Clean waters are the goal. Sound science takes us there.

Proceedings for U.S. EPA’s 2016 Recreational Waters Conference

April 12–15, 2016
New Orleans, Louisiana
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# U.S. EPA’s 2016 Recreational Waters Conference Agenda

April 12–15, 2016  
New Orleans, Louisiana

## Tuesday, April 12, 2016 (Preconference Meetings and Activities)

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<th>Time</th>
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<tbody>
<tr>
<td>8:00–6:00</td>
<td>Registration</td>
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<tr>
<td>8:00–10:00</td>
<td>Introduction to Federal and State Programs that Protect Human Health in Recreational Waters</td>
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<tr>
<td>10:30–12:00</td>
<td>Evaluating Water Quality at your Beach through Sanitary Surveys and Monitoring Data</td>
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<tr>
<td>1:30–3:00</td>
<td>Data Submission and Verification</td>
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<tr>
<td>1:30–3:00</td>
<td>Rapid Method: Quantitative Polymerase Chain Reaction</td>
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<td>3:30–5:00</td>
<td>Predictive Tools Forum</td>
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<td>3:30–5:00</td>
<td>qPCR Continued—Implementation Experiences</td>
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## Wednesday, April 13, 2016

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>7:00–4:00</td>
<td>Registration</td>
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**Session 1: Welcome Speakers**  
Session Chair: Tracy Bone, U.S. Environmental Protection Agency

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:30–8:45</td>
<td>EPA Welcome</td>
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<tr>
<td></td>
<td><strong>Tracy Bone, U.S. Environmental Protection Agency</strong></td>
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<tr>
<td>8:45–9:05</td>
<td>Protection of Recreational Waters</td>
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<td><strong>Ellen Gilinsky, U.S. Environmental Protection Agency</strong></td>
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<td>9:05–9:45</td>
<td>The Continuing Recovery and Renaissance of Lake Pontchartrain and Its Rivers</td>
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<td><strong>Andrea Bourgeois-Calvin, Lake Pontchartrain Basin Foundation</strong></td>
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<tr>
<td>9:45–10:00</td>
<td>Q &amp; A</td>
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<tr>
<td>10:00–10:20</td>
<td>BREAK</td>
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Session 2: **Trends in Beach Management**

Session Chair: Julie Kinzelman, Racine Department of Health

10:20–10:35 **The Broader Context of Beach Monitoring**
John Wathen, U.S. Environmental Protection Agency

10:35–10:50 **Providing and Promoting Recreational Water Quality Information through Mobile and Social Technology**
Trevor McProud, New York City Department of Health and Mental Hygiene

10:50–11:05 **Monitoring, Detection, and Management of Hazardous Algal Blooms in Freshwater Lakes East of San Francisco Bay**
Matthew Graul, East Bay Regional Park District

11:05–11:20 **Digging in: Understanding the Causes, Impacts, and How Best to Address Excessive Seaweed Accumulation on Maine’s Coastal Beaches**
Keri Kaczor, University of Maine Cooperative Extension, Maine Sea Grant

11:20–11:35 **The Changing Geographic Distribution of Climate-Sensitive Pathogens in Recreational Water**
Jonathan Yoder, Centers for Disease Control and Prevention

11:35–11:50 Q & A

11:50–1:20 LUNCH (on your own)

Session 3: **Recreation Water Monitoring and Implementation Challenges/Successes**

Session Chair: John Griffith, Southern California Coastal Water Research Project

1:20–1:35 **Monitoring Beaches Statewide in Michigan for E. coli with qPCR (USEPA Draft Method C)**
Shannon Briggs, Michigan Department of Environmental Quality

1:35–1:50 **Rapid Analyses of Water Quality at Five Chicago Beaches, 2015**
Abhilasha Shrestha, University of Illinois, School of Public Health

