The Conference is organized and presented by Battelle.

Battelle’s environmental engineers, scientists, and professionals offer focused expertise to government and industrial clients in the U.S. and abroad. Combining sound science and engineering solutions with creative management strategies, Battelle works with clients to develop innovative, sustainable, and cost-effective solutions to complex problems in site characterization, assessment, monitoring, remediation, restoration, and management. Every day, the people of Battelle apply science and technology to solving what matters most. At major technology centers and national laboratories around the world, Battelle conducts research and development, designs and manufactures products, and delivers critical services for government and commercial customers. Headquartered in Columbus, Ohio, since its founding in 1929, Battelle serves the national security, health and life sciences, and energy and environmental industries.
Conference Sponsors

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Welcome back to New Orleans! Thank you for attending the 2019 Sediments Conference. We believe you will find both the technical program content and the networking opportunities well worth your time. The 2019 Conference is a forum for sharing research results, practical experiences, and opportunities associated with investigating, remediating, and restoring the environmental and economic vitality of waterways. Managing these aquatic systems requires complex actions that affect a diverse group of stakeholders and touch a wide range of environmental, economic, political, and social issues.

We’re looking forward to a great week, with more than 1,050 environmental professionals from 21 countries participating in the extensive technical program and other events.

We appreciate the participation of the Conference Sponsors, whose financial support has been an important part of the planning process. In addition, we recognize the efforts of the Technical Steering Committee, the session chairs, and the panel organizers, who have devoted their time and technical expertise to developing a high-quality program.

Eight short courses will be offered on Monday from 8:00 a.m.-5:00 p.m. and the Conference Registration Desk will open at 2:00 p.m. In a slight change to the traditional schedule of years’ past, the Plenary Session featuring Dr. John Todd will be presented beginning at 5:30 p.m. prior to the Welcome Reception that will begin at 7:00 p.m. The 80 exhibit booths and Group 1 poster display will also open at 7:00 p.m.

From Tuesday through Thursday, 43 breakout sessions and four panels will be conducted. Posters will be presented in two groups, on Tuesday and Wednesday evenings. More than 500 platform and poster presentations are scheduled. On Thursday afternoon, the Conference will close with a Roundtable discussion that will provide attendees an opportunity to reconvene and participate in a wrap-up discussion.

Enjoy your free time exploring the French Quarter, the French Market, and the wealth of world-famous restaurants, shops, and historical sites within walking distance of the Hotel that make up one of the oldest cities in the U.S.

Lisa Lefkovitz
Pam Rodgers
Conference Chairs (Battelle)
Conference Floor Plan

HILTON FIRST FLOOR

GRAND BALLROOM
- Exhibits
- Learning Lab
- Internet Café
- Poster Displays
- Breakfasts and Beverage Breaks
- Welcome and Poster Receptions

CHEMIN ROYALE

GRAND SALON
- A Sessions
- Plenary Session (Monday)
- Closing Roundtable (Thursday)
- B Sessions
- C Sessions
- D Sessions
- E Sessions

Conference Registration

Guest Room

Elevators

Escalator To 2nd Floor (Buffet Lunches)
Exhibit Hall—Grand Ballroom

Exhibit Hours
Monday, February 11: 7:00–9:00 p.m.
Tuesday, February 12: 7:00 a.m.–7:00 p.m.
Wednesday, February 13: 7:00 a.m.–7:00 p.m.
Thursday, February 14: 7:00 a.m.–1:00 p.m.

Conference Sponsors are shown in bold.
Dr. John Todd is a pioneer of the new field of ecological design and has been active in shaping the field for over forty years. He received a BA in Agriculture and MSc in Parasitology from McGill University and a Ph.D. in Fisheries & Oceanography from the University of Michigan. He has since received two honorary doctorates. He is an Emeritus Research Professor and Distinguished Lecturer at the University of Vermont and a Fellow at the Gund Institute for Ecological Economics. He is Founder and President of John Todd Ecological Design and President of Ocean Arks International, an NGO dedicated to publishing and to healing the inshore oceans. Dr. Todd was an assistant scientist at the Woods Hole Oceanographic Institution as well as the co-founder of the New Alchemy Institute in 1969. Dr. Todd is widely published as the author of over two hundred scientific, technical, and popular articles and author or co-author of seven books, including Healing Earth: An Ecologist’s Journey of Innovation and Stewardship (scheduled for publication in 2019) and one in the works, Man Overboard: Natural and Unnatural Histories from the Edge of the Sea. He is the inventor of Eco-Machines™ and holds five patents. His work revolving around the broad field of planetary healing and regeneration has resulted in numerous awards for design, technological innovation, conservation, and environmental restoration and he was named “Hero of the Planet” by Time Magazine in 1999.

Dr. Todd’s talk will explore evolution's legacy as a window into a new design science and address fundamental questions of our time, namely the restoration of landscapes and aquatic ecosystems throughout the world through his organizations, Ocean Arks International and John Todd Ecological Design. He will address decoding Nature's operating instructions and the subsequent invention of living technologies as well as the concerns manifested with the fusion of ecology and economics. Ultimately, the goal is to help stabilize climate, restore biodiversity, and heal the Earth.

Dr. Todd’s most recent project involves greening the Sinai desert with the mission of creating a biologically-based future for the region and beyond. The Sinai is a weather crucible that influences climate throughout the eastern Mediterranean and to the east as far as India and China. This work is led by a Dutch organization, The Weather Makers, in collaboration with the Dutch, Belgian and Egyptian governments. They propose that a greened Sinai will positively influence rainfall and temperatures in the region. To do so, oasis Eco-Machines™ using sea water to establish living systems in the desert were designed and phytoremediation techniques using salt tolerant halophyte plants are being developed.
General Information

All Conference events will be held at the Hilton New Orleans Riverside located at 2 Poydras St., New Orleans, Louisiana, 70130.

The breakout sessions and panels are organized into the following tracks:

A. Remedy and Restoration Implementation
B. Remediation and Restoration Alternatives
C. Management Approaches and Policy
D. Environmental Processes and Modeling
E. Characterization, Assessment, and Monitoring

See the following pages for additional information:

- Page 11: Short Courses offered on Monday
- Pages 18 and 30: Sessions in each of the two poster groups.
- Page 43: Overview of the platform sessions and panels to be conducted each day. Times for exhibits, breakfasts, lunches, and receptions.

