

# SWIM ANNUAL WORKSHOP AGENDA

## Water and Wastewater Pipeline Asset Management with Big Data Management, Analytics, and Artificial Intelligence Applications

**WORKSHOP, Tuesday, December 6<sup>th</sup> 7:30 am – 5:00 pm**

The goal of the workshop is to improve the practice of water and wastewater pipeline infrastructure management using utility data and web-based, standardized, centralized data analytics platform called “PIPEiD”. PIPEiD assists water and wastewater utility to understand pipeline infrastructure systems for performance, resiliency, and sustainability within the context of their own data and benchmark performance versus other utilities. PIPEiD provides a secured, robust, and centralized artificial intelligence-enabled platform to address all three major infrastructure asset management levels: strategic, tactical, and operational, and for water utilities of all sizes (small, medium and large). The workshop will include discussions on historical data verification, standardization for data collection of pipe infrastructure performance, analysis of utility pipe systems, and planning for pipe system management. A live, interactive demonstration of PIPEiD will be conducted to help utility engineers in understanding what PIPEiD can and cannot do as well as how they can put PIPEiD to work for themselves.

### WORKSHOP AGENDA

**7:30 am: Continental Breakfast**

**8:00 am: Welcome Address and Opening Remark – Sunil Sinha**

**8:15 am: Water & Wastewater Pipeline Asset Management – Graham Bell**

**8:30 am: Washington Suburban Sanitary Commission – Fred Pfeifer**

**8:45 am: Portland Water Pipeline Asset Management – Eric Brainich**

**9:00 am: Louisville Water Pipeline Asset Management - Jordan Basham**

**9:15 am: Metropolitan Water District of Southern California – Mark Bushyeager**

**9:30 am: HRSD Wastewater Pipeline Asset Management – Anas Malkawi**

**9:45 am: Houston Wastewater Pipeline Asset Management – Pratistha Pradhan**

**10:00 am: Baltimore City Department of Public Works – Brian Ball**

**10:15 am: District of Columbia Water and Sewer Authority (DC Water) - Alireza Parhami**

### 10:30 am-11:00 am: Coffee Break

**11:00 – 12:30 pm: Panel Session 1 – Drinking Water Pipeline Infrastructure Asset Management**

*Panelist: Alireza Parhami, Mark Bushyeager, Brian Ball, Craig Daily, Celine Hyer, Gregg Horn*

*Moderator: Hugh Sinclair, Vice President, National Practice Lead - Asset Management, Arcadis*

*Discussion on Data, Likelihood & Consequence of Failure, Risk and Asset Management Practices, AI/ML*

### 12:30 pm-1:30 pm: Lunch Break

**1:30 – 3:00 pm: Panel Session 2 – Wastewater Pipeline Infrastructure Asset Management**

*Panelist: Pratistha Pradhan, Fred Pfeifer, Anas Malkawi, Walter Graf, Chris Dermody, Jay Pravez*

*Moderator: Gage Muckleroy, Principal, Integrated Water & Asset Management, GHD*

*Discussion on Data, Likelihood & Consequence of Failure, Risk and Asset Management Practices, AI/ML*

### 3:00 pm-3:30 pm: Coffee Break

**3:30 pm: Summary of Activities and Discussion on Path Forward for PIPEiD Project**

*Moderators: Sunil Sinha, and Graham Bell*

### 4:30 pm: Workshop Wrap-Up

# SWIM ANNUAL CONFERENCE AGENDA

## Wednesday, December 7<sup>th</sup>, 2022

7:30 am: Continental Breakfast

8:00 am: **Climate Change, Water Crisis, and Equity**  
*Ben Grumbles, Exec. Dir., Environmental Council of States*  
8:15 am: **Smart One Water Management & Governance**  
*Sunil Sinha, Professor and Director, SWIM Center, VT*

### 8:30 am: Federal/State/Regional Initiatives

CISA – *Stephen Cauffman, Chief, Resilience Branch*  
USGS – *Richard Niswonger, Water Resource Mission Area*  
USACE - *Gene Stakhiv, Institute for Water Resources*  
NOAA – *Josh Murphy, Manager, Coastal Management*  
NIST – *Michael Dunaway, IoT Devices and Infra. Group*  
ORNL – *Yarom Polsky, Director, Manufacturing & Sci. Div.*

10:00 am: **Moderator: Celine Hyer, ARCADIS**

### 10:30 – 11:00 am – Coffee Break

### 11:00 am: Water Industry Initiatives

ARCADIS – *John McCarthy, Business Area Director*  
XYLEM – *Chris Angell, Dir., Strategy and Business Dev.*  
JACOBS – *Jennifer D. Baldwin, Digital One Water Lead*  
AECOM – *Beverly Stinson, Ex. Vice President - Water*  
*Black & Veatch – Kent Lackey, Sr. Vice President*  
GHD – *Freddie Guerra, Digital Water Market Leader*