1:50–2:05 **Application of Rapid qPCR-Based Tests for Enterococci (Method 1611) in Hawaiian Coastal Waters**
Marek Kirs, University of Hawaii

2:05–2:20 **Multi-Laboratory Survey of U.S. EPA Enterococci qPCR Methods Acceptability for Analyses of U.S. Coastal and Inland Waters**
Richard Haugland, U.S. Environmental Protection Agency

Kevan Yamahara, Monterey Bay Aquarium Research Institute

2:35–2:50 Q & A

2:50–3:10 BREAK
Session 4: Citizen Science

Session Chair: Ibrahim Goodwin, U.S. Environmental Protection Agency

3:10–3:25  Keeping It Real: Creating and Managing Citizen Monitoring Programs for the Collection of Actionable Data Concerning Contact Recreation Water Quality Standards and Watershed Management
Erick Burres, California State Water Resources Control Board, Clean Water Team

3:25–3:40  The Surfrider Foundation's Blue Water Task Force: Citizen Science Applied to Enhance the Coverage and Effectiveness of State and Local Beach Programs
Mara Dias, Surfrider Foundation

Dan Shapley, Riverkeeper

3:55–4:10  Leveraging Volunteer Hours for Water Quality Restoration
Michael Meyer, Chattahoochee Riverkeeper

4:10–4:25  Our MS4 Permit—Reframing the Permit's Ownership through Citizen Science
Jennifer McDonnell, Arlington County Department of Environmental Services

4:25–4:40  Q & A

4:40–7:00  Poster Session (Foyer of Ile de France Ballroom)

Thursday, April 14, 2016

8:00–4:00  Registration

Session 5: Epidemiology and Quantitative Microbial Risk Assessment

Session Chair: John Ravenscroft, U.S. Environmental Protection Agency

8:30–8:45  Acute Illness Associated with Ocean Exposure and Fecal Indicator Bacteria during Dry and Wet Weather: A Longitudinal Cohort Study of Surfers in San Diego, California
Ayse Ercumen, University of California—Berkeley

8:45–9:00  Development of Site-Specific REC Criteria for a Tidal Creek using Peer-Reviewed, Stakeholder-Led QMRA Process
Dustin Bambic, Paradigm Environmental

9:00–9:15  Preliminary Evidence for Asymptomatic Norovirus Infection Transmission Associated with Swimming at a Tropical Beach
Timothy Wade, U.S. Environmental Protection Agency

Sunny Jiang, University of California—Irvine

9:30–9:45  Human-Associated Fecal qPCR Measurements and Simulated Risk of GI Illness in Recreational Waters Contaminated with Raw Sewage
Alexandria Boehm, Stanford University
9:45–10:00  Q & A

10:00–10:30  BREAK

**Session 6: Advances in Alternative Indicators and Measurement**
*Session Chair: Stephen Weisberg, Southern California Coastal Water Research Project*

10:30–10:45  Evaluation of Three Culture-Based Methods for Enumeration of Coliphage from Ambient Waters
*Asja Korajkic, U.S. Environmental Protection Agency*

10:45–11:00  Coliphage Levels in the Effluents of Wastewater Treatment Plants Discharging Nearby Great Lakes Beaches
*Marirosa Molina, U.S. Environmental Protection Agency*

11:00–11:15  Advances in Measurements and Indicators for Determining Shellfish Growing Area Classifications Adjacent to Wastewater Treatment Plant Outfalls
*Yaping Ao, U.S. Food and Drug Administration*

11:15–11:30  Coliphages as Indicators of Gastrointestinal Illness in Recreational Waters: A Pooled Analysis of Six Prospective Marine Beach Cohorts
*Jack Colford, Jr., University of California—Berkeley*

11:30–11:45  EPA's Development of Recreational Water Quality Criteria for Coliphage: Updates and Experts Coliphage Workshop Overview
*Sharon Nappier, U.S. Environmental Protection Agency*