Program Overview

Monday, February 11

- 8:00 a.m.–5:00 p.m. Short Courses
- 2:00–9:00 p.m. Registration Desk Open
- 5:30–7:00 p.m. Plenary Session
- 7:00–9:00 p.m. Welcome Reception, Exhibits, Poster Group 1 Display

Tuesday, February 12

- 7:00–8:00 a.m. Continental Breakfast
- 8:00 a.m.–5:35 p.m. Platform Presentations
- 9:00–9:45 a.m. Morning Beverage Break
- 11:30 a.m.–1:00 p.m. General Lunch
- 2:30–3:15 p.m. Afternoon Beverage Break
- 5:45–7:00 p.m. Group 1 Poster Presentations & Networking Reception

Wednesday, February 13

- 7:00–8:00 a.m. Continental Breakfast
- 8:00 a.m.–5:35 p.m. Platform Presentations
- 9:00–9:45 a.m. Morning Beverage Break
- 11:30 a.m.–1:00 p.m. General Lunch
- 2:30–3:15 p.m. Afternoon Beverage Break
- 5:45–7:00 p.m. Group 1 Poster Presentations & Networking Reception

Thursday, February 14

- 7:00–8:00 a.m. Continental Breakfast
- 8:00 a.m.–2:40 p.m. Platform Presentations
- 9:00–9:45 a.m. Morning Beverage Break
- 11:30 a.m.–1:00 p.m. General Lunch
- 2:30–3:00 p.m. Refreshments
- 3:00–4:00 p.m. 2019 Conference Recap: Takeaways and What’s Next?

Presentations

Platform and poster presentations scheduled as of January 24, 2019, are listed by day on pages 14-39.

Late revisions in platform presentations (speaker changes, withdrawals) will be marked on overview sheets posted in the registration area and on daily lists outside each breakout room.

Talks are scheduled at 25-minute intervals, and each talk is to begin promptly at the time printed in the schedule, except as may be noted at the beginning of the day on the overview sheets and the daily lists. Session chairs will adhere strictly to the schedule, making it possible for registrants to move between breakout rooms to hear the talks most pertinent to them. To minimize distraction, please confine such movement to the short intervals between talks.

Audio, video, and still photography are prohibited in session rooms during platform presentations or panel discussions without FIRST securing the speaker(s) permission and notifying the session chair or panel moderator in advance.

Video and still photography of poster board presentations is also prohibited without FIRST securing author/speaker permission.

Professional Development

General Attendance Certificate. If you would like to receive a general certificate of Conference attendance, inquire at the Registration Desk. If your state licensing board accepts conference attendance and will require documentation of hours attended during the Tuesday through Thursday technical program, a daily attendance log can be established for you and a certificate will be emailed after the Conference with the number of hours logged.

To obtain credit, you are required to sign in and out whenever you arrive at or leave the Conference and you may not complete or sign a previous days’ log. Only those days with complete attendance logs (i.e., sign-in, sign-out, and signature) will be included on your attendance certificate. PDF certificates will be emailed after the Conference. Visit the Registration Desk upon arrival to establish an attendee log.

State of Massachusetts LSP Credits. Technical program attendance and select short courses have been approved by the State of Massachusetts for LSP credit as seen below. Attendees who wish to receive credit are required to establish and maintain a daily attendance log.

- 1 Technical credit for every 2 hours of Conference attendance
- 1 Technical credit for every 1 hour of short course attendance
Exhibits
Booths will be provided by 80 organizations that conduct remediation activities or supply equipment used in such work. Exhibits will be on display from 7:00 p.m. Monday evening through 1:00 p.m. Thursday afternoon. See page 6 for exhibit hours and the list of exhibitors.

Daily continental breakfasts, breaks, and receptions will be served in the Exhibit Hall where seating will also be provided.

Ad Hoc Meeting Rooms, Internet Café & Wi-Fi
Ad Hoc Meetings. Small meeting rooms may be available for ad hoc meetings. Check at the Conference Registration Desk for details.

Internet Café. Computers and charging outlets are available to participants who wish to check email during Exhibit Hall hours hours Monday–Thursday. The Internet Café is located near the Learning Lab area in the Exhibit Hall.

Internet Café Sponsors. We appreciate the participation of the following companies, whose contributions have been applied toward the overall cost of the Internet Café.

Learning Lab Schedule
The Learning Lab, located in the Exhibit Hall, will consist of live demonstrations highlighting specific technologies, tools, and software. The schedule of planned demonstrations is available on the Conference mobile app and can be seen below. Look for the symbol to the right throughout the platform schedule grids for a reminder when a Learning Lab is scheduled.

Tuesday, February 12
- 10:05-10:30 a.m.—A Novel Sampling Device for Dissolved Contaminants in NAPL-Impacted Sediments
- 2:40-3:05 p.m.—Treatment of Dioxins in Soil and Sediment: Problem Solved
- 3:30-3:55 p.m.—Evaluating and Comparing Various Remedial Cap Designs for Removal of PCBs and PAHs from Water
- 4:20-4:45 p.m.—The Use of Bathymetry in the Determination of Capping Material Thickness Challenges and Options

Wednesday, February 13
- 9:40-10:05 a.m.—Real-Time Open Water Monitoring of Engineering Controls Applied during Selective Sediment Removal & Pier Restoration Scenarios Using FDS Connect
- 10:30-10:55 a.m.—Software for Mapping and Quantifying Flow across the Sediment/Water Interface with Temperature Data
- 1:25-1:50 p.m.—Passive Samplers in the Field: Deployment and Retrieval without Divers
- 2:15-3:05 p.m.—Built by Zidell
- 3:30-3:55 p.m.—Application of Molecular Diagnostics to Site Assessment

Thursday, February 14
- 8:25-8:50 a.m.—3-D Visualization & Analysis Software Demonstration
- 9:40-10:05 a.m.—Mixed Reality Comes to Sediment Management
- 10:55-11:20 a.m.—Chemometric Pattern Recognition: Using Machine Learning to Decipher Complex Patterns in Chemical Data

Complimentary wireless Internet access is available in the Exhibit Hall and session rooms. SSID: Hilton Meetings Password (case-sensitive): Sediments2019
Mobile App & Abstract Collection
Abstracts will be available only through the Conference mobile app. Due to the size of the program—four panel discussions and more than 500 platform talks and poster presentations—it is recommended that attendees review the schedule and abstracts prior to the Conference.

Abstracts are included for all platform and poster presentations and panel discussions. The app may be used to build a personal schedule and take notes on presentations, and favorite Exhibitors. In addition, you have the option of entering your profile to enhance networking opportunities with other participants, including sending private instant messages.

Closing Session Feedback & Track Surveys. Each of the five technical tracks has been assigned a three-question survey to collect feedback and points for discussion for the Closing Roundtable. To access the surveys, click on any platform or poster listing and scroll to the bottom of the listing; the survey will correspond to the track of the presentation you are viewing (e.g., Track A survey for A Sessions, Track B survey for B Sessions.)