12:30 pm: **Moderator: Lindsay Birt, XYLEM**

### 1:00 – 2:00 pm – Lunch Break

### SMART ONE WATER

2:00 pm: Expert Panel Discussion

2:10: *Clean Water Services – Ting Lu, Digital Tech Leader*  
2:20: *Anchorage Water & Wastewater Utility – Ed Sorenson*  
2:30: *Carollo - Beate M. Wright, Vice President*  
2:40: *AECOM - Srini Vallabhaneni, Vice President, Water*

2:50: Structured Panel Discussion

**Panelist: Utility, Consultant, & Technology Provider**  
**Moderator: David Dzombak, Prof., Carnegie Mellon Univ.**

3:20: Panel Wrap-up

### 3:30 – 4:00 pm – Coffee Break

### WATERSHED/RIVER-BASIN SCALE GOVERNANCE

4:00 pm: Expert Panel Discussion

4:10: *Miami-Dade Water & Wastewater - Hardeep Anand,*  
4:20: *DRBC - Kristen Kavanagh, Deputy Exec. Director*  
4:30: *EPA – Kandis Boyd, Dir. Chesapeake Bay Program*  
4:40: *NYDEP - Paul Rush, Deputy Commissioner*

4:50: Structured Panel Discussion

**Panelist: Utility and State Commissions**  
**Moderator: Ken Thompson, JACOBS**

5:20: Panel Wrap-up

5:30 pm: SWIM Center Award Ceremony

6:00 – 7:30 pm Networking Reception

## Thursday, December 8<sup>th</sup>, 2022

7:30 am: Continental Breakfast

8:00 am: **New Blue Ridge PBS Documentary**  
*William Anderson, President & CEO, Blue Ridge PBS*  
8:15 am: **Big Data Analytics & Artificial Intelligence**  
*Sunil Sinha, Professor and Director, SWIM Center, VT*

### 8:30 am: Utility Initiatives

DC Water – *William Elledge, Env. Engineering Executive*  
WSSC – *Lingyi Zhang, Acting Division Manager*  
South Bend Water Works – *Kieran Fahey, Dir., Control Plan*  
Buffalo Sewer Authority – *Oluwole McFoy, General Manager*  
Halifax County Service Authority - *Mark Estes, Exec. Dir.*  
SUEZ – *Jennifer Steffens, Director, Smart & Env. Solutions*

10:00 am: **Moderator: Walter Graf, GHD**

### 10:30 – 11:00 am – Coffee Break

### 11:00 am: Organization & Association Initiatives

NACWA – *Adam Krantz, Chief Executive Officer*  
Internet of Water Coalition - *Peter Colohan, Chair*  
NRWA - *Michael Preston, Legislative and Policy Analyst*  
SWAN - *Shirley Ben-Dak, VP Strategy & Innovation*  
AWWA – *Adam Carpenter, Energy and Env. Policy*  
WEF – *Lisa McFadden, Water Science & Engineering*

12:30 pm: **Moderator: Chris Dermody, JACOBS**

### 1:00 – 2:00 pm – Lunch Break

### CLIMATE CHANGE, SUSTAINABILITY & RESILIENCE

2:00 pm: Expert Panel Discussion

2:10: *HRSD – Bruce Husselbee, Director of Engineering*  
2:20: *City of Richmond – Eric Whitehurst, Deputy Director*  
2:30: *Arcadis – Edgar Westerhof, National Director*  
2:40: *Xylem – Patrick Decker, President & CEO*

2:50: Structured Panel Discussion

**Panelist: Utility, Consultant, & Technology Provider**  
**Moderator: Ting Lu, CLEAN WATER SERVICES**

3:20: Panel Wrap-up

### 3:30 – 4:00 pm – Coffee Break

### BIG DATA ANALYTICS & ARTIFICIAL INTELLIGENCE

4:00 pm: Expert Panel Discussion

4:10: *Houston Water - Fazle Rabbi, Managing Engineer*  
4:20: *NYCDEP - Brian O'Malley, Chief, Data Operations*  
4:30: *Jacobs – Raja Kadiyala, Global Director Digital*  
4:40: *IBM – Rebekah Eggers, Innovation Director*

4:50: Structured Panel Discussion

**Panelist: Utility, Consultant, & Technology Provider**  
**Moderator: Jim Cooper, ARCADIS**

5:20: Panel Wrap-up

5:30 pm: SWIM Conference Wrap-Up

6:00 – 7:30 pm Networking Opportunity