



# CONFLUENCE

WATER TECHNOLOGY INNOVATION CLUSTER  
OHIO RIVER VALLEY REGION

## 2014 Water Symposium

May 14, 2014

Northern Kentucky Convention Center

### About Confluence

Confluence was formed to establish the Ohio River Valley region as a global leader in water technology innovation. Our vision is to identify, test, develop and commercialize innovative technologies to solve environmental challenges and spur sustainable economic development and job creation.

### Session Information

For more detailed information on session topics, including abstract summaries and authorship, scan the QR code or visit our website.



### Networking Reception Information

Please join us for an evening networking reception, sponsored by CitiLogics, at:

Keystone Bar & Grill  
313 Greenup St  
Covington, Kentucky



### Schedule

#### 8:00 – 8:30

Welcome and Annual Confluence Update

#### 8:30 – 9:50      **Session I**

Innovative Treatment Technologies I  
Sensing, Analytics and Smart Technologies I

#### 9:50 – 10:30

Networking Break

#### 10:30 – 11:30      **Session II**

Innovative Treatment Technologies II  
Sensing, Analytics and Smart Technologies II

#### 11:30 – 1:00

Luncheon and Keynote Presentation

#### 1:00 – 2:40      **Session III**

Green Infrastructure Technologies and Best Practices I  
Industry Risks and Commercialization Opportunities

#### 2:40 – 3:20

Networking Break

#### 3:20 – 4:40      **Session IV**

Green Infrastructure Technologies and Best Practices II  
Innovative Strategies for Water Infrastructure Adaptation

#### 5:00 – 7:00

Networking Reception, sponsored by CitiLogics  
Keystone Bar & Grill 313 Greenup St., Covington



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## 8:00-8:30      **Welcome and Annual Confluence Update**      **Rooms 2 & 3**

Chair: Jim Uber, CitiLogics

Alan Vicory, Board President of the Confluence Water Technology and Innovation Cluster, will provide a short briefing on the Confluence organization and salient accomplishments over 2013 and the first quarter of 2014. More importantly, Mr. Vicory will outline opportunities for Workshop participants to become engaged and the benefit gained from that engagement.

## 8:30-9:50      **Session I**

### **Innovative Treatment Technologies I**

**Room 4**

Chair: James Goodrich, U.S. Environmental Protection Agency

UV Technology – 100 Years and Counting

Thermo-Oxidation of Municipal Wastewater Treatment Plant Sludge for Production of Class A Biosolids

Recent Deployments In Runoff/Leachate Pollution Reduction: Field Data - Upper Ohio Valley LID Deployments 2012-2014

Cost Effective Gas Stripping and Particle Extraction Using a Vacuum Airlift

### **Sensing, Analytics and Smart Technologies I**

**Room 5**

Chair: Scott Holmes, City of Dayton Water Department

Ubiquitous Sensing of Water and the Environment

Advanced Water Quality Sensors – How Will Regulations Keep Pace?

Rapid Identification Of Bacteria in Water by Raman Spectroscopy of Micro-colonies

The Next Step in Data Integration

## 10:30-11:30      **Session II**

### **Innovative Treatment Technologies II**

**Room 4**

Chair: Dominic Boccelli, University of Cincinnati

Advanced Bioretention Filter Media Enhanced with Nano-glass Adsorbents Sold Under the Trade Name Osorb®: Field Results from Stormwater Runoff Systems 2011-2014

Application of Biomedias for Effective Treatment of Water

Black is the New Green - Enhancing Green Roof Performance with Novel Substrate

### **Sensing, Analytics and Smart Technologies II**

**Room 5**

Chair: Ron Lovan, Northern Kentucky Water District

Leveraging Real-time Distribution System Hydraulic and Water Quality Modeling to Reduce Pumping Costs

The Real (-Time) Promise of Predictive Water Analytics

What Can Be Done to Protect Our Nation's Water Systems?



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11:30-1:00

## Luncheon and Keynote Presentation

Rooms 2 & 3

### **Keynote Presentation**

**Speaker:** Thomas McGill, P.E., Chief Grants & Infrastructure Branch, EPA Region 4

Thomas has worked for EPA Region 4 for the past 21 years and is currently serving as the Chief of Grants & Infrastructure Branch. His responsibilities have included managing several water quality programs within the EPA, including water quality standards, NPDES permitting, nonpoint source management, water quality monitoring, and Total Maximum Daily Loads. Mr. McGill received his BA and MA from Georgia Tech in the field of civil engineering.

### **Luncheon Menu**

#### **Tossed Garden Green Salad**

Cherry tomatoes, cucumbers, red and yellow peppers, carrots, and homemade croutons  
Peppercorn Ranch or Basil Vinaigrette dressings

#### **Chicken Breast Roma**

Grilled chicken breast stuffed with ricotta cheese, artichoke hearts,  
sun dried tomatoes, and mushrooms  
finished with Roma tomato and basil cream sauce  
Roasted potato wedges  
Chef's selection of seasonal vegetables  
Artisan rolls with butter

#### **Dessert**

Chef's selection of miniature dessert trays

Coffee, Tea, Decaffeinated Coffee, and Iced Tea



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1:00-2:40

## Session III

### **Innovative Treatment Technologies I**

**Room 4**

Chair: Chris Kaeff, SD1 and Kenton County Conservation District

Cost-Effective Stormwater Management Retrofit Device

Revolutionary Water Management System

Water Below and Water Above - Sustainable Cost Effective Strategies

South Bend CSO Long Term Control Plan Optimization: Grey-Green Infrastructure Solution

Demonstrates \$100M Savings

Can Green Infrastructure Survive in the Cincinnati Area?

### **Industry Risks and Commercialization Opportunities**

**Room 5**

Chair: Evelyn Hartzell, U.S. EPA, Cincinnati

Enterprise Risk Management Program

The Envision Rating System and the Expanding Water Technology Market in Sustainable Infrastructure Design and Construction

Road Blocks and Hurdles to Innovative Treatment Alternatives for Small Public Drinking Water Systems

U.S. EPA's Stormwater And Wastewater Infrastructure Monitoring (SWIM) Test Bed

Panning For Gold In Water Technologies

3:20-4:40

## Session IV

### **Green Infrastructure Technologies and Best Practices II**

**Room 4**

Chair: Verna Arnette, Greater Cincinnati Water Works

Green Infrastructure Incentives

A Rebate/Incentive Program for Rainwater Harvesting Systems Within an Urban Watershed: The Santa Fe, New Mexico Experience

Volunteer Water Quality Monitoring, An Untapped Resource to Extend Coverage of Regional Long Term Water Quality Data and Analysis

The Ohio River Basin Water Quality Trading Project

### **Water Infrastructure Adaptation**

**Room 5**

Chair: Andy Mauk, Kiesland Development Services, LLC

Generalizing Hunter's Curve for Water Systems in Today's Buildings

Updating of Aging Municipal Water Infrastructure in a Sustainable-way

Optimization Modeling: An Advanced Tool for Utility Planning, Management and Operation - Dayton and Montgomery County Perspective

Development of Decentralized Wastewater Treatment Systems