11:45–12:00  Q & A

12:00–1:30  LUNCH (on your own)

**Session 7: Pollution Source Identification, Tracking, and Sanitary Surveys**
*Session Chair: Orin Shanks, U.S. Environmental Protection Agency*

1:30–1:45  Florida Beach Geomorphology and Beach Management Practices Correlate with Enterococci Percent Exceedances
*Helena Solo-Gabriele, University of Miami*

1:45–2:00  Source Tracking of Ankle-Depth Water Quality Impairment at Freshwater Beaches in Ontario, Canada
*Thomas Edge, Environment Canada*

2:00–2:15  Sources of Enterococci and their Relation with Environmental Factors at an Inland Beach
*Asli Aslan, Georgia Southern University*

*Mia Mattioli, Emory University*

2:30–2:45  Exploring the Microbiome for New Approaches to Microbial Source Tracking
*Sandra McLellan, University of Wisconsin—Milwaukee*

2:45–3:00  Q & A
3:00–3:30 BREAK

Session 8: Harmful Algal Blooms Impact

Session Chair: Virginia Roberts, Centers for Disease Control and Prevention

3:30–3:45 Cyanobacterial Blooms in Freshwater and Potential Health Impact in the United States

Jiyoung Lee, Ohio State University

3:45–4:00 Application of a Linked Hydrodynamic-Harmful Algal Bloom Model for Assessment of Management Scenarios to Impaired Long Island Embayments

Raghav Narayanan, Anchor QEA

4:00–4:15 Recreational Risk Management of Surface Waterbodies: Cyanobacteria Surveillance in Massachusetts

Michael Celona, Massachusetts Department of Public Health

4:15–4:30 Cyanotoxin Ambient Water Quality Criteria for Recreational Waters

John Ravenscroft, U.S. Environmental Protection Agency

4:30–4:45 Anatoxin-a Poisoning in a Dog Associated with Exposure to a Minnesota Lake, June 2015

Stephanie Gretsch, Minnesota Department of Health

4:45–5:00 Q & A

Friday, April 15, 2016

7:30–12:00 Registration

Session 9: Restoration and Remediation of Beaches

Session Chair: John Wathen, U.S. Environmental Protection Agency

8:00–8:20 Developing and Implementing a "Healthy Beaches Action Plan"

Sarah U'Ren, The Watershed Center Grand Traverse Bay

8:20–8:40 E. coli Decrease in Southern and Western Lake Michigan: Management, Meteorology, or Mussels?

Richard Whitman, formerly with U.S. Geological Survey

8:40–9:00 Turbulence and Triumph: Tackling the Complex Challenges Related to Healthy Beaches

Kathleen Bell, University of Maine School of Economics

9:00–9:20 The Multidimensional Benefits to Beach Remediation and Restoration

Greg Kleinheinz, University of Wisconsin—Oshkosh

9:20–9:30 Q & A

9:30–10:15 BREAK
Session 10: Predictive Modeling and Forecasting

Session Chair: Mike Cyterski, U.S. Environmental Protection Agency

Adam Mednick, University of Wisconsin Sea Grant Institute

10:30–10:45 California Beach Water Quality Nowcasting
Leslie Griffin, Heal the Bay

10:45–11:00 Predictive Modeling and Forecasting of Water Quality at Recreational Beaches along Gulf of Mexico Coast
Zhiqiang Deng, Louisiana State University

11:00–11:15 Using Probabilities of Enterococci Exceedance and Logistic Regression to Evaluate Long-Term Weekly Beach Monitoring Data
Jay Fleisher, Nova Southeastern University

11:15–11:30 Development of a Predictive Spatial Model to Understand the Connection between Rainfall Events and Beach Water Quality
Lance Larson, Natural Resources Defense Council

11:30–11:45 Q & A

11:45–12:00 Conference Wrap-Up
Sara Hisel-McCoy, U.S. Environmental Protection Agency