am Historic Civil War Era 48" Outfall Sewers Fully Renewed Using CIPP

Technology in Hoboken, NJ Mark G. Wade, CH2M Hill

Whitley Burchett & Associates

Alternate Clean as a Whistle: Evaluation of Brick Sewers and Siphons

Robert A. Curti, Hatch Mott MacDonald

# Session 12: Modeling II

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

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, Michael Kirby, Woolpert
12B	9:00am	The Tale Of Two Solutions - 1D vs. 2D Solution For Combined Sewer System Modeling Mira Chokshi, AECOM; Nicholas Birth, San Francisco Public Utilities Commission
12C	9:30am	Steady-State or 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 Wendy Reust, City of Fort Wayne, Indiana; Srinivas Vallabhaneni, Carl Chan, Dan Lexsa, Pat Flynn, CDM Smith
12D 12E	10:15am 10:45am	Application for Real Time Control Evaluations Wendy Reust, City of Fort Wayne, Indiana; Srinivas Vallabhaneni, Carl