Click on the survey link and answer the questions; each survey may be filled out multiple times.

Meals, Breaks, & Receptions
For the convenience of Conference participants, the following meals, breaks, and light receptions will be provided at no additional cost to program registrants and exhibit booth staff during the food service times listed. Food service for breakfasts, morning and afternoon beverage breaks, and receptions will be in the Exhibit Hall. Buffet lunches will be served in the Churchill Ballroom (2nd floor) to accommodate seating.

For other meals and refreshments not provided by the Conference, Dragos Seafood Restaurant, Riverblends Café (open from 6:00 a.m.-5:00 p.m.), and Spirits Bar are located in the Hotel and other options are available nearby.

Guest Tickets. If registrants wish to bring guests to meals or receptions, guest tickets can be purchased at the Conference Registration Desk; guest tickets will be priced equal to the cost incurred by the Conference for each meal.

Food & Beverage Sponsor. We appreciate the participation of GEI, whose contribution have been applied toward the overall cost of food and beverage for conference attendees.
Student/Young Professional Participation & Events

University students, through Ph.D. candidates, will find participation in the Conference valuable to their career development. In addition to the technical information gained by attending presentations and visiting exhibits, students will be able to meet and talk with environmental professionals representing a wide range of work experience and employers. Recruitment is a major focus of many participating Exhibitors and Sponsors and the Conference will provide enhanced networking opportunities for student job-seekers. Be sure to check the Message Board near the Registration Desk where job postings may be available from participating companies.

Student Event & Scholarships Sponsor. We appreciate the participation of Anchor QEA, whose contribution has been applied toward the student paper award and student events. Anchor QEA also generously provided three student scholarships.

Proceedings

All presentations given at the Conference will be represented in the proceedings. Each platform and poster presenter has been invited to submit a short paper expanding upon his or her presentation. If no paper is submitted, the one-page abstract will be included in the proceedings supplemented with the slide files for platform presentations. After the Conference, the proceedings will be compiled and published only online. Approximately two months after the Conference, an access link and password will be distributed to all registrants who paid standard or student rates.

Messages, Job Postings, Lost & Found

A message board will be available near the Conference Registration Desk for the use of attendees wishing to contact one another. Notices about jobs available or wanted may be posted here. This board also will be used for messages taken by the Registration Desk staff for attendees. Please turn any found items into the Registration Desk. Lost items may be picked up with a detailed description of the item.

Student/Young Professional Networking Reception.

To help students, young professionals (5 years or less in their field), and invited mentors get acquainted, a Networking Reception will be held Tuesday evening, following the Group 1 poster presentations.

Students and Young Professionals are invited to bring a one-page resume to the event and participate in the “Six-Second Resume Challenge.” Invited mentors will review the resume for six seconds and give participants feedback.

Short Courses

The following courses are being offered. Check at the Short Course Registration Desk at least one hour before the starting time to see if openings remain in any course.

Monday, February 11

8:00 a.m.-5:00 p.m.
- Evaluating Sediment Transport: Best Practices, Tools, Techniques, and Application to Site Management
- An Introduction to PFAS at Contaminated Sediment Sites: Scientific and Regulatory Overview
- Capping Design: The Art of Designing Isolation Layers to Reduce Environmental Risk Associated with Contaminated Sediments
- Expanding the Use of In Situ Solidification/Stabilization to Provide Additional Tools for the Management of Impacted Sediments

1:00-5:00 p.m.
- Current State of Knowledge on the Per- and Polyfluoroalkyl Substances (PFAS) Site Characterization and Management: Sampling, Analysis, Fate and Transport, and Remediation
- Environmental Dredging 101
- Operationalizing Sustainability Concepts in Sediment Remediation Decision Making*
- The Development and Application of the Forensic Approach to Determine Contaminant Sources in the Environment

* Indicates a “laptop-required” course.

Student Paper Competition Winner

The winning paper is scheduled for presentation at the Conference and the winner has been awarded a complimentary registration and a financial award to help cover travel and related costs at the Plenary Session.

Trevor Needham (University of Maryland Baltimore County/USA)
Kinetics of PCB Microbial Dechlorination Explained by Freely Dissolved Concentration in Sediment Microcosms

(Session B6, Poster Group 1, Board #76)
**Tuesday Platform Sessions**

**A1. Innovation and Improvement in the Design Process**
Tim Donegan (Sevenson Environmental Services)
Rhiannon Faber (Arcadis)

**A2. Monitoring and Evaluating Remedy Effectiveness**
JR Flanders (AECOM)
Steven Laszewski (Foth)

**A3. Remediation of Urban Waterways**
Kendrick Jaglal (OBG, Part of Ramboll)
Scott Thompson (Louis Berger)

**A4. Successfully Combining Remedies**
Stephanie Fiorenza (BP)
Kimberly Markillie (U.S. Navy)

**B1. Cap Design and Modeling**
Howard Cumberland (Geosyntec Consultants)
Danny Reible (Texas Tech University)

**B2. Cap Construction and Operation**
Christopher Greene (Geosyntec Consultants)
Heather VanDewalker (Arcadis)

**B3. MNR and Enhanced MNR**
Andrew Bullard (CDM Smith, Inc.)
Edward Glaza (Parsons Corporation)

**B4. Dredging Design and Operation**
Katherine Mason (Charter)
Andrew Timmis (J.F. Brennan Company, Inc.)

**C1. Great Lakes Legacy Act Successes and Challenges**
Steven Nadeau (Sediment Management Work Group/ Honigman Miller)
Michelle Rioux (Infrastructure Alternatives, Inc.)

**C2. Adaptive Management Approaches**
Rick Fox (OBG, Part of Ramboll)
Douglas Reid-Green (BASF)

**D1. Contaminant Fate and Transport in Sediments**
Vicky Freedman (Pacific Northwest National Laboratory)
Edward Garvey (Louis Berger)

**D2. Hydrodynamics and Sediment Transport**
Craig Jones (Integral Consulting, Inc.)
Tim Wagner (Foth)

**D3. Groundwater/Sediment/Surface Water Interactions**
Ernest Ashley (CDM Smith, Inc.)
Bob Veenstra (Geosyntec Consultants)

**E1. Innovative Characterization and Assessment Approaches**
Rick Beach (GZA GeoEnvironmental, Inc.)
Upal Ghosh (University of Maryland, Baltimore County)

**E2. Passive Samplers**
Robert Burgess (U.S. Environmental Protection Agency)
Lisa Lefkovitz (Battelle)

**Wednesday Platform Sessions**

**A5. Habitat Mitigation and Restoration Services**
Natalia J. Cagide Elmer (Parsons Corporation)
Sanjiv Sinha (Environmental Consulting & Technology, Inc.)

**A6. Contaminant Forensics**
Helder Costa (Haley & Aldrich, Inc.)
Timothy Dekker (LimnoTech)

**B5. Dredged Material Dewatering and Disposal**
Steve Cross (Heritage Environmental Services, LLC)
Mike Crystal (Sevenson Environmental Services)

**B6. Sediment Bioremediation**
Arul Ayyaswami (Tetra Tech, Inc.)
Heather Rectanus (Geosyntec Consultants)

**B7. Beneficial Use of Contaminated Sediments**
Steve Sands (Clean Earth, Inc.)
Amber Wilson (Infrastructure Alternatives, Inc.)

**B8. Evaluating Sustainability**
Frank Barranco (EA Engineering, Science, and Technology, Inc., PBC)
Victor Magar (Ramboll)

**C4. Site Management Decision Strategies**
Eric Blischke (CDM Smith, Inc.)
Shannon Dunn (Arcadis)

**C5. Restoration and Revitalization Strategies**
Ram Mohan (Anchor QEA, LLC)
Marc Tuchman (U.S. Environmental Protection Agency)
C6. NAPL and MGP Sites
Jeff Gentry (Jacobs)
Anthony Pisanelli (Charter)

D4. Contaminant Bioavailability and Uptake
Eliza Kaltenberg (Battelle)
Katherine von Stackelberg (Harvard Center for Climate, Health and the Global Environment)

D5. Ebullition
Ted O’Connell (TRC Companies, Inc.)
Karl Rockne (University of Illinois at Chicago)

D6. Geospatial Data Evaluation and Data Visualization
Tim Negley (TIG Environmental)
Kersey Sturdivant (INSPIRE Environmental)

E3. Field Sampling Methods and Techniques
Bryan Peed (U.S. Navy)
Ben Sheets (Barr Engineering Co.)

E4. Chemical/Toxicological/Biological Measurements and Monitoring
Frank Dillon (Jacobs)
Marcia Galloway (Ecology and Environment, Inc.)

E5. Source ID, Loading Assessment, and Control
Solomon Gbondo-Tugbawa (Louis Berger)
Raymond Lees (Langan)

Thursday Platform Sessions
A7. Characterization and Remediation of PFAS-Contaminated Sediments/Media
Ramona Iery (U.S. Navy)
Marc Mills (U.S. Environmental Protection Agency)

B9. Field-Scale Application of In Situ Treatment Technologies
John Collins (AquaBloc, Ltd.)
George Hicks (Baley & Aldrich, Inc.)

B10. Understanding Chemistry of In Situ Treatment Amendments
Scott Blaha (Parsons Corporation)
John Hull (Hull & Associates)

B11. In Situ Stabilization
Tim Olean (OBG, Part of Ramboll)
Steve Shaw (Sevenson Environmental Services)

C7. International Approaches for Site Identification and Cleanup
Sabine Apitz (SEA Environmental Decisions, Ltd.)
Philip Spadaro (TIG Environmental)

C8. International Experiences in Contaminated Sediment Remediation
Katherine Cronin (Deltares)
Priscilla Viana (Arcadis)

C9. Remedy Cost and Cost Allocation Considerations
Dennis Farley (TIG Environmental)
Melanie Kito (U.S. Navy)

D7. Ecological and Human-Health Risk Assessment
Susan Kane Driscoll (Exponent)
Betsy Ruffle (AECOM)

D8. Establishing Remediation Goals
Lawrence Burkhard (U.S. Environmental Protection Agency)
Marcia Greenblatt (Integral Consulting, Inc.)

D9. Long-Term Monitoring Strategies
Keegan Roberts (CDM Smith, Inc.)
Patricia White (Jacobs)

E6. Innovative Characterization and Assessment Tools
Mike Dickey (Foth)
Paul Dragos (Battelle)

E7. Communication and Facilitation with Stakeholders
Tim Ashmore (Charter)
Tamara Sorell (Brown and Caldwell)

Panel Discussions

TUESDAY
(Track C, 10:55 a.m.)
Alternative Financial Models for Funding Contaminated Sediment Cleanup: Public-Private Partnerships, Local Sponsorship, and Redevelopment Benefit: How Can We Get More Done?
Moderators: Philip Spadaro (TIG Environmental) and Marc Tuchman (USEPA)

WEDNESDAY
(Track A, 10:30 a.m.)
Incorporating Sustainability Principles in Superfund Sediment Remediation Projects
Moderator: Steven Nadeau (Sediment Management Work Group)

(Track D, 3:55 p.m.)
Challenges in Evaluating Fish-Sediment Exposure at Contaminated Sediment Sites
Moderator: Todd Bridges, Ph.D. (U.S. Army Corps of Engineers ERDC)

THURSDAY
(Track A, 8:00 a.m.)
Rethinking Environmental Dredging: A Roundtable Discussion
Moderator: Victor S. Magar Ph.D., PE (Ramboll)
Tuesday Platform Sessions—8:00am–10:05am

**A SESSIONS**

**8:00**
- **Management of PAH- and NAPL-Impacted Dredge Residuals: Former Manufactured Gas Plant Site Located in the Portland Harbor Superfund Site.**
  - R. Barth, H. Samaha, and B. Wyatt.
  - Ryan Barth (Anchor QEA, LLC/USA)

**8:25**
- **Innovation and Improvement in the Design Process**
  - Matt Smith (Anchor QEA, LLC/USA)
  - A. Burnham, and J. McAuliffe.
  - Anna-Karin Dahlberg (Swedish University of Agricultural Sciences/Sweden)

**8:50**
- **Installation of J-Hook Vanes to Mitigate Bank Erosion as Part of a Time Critical Removal Action.**
  - Anita Emery-DeVisser (Wood/USA)

**9:15**
- **Structured Design Process Improvement for Complex Sediment Site Remedial Designs.**
  - M.J. Erickson, R. Faber, and A. Hebert.
  - Michael Erickson (Arcadis/USA)

**9:40**
- **Sediment Cap Design, Modeling, and Construction.**
  - Dale Kolstad (Barr Engineering Co./USA)

**10:05**
- **Onondaga Lake Recovery: Declining Mercury in Water and Fish.**
  - M. Smith, L. DeSantis, E. Henry, M. Amigo, A. Burnham, and J. McAuliffe.
  - Matt Smith (Anchor QEA, LLC/USA)

**B SESSIONS**

**8:00**
- **Use of Dredged Material for Contaminated Sediment Source Control.**
  - David W. Moore (USACE ERDC/USA)

**8:25**
- **Subaqueous Sediment Capping from Field Investigation to Design with a Focus on Chemical Isolation.**
  - C. Kiehl-Simpson and J. Beaver.
  - Caryl Kiehl-Simpson (EA Engineering Science, and Technology, Inc., PBC/USA)

**8:50**
- **Modeling and Uncertainty Analysis for Remedy Selection and Design to Address Groundwater Discharging to Surface Water.**
  - Katy Lindstrom (Barr Engineering Co./USA)

**9:15**
- **Multi-Objective Cap Design for Ecological and Armor Layers at the Gowanus Canal Superfund Site.**
  - Bridgette DeShields (Integral Consulting, Inc./USA)

**9:40**
- **Sediment Legacy Act (GLLA) Used to Focus Stakeholders on Developing an Acceptable Remedial Alternative for Spirit Lake in the St. Louis River (Duluth) AOC.**
  - Steven Nadeau (Sediment Management Work Group/Minnesota Pollution Control Agency)

**C SESSIONS**

**8:00**
- **The Great Lakes Legacy Act: Fifteen Years of Successful Partnerships for Sediment Remediation in the Great Lakes.**
  - M. Tuchman and S. Cieniawski.
  - Marc Tuchman (U.S. Environmental Protection Agency/USA)

**8:25**
- **A Seat at the Table: Successes and Challenges in Great Lakes Legacy Act Partnerships.**
  - C.A. Nigrelli.
  - Carrie Nigrelli (Illinois-Indiana Sea Grant/USA)

**8:50**
- **Unique Aspects of Capping and Long-Term Monitoring at River Raisin, Michigan.**
  - J.P. Doody, A.C. Corbin, D.R. Opydke, C. Pinter, and W.J. Murray.
  - Paul Doody (Anchor QEA, LLC/USA)

**9:15**
- **Lessons Learned for Sediment Remediation Design in the Great Lakes from Recently Constructed Remedies.**
  - Jon Trombino (EA Engineering Science, and Technology, Inc., PBC/USA)

**9:40**
- **Onondaga Lake Recovery: Declining Mercury in Water and Fish.**
  - M. Smith, L. DeSantis, E. Henry, M. Amigo, A. Burnham, and J. McAuliffe.
  - Matt Smith (Anchor QEA, LLC/USA)

**D SESSIONS**

**8:00**
- **Dispersal of Persistent Organic Pollutants from Wood Fiber-Contaminated Sediments of Industrial Origin in Sweden.**
  - Anna-Karin Dahlberg (Swedish University of Agricultural Sciences/Sweden)

**8:25**
- **Optically-Based Quantification of Concentrations and Fluxes of Mercury and Methylmercury in South River, Virginia (USA).**
  - G. Chang and T. Martin.
  - Grace Chang (Integral Consulting, Inc./USA)

**8:50**
- **Assessment of Impact of NAPL Seeps from Multiple Sources on Contaminant Concentrations in the Sediments of a Superfund Site.**
  - Ron Weissbard (New York City Department of Environmental Protection/USA)

**9:15**
- **Assessing Contaminant Fate and Transport in Urban Tidal Waterbody.**
  - S. Gbondo-Tugbawa, C. Prabhu, S. McDonald, E.A. Garvey, R. Weissbard, and D. Marulanda.
  - Solomon Gbondo-Tugbawa (Louis Berger/USA)

**9:40**
- **RECOVERY 5.0: A Contaminated Sediment-Water Interaction Model.**
  - C.E. Ruiz and T.K. Gerald.
  - Carlos E. Ruiz (USACE/USA)

**E SESSIONS**

**8:00**
- **A Cost-Effective In Situ Approach for Concurrent Evaluation of Site-Specific Sediment Remedy Performance and Recontamination Potential.**
  - Gunther Rosen (SPWAR/WSU PACIFIC/USA)

**8:25**
- **Approaches for Real-Time PCB Mass Removed Estimates during Dredging and Mass Remaining Estimates after Dredging in the Upper Hudson River.**
  - A. Constant, J. Benaman, and R. Gibson.
  - Adrienne Constant (Anchor QEA, LLC/USA)

**8:50**
- **Development of a Hydrodynamic-Based Conceptual Site Model for the Upper Hudson River Floodplain PCB RIFS.**
  - Elizabeth Lamoureux (Anchor QEA, LLC/USA)

**9:15**
- **Statistical Background Characterization and Recontamination Potential of the Menominee and Milwaukee Rivers.**
  - S. Lehrke, S. Barciacik, and B. Paulson.
  - Stephen Lehrke (Foth/USA)

**9:40**
- **Beyond Sediment Quality Guidelines: A Machine-Learning Approach to Predicting Toxicity in Multivariate Data Sets.**
  - B. Shanrock-Solberg, T.C. Michelsen, and P. Taatil.
  - Teresa Michelsen (Avocet Consulting, LLC/USA)
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| 10:30 | Lower Fox River OU1 Remedy Effectiveness Characterized through Water and Fish Tissue Long-Term Monitoring.
S. Lehrke, D. Roznowski, and W. Hartman.
Stephen Lehrke (Foth/USA) | Sediment Cap Design and Placement: Site 19, Former Derecktor Shipyard Marine Sediment (Operable Unit 5).
S. Patelselas, R. Clarke, and J. Gravette.
Stavros Patelselas (Tetra Tech, Inc./USA) | SESSION BREAK | Hydraulic Modeling in Support of Time Critical Removal Action with Dam Removal.
W. Ingram, J. Hansen, S. Jelen, and C. Draper.
D. Wayne Ingram (Wood/USA) | Where to Draw the Line: Determination of Remedial Areas by the Numbers Using Changepoint Analysis.
K. Whitehead, N. Swanson, T. Martin, and J. Durda.
Kenia Whitehead (Integral Consulting, Inc./USA) |
| 10:55 | Early Assessment of the Overall Effectiveness of the Upper Hudson River Remedy.
J. Benaman, J. Connolly, B. Lamoureux, J. Haggard, and R. Gibson.
T. Konechné, C. Bowen, K.S. Bell, and S. Hayter.
Todd Konechné (The Dow Chemical Company/USA) | Long-Term Monitoring of a Thin-Layer Sand Cap in Peninsula Harbour Area of Concern.
Danny Reible (Texas Tech University/USA) | PANEL DISCUSSION | Severe Storm Hydrodynamics and Sediment Transport Impacts on Dioxin and PCB Levels in an Industrialized Estuary.
A. Govindarajan, A. Khaghadi, and H.S. Rifai.
Adithya Govindarajan (University of Houston/USA) | Collaborative Multibeam Echosounder and Sediment Profile Imaging Surveys Provide a Novel Approach to Fine-Scale Sedimentation Analysis.
Marina Guarinello (INSPIRE Environmental/USA) |
| 11:20 | Assessing the Hudson River Post-Remedy: An Overview of the Ongoing Recovery of PCB Levels in Fish, Sediment and Water in 150 Miles of River.
Edward Garvey (Louis Berger/USA) | Monitoring Effectiveness of Pilot-Scale Sediment Caps in a Dynamic Sand Riverbed.
R. Johnson, R. Cleary, P. LaGoy, and K. Powell.
Moderators
Philip Spadaro (TIG Environmental)
Marc Tuchman (USEPA)
Panelists
Mike Bares (Minnesota Pollution Control Agency)
Matt Graham (Environment Canada)
James McKenna (State of Oregon)
John Morris (Honeywell International, Inc.)
Jeff Ring (Ring Bender)
Katrien Van De Wiele (OVAM) | A Tale of Two Sediment Releases: Ecosystem Recovery from Catastrophic Anthropogenic and Naturalogic Events.
D.R. Tormey.
Daniel Tormey (Catalyst Environmental Solutions Corporation/USA) | Selection of In Situ Stabilization Target Areas for NAPL-Impacted Sediment Remediation.
J. Gentry, P. Motzahn, J. Hess, and C. Talamis.
Jeff Gentry (Jacobs/USA) |
| 11:45 | Boeing Plant 2 Sediment Remediation: Post Remedy Monitoring and the Search for Long-Term Success.
T. Konechné, C. Bowen, K.S. Bell, and S. Hayter.
Todd Konechné (The Dow Chemical Company/USA) | Monitoring Effectiveness of Pilot-Scale Sediment Caps in a Dynamic Sand Riverbed.
R. Johnson, R. Cleary, P. LaGoy, and K. Powell.
Russell Johnson (Wood/USA) | PANEL DISCUSSION | Evaluating Climate Change Effects on Natural Recovery of a Contaminated Sediment Site.
Kara Scheu (Integral Consulting, Inc./USA) | Estimating NAPL Effective Hydraulic Conductivity and Potential Velocity in the Field Based on Laboratory Pore-Fluid Mobility Test Results.
M. Gefell, J. Kase, J. Rhea, and C. Reece.
Jason Kase (Anchor QEA, LLC/USA) |
| 12:10 | LUNCH & LEARN
Beneficial Clean and Contaminated Sediment Use in the Context of Sustainability
(12:10–12:50pm) | LUNCH & LEARN
Beneficial Clean and Contaminated Sediment Use in the Context of Sustainability
(12:10–12:50pm) | SESSION BREAK | Do PCBs Smell? The Use of Detection Dogs to Locate PCB Hotspots.
Suzanne Replinger (Windward Environmental LLC/USA) | SESSION BREAK |
| 12:35 | SESSION BREAK | SESSION BREAK | SESSION BREAK | SESSION BREAK | SESSION BREAK |
### Tuesday Platform Sessions—1:00pm–3:05pm

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Display: Monday, 7:00 p.m.–Tuesday, 7:00 p.m.
Presentations: Tuesday, 5:45–7:00 p.m.

The following posters will be on display from Monday evening through Tuesday evening. During the Presentations period Tuesday evening, presenters will be at their displays to discuss their work. The poster board number assigned to each presentation appears below.

A1. Innovation and Improvement in the Design Process
A2. Monitoring and Evaluating Remedy Effectiveness
A3. Remediation of Urban Waterways
A4. Successfully Combining Remedies
A5. Habitat Mitigation and Restoration
A6. Contaminant Forensics
B1. Cap Design and Modeling
B2. Cap Construction and Operation
B3. MNR and Enhanced MNR
B4. Dredging Design and Operation
B5. Dredged Material Dewatering and Disposal
B6. Sediment Bioremediation
B7. Beneficial Use of Contaminated Sediments
C1. Great Lakes Legacy Act Successes and Challenges
C2. Adaptive Management Approaches
C3. Sediment Management under State-Led Programs
D1. Contaminant Fate and Transport in Sediments
D2. Hydrodynamics and Sediment Transport
D3. Groundwater/Sediment/Surface Water Interactions
E1. Innovative Characterization and Assessment Approaches
E2. Passive Samplers

A1. Innovation and Improvement in the Design Process

1. Flexibility in Dredge Design in Urban Waterways.  
   Abby Chin (AECOM/USA)

2. In-Stream Remediation of Coal Tar-Impacted Sediments and Fractured Bedrock.  
   R.D. D’Hollander, H.M. Philip, and P.L. Roth.  
   Ray D’Hollander (Parsons Corporation/USA)

3. Dredge Completion Decision Trees.  
   M. Erickson, L. Tomlinson, and E. Dievendorf.  
   Eric Dievendorf (Arcadis/USA)

   J. Drummond, D. Wilt, J. Hulbert, and K. Sharpe.  
   Jesse Drummond (EA Engineering, Science, and Technology, Inc., PBC/USA)

   J. Hansen, A. Emery-DeVisser, J. Caryl, and C. Draper.  
   Jeshua Hansen (Wood/USA)

6. Addressing Contaminated Groundwater to Surface Water Discharge: Application of Materials and Methods for Construction of In Situ Permeable Reactive Barriers (PRBs) to Limit Migration of PFAS.  
   Richard Stewart (Ziltek Pty., Ltd./Australia)

   K. Young, E. Ashley, C. Silver, and S. Ozkan.  
   Katie Young (CDM Smith, Inc./USA)

A2. Monitoring and Evaluating Remedy Effectiveness

8. Effects of Sediment Dredging on Contaminant Levels in Fish from the Buffalo River Area of Concern.  
   Barry Baldigo (U.S. Geological Survey/USA)

   Michael Cheplowitz (U.S. Environmental Protection Agency/USA)

10. 10 Years Post-Remediation Progress Evaluated and Impacts on Restoration in the Ashtabula River Area of Concern.  
    Scott Cieniawski (U.S. Environmental Protection Agency/USA)

11. Former Zephyr Oil Refinery Fire Suppression Ditch Area Sediment Remediation Remedy Effectiveness.  
    Pat Faessler (Sevenson Environmental Services, Inc./USA)

12. Condition of Benthic Macroinvertebrate Communities and Toxicity of Sediments in the Buffalo River Area of Concern Following Remediation of Contaminated Sediments.  
    Scott George (U.S. Geological Survey/USA)

13. Long-Term Performance of In Situ Treatment of Sediment with AC at Two Pilot-Scale Study Locations.  
    Upal Ghosh (University of Maryland, Baltimore County/USA)
14. PCBs in Fish Tissues at the Hudson River PCBs Superfund Site: Update on Results of Remedial Action and Early Post-Construction Monitoring.
Marc Greenberg (U.S. Environmental Protection Agency/USA)

15. Comparison of Lower Duwamish Waterway Baseline Tissue Results with Historical Data and Remedial Conditions.
Susan McGroddy (Windward Environmental LLC/USA)

16. Designing and Implementing a Remedy Effectiveness Assessment for Thomson and Scanlon Reservoirs in the St. Louis River Area of Concern (AOC).
M. Mills, T. Luxton, J. Lazorchak, K. Fritz, J. Hoffman, L. Burkhard, G. Peterson, G. Hanson, M. Kern, D. Walters, and M. Elliot.
Marc Mills (U.S. Environmental Protection Agency/USA)

C. Moody and A. Desai.
Chris Moody (Farallon Consulting/USA)

18. Alternative Remedy Metrics: Are Your Fish Ready for a Five-Year Review?
John Schell (TEA, Inc./USA)

A3. Remediation of Urban Waterways

R. Murley, J. Travis, J. Kebs, Y. Burhan, and D. Pilat.
Ryan Murley (Tetra Tech, Inc./USA)

20. Willamette River Downtown Reach Remediation at Two Sites: Challenges and Lessons Learned for Future Actions.
Jason Palmer (AECOM/USA)

A4. Successfully Combining Remedies

K.S. Bell, T. Konechne, R. Davis, C. Lefevre, B. Kulhanek, and D. Heinez.
Kristin Searcy Bell (Ramboll/USA)

22. Integrated Lake and Upland Remediation and Redevelopment along 3 Miles of Onondaga Lake Shoreline.
E.C. Glaza, M.A. Arrigo, J.P. McAuliffe, and W. Hague.
Edward Glaza (Parsons Corporation/USA)

B. Tracy, A. Joshi, J. Herzog, D. Heriks, and E. Gerking.
Abhijit Joshi (GeoEngineers, Inc./USA)

24. Converting a Stormwater Pond into a Multi-Stage Treatment Reactor for Arsenic, Ammonia, and Benzene Including Dredging and Maintenance of Chemocline at the Groundwater/Surface Water Transition Zone.
T. Majer, M. Kelley, B. Thompson, C. Elder, C. Elmendorf, and J. Gabriell.
Mark Kelley (Haley & Aldrich, Inc./USA)

Steven Laszewski (Foth/USA)

Kimberly Markillie (U.S. Navy/USA)

A5. Habitat Mitigation and Restoration

27. Assessing Potential Contaminant Removal from Sediments within the First Wetland Mitigation Bank in New York City.
AmyMarie Accardi-Dey (Louis Berger/USA)

Erik Bakkom (Maul Foster & Alongi, Inc./USA)

29. Re-Creation of a Historical Island in the Mississippi River: Restoring Habitat in an Urban Setting.
Jamie Bankston (Barr Engineering Co./USA)

Natalia J. Cagide Elmer (Parsons Services/USA)

31. Environmental Issues Regarding Fish Habitat, Water Quality and Biological Monitoring, Gaspe: Sandy Beach, Quebec, Canada.
M. Desrosiers and L. Roberge.
Marc Desrosiers (Public Works and Government Services Canada/Canada)

A6. Contaminant Forensics

32. Advances in Oil Spill Forensic Using Biomarkers and Isotope Ratio Technique.
H. Behzadi.
Harry Behzadi (SGS North America/USA)

33. Spatial Variations in Ambient PAH Concentrations in Sediment in a Complex Urban River System.
Marcus Byker (OBG, Part of Ramboll/USA)

34. Integrated Application of RSIMCA, t-SNE, and PVA for Chemometric Mapping of PCDD/F Congeners.
M.J. Cejas and R.C. Barrick.
Mark Cejas (Pace Analytical/USA)

35. Tracking a Petrogenic Source with Pyrogenic Compounds: Forensic PAH Apportionment at a Site with Severely Weathered Crude Oil.
D. Chiavelli, P.M. Simon, P.B. Simon, and M. Rury.
Deborah Chiavelli (Anchor QEA, LLC/USA)
Emily Davis (Dalhousie University/Canada)

37. Contaminated Soils from the Liberty State Park (NJ, USA) Brownfield Site.
Diane Hagmann (Montclair State University/USA)

38. Using the Past to Understand the Present: Reconstructing Background Conditions in Historically-Impacted Lakes.
Brett Lucas (Golder Associates/Canada)

J. Rominger and C. Tuit.
Jeff Rominger (Gradient/USA)

P.M. Simon, P.B. Simon, S. Stubblefield, and E. Paulson.
Peter Simon (Ann Arbor Technical Services, Inc./USA)

B1. Cap Design and Modeling

41. Innovative Sand and Sand Cap Stabilization Methods Using Protein Polysaccharide Biopolymers (PPBs).
A. Dahmani, F. Dahan, M. Begag, and J. Mulqueen.
Amine Dahmani (SESI Consulting Engineers/USA)

42. Modelling for Erosion Protection in Capping Design.
M. Moseid, E. Eek, and F. Lovholt.
Espen Eek (Norwegian Geotechnical Institute/Norway)

43. Evaluation of Activated Carbon as a Reactive Sediment Cap Amendment for Feasibility Level Studies.
John Satterfield (Cabot Norit Activated Carbon/USA)

44. Conceptual Design for a Wetland Treatment and Habitat Improvement Cap at the Solvay Site Car Ferry Slip.
Steve Garbaciak (Foth/USA)

Changsheng Lu (Jacobs/USA)

T. Hussain, D. Reible, and J. Olsta.
Jim Olsta (HUESKER, Inc./USA)

B2. Cap Construction and Operation

Jim Olsta (HUESKER, Inc./USA)

M. Ellis, T. Boom, and A. Santini.
Mike Ellis (Barr Engineering Co./USA)

49. Onondaga Lake Long-Term Cap Monitoring Program.
Edward Glaza (Parsons Corporation/USA)

Katarzyna Krzanowska (AECOM/USA)

51. Do In Situ Caps/Covers Work? Where is the Science?
Eduardo Cervi (University of Michigan/USA)

52. Mixing, Transporting, Placing, and Field Verification of a Chemical Containment Subaqueous Cap: A Case Study.
Geoffrey Schwartz (GZA GeoEnvironmental, Inc./USA)

Kenneth Takagi (Louis Berger/USA)

B3. MNR and Enhanced MNR

54. Tracking Sediment Recovery in the Upper Hudson River: Baseline, Remediation, and Recovery.
Juliana Atmadja (Louis Berger/USA)

55. Phytoremediation and Rhizodegradation Pilot Studies at a 73-Acre Former Waste Water Pond in Northern California.
Rob Dyer (ERM/USA)

56. Evaluation of the Potential for Monitored Natural Attenuation to Address Legacy Contamination along a Tidal Estuary.
D. Winslow and S. Huber.
David Winslow (GZA GeoEnvironmental, Inc./USA)
B4. Dredging Design and Operation

Jonathan Blount (Jacobs/USA)

60. Adaptive Management Approaches to Protect Manatees and Minimize Ecological Impacts while Dredging in Sensitive Habitats: Design Build Services for Wagner Creek/Seybold Canal, Miami, Florida. 
D. Levy, B. Madabhushi, T. Donegan, M.D. Crystal, and R. Fenton. 
Babu Madabhushi (AECOM/USA)

B5. Dredged Material Dewatering and Disposal

H. Williams, J. Beaver, K. Kowalk, J. Trombino, and L. Rief. 
Jamie Beaver (EA Engineering, Science, and Technology, Inc., PBC/USA)

64. Use of Paste Technology for Sediment Transport and Disposal. 
C. Becker and J. Gravenmier. 
Carsten Becker (Arcadis/USA)

Sophia Dore (GHD/USA)

B6. Sediment Bioremediation

Eric A. Stern (Montclair State University/USA)

70. Bench-Scale Sediment Geotextile Dewatering Treatability Study and Weep Water Treatment Design. 
Huan Xia (Langan/USA)

B7. Beneficial Use of Contaminated Sediments

78. Dredge Sediment Reuse: Expanded Approach and Broad Applications. 
J.D. Chambers, S. McLaughlin, V. Magar, and M. Edde. 
Deni Chambers (Northgate Environmental Management, Inc./USA)

79. Pilot Channel and Beneficial Reuse of Sediments for a Time Critical Removal Action. 
A. Emery-DeVisser, J. Hansen, J. Caryl, and C. Draper. 
Anita Emery-DeVisser (Wood/USA)

Steve Garbaciak (Foth/USA)
L. Iacobucci, R. Miskewitz, and A. Maher.
Lauren Iacobucci (Rutgers University/USA)

82. A Novel Approach for Searching Suitable Sediment Placement Sites: Combination of GIS-Based Spatial Assessments and Cost-Benefit Analysis.
A. Itkonen, S. Oksman, and S. Vaalgamaa.
Arto Itkonen (Sitowise Ltd./Finland)

83. Environmental Assessment of Road Materials Including Marine Dredged Sediments from Dunkirk Harbor (North Sea, France).
Yannick Mamindy Pajany (IMT Lille Douai/France)

84. Beneficial Reuse of Dredged Materials in the Mid-Atlantic Region: Laboratory Considerations and a Review of Significant Projects.
J. Occhialini, J. Bourdeau, and E. Porta.
James Occhialini (Alpha Analytical, Inc./USA)

T.C. Stephens.
Thomas Stephens (TenCate Geosynthetics/USA)

86. Exploring Beneficial Use Options for Dredged Sediment from Toledo Harbor.
J.B. Wescott and J. Lepore.
James Wescott (Tetra Tech, Inc./USA)

C1. Great Lakes Legacy Act Successes and Challenges

87. Utilizing a Web-Based Geographic Information System for Project Collaboration, Great Lakes Legacy Act, Otter Creek Sediment Site.
D. Klatt and B. Jones.
Gina Bayer (Jacobs/USA)

J. Beaver, K.E. McCormick, and M. Ciarlo.
Jamie Beaver (EA Engineering, Science, and Technology, Inc., PBC/USA)

Rosanne Ellison (U.S. Environmental Protection Agency/USA)

90. Collaborative Multi-agency Characterization of Two Reservoirs Targeted for GLLA Sediment Remediation in the St. Louis River Area of Concern (AOC) in Duluth, Minnesota.
M. Kern, M. Mills, J. Lazorchak, J. Hoffmann, M. Elliot, H. Bauman, M. Bares, S. Schoff, P. Horner, and C. Custer.
Meaghan Kern (U.S. Environmental Protection Agency/USA)

91. Evaluating the Ratio of Total PAH-34 to PAH-17 in Great Lakes Legacy Act Projects.
Ken Miller (General Dynamics Information Technology, Inc./USA)

92. Achieving a Higher Level of Remediation through Public/Private Collaboration.
Robert Paulson (WEC Energy Group/USA)

93. 15 Years of Information Management: Complex Sediment Projects, Extensive Datasets, Data of Known and Documented Quality: Supporting and Defending Environmental Remediation by the Great Lakes Legacy Act.
Judith Schofield (General Dynamics Information Technology, Inc./USA)

C2. Adaptive Management Approaches

94. Ten-Year Case Study of Successful Adaptive Management of a Groundwater to Surface Water Discharge Site Regulated under CERCLA.
M. Ciarlo and J. Aichroth.
Michael Ciarlo (EA Engineering, Science, and Technology, Inc., PBC/USA)

S. Simpkins, A. Reese, and S. Miller.
Sunny Simpkins (Multnomah County Drainage District/USA)

Mike Traynor (Louis Berger/USA)

C3. Sediment Management under State-Led Programs

97. Remediation and Restoration of an Urban Hudson River Site under New York State Oversight.
J.A. Bleiler, D. Reid-Green, R.S. McCarthy, and H. Martin.
John Bleiler (AECOM/USA)

Kevin Parrett (Oregon Department of Environmental Quality/USA)

Brian Platt (OBG, Part of Ramboll/USA)

100. Lake Apopka Sediment Dredging and Material Placement Projects Planning and Permitting, St. Johns River Water Management District, Lake and Orange County, Florida.
Joe Wagner (Wood/USA)
D1. Contaminant Fate and Transport in Sediments

K. Apigian, L. McIntosh, and D. Collins.
Kyle Apigian (Woodard & Curran/USA)

102. Modeling the Relative Importance of Chemical Loadings from Combined Sewer Overflows to Sediment Contaminant Inventories in Urban Rivers.
Joel Baker (University of Washington/USA)

103. Modeling to Estimate Constituent Concentrations in Surface Water and Sediment in a River from a Barge Release of Fracking Fluid.
A.M. Bernhardt, H.N. Rodriguez, and A.C. Bejarano.
Aaron Bernhardt (Tetra Tech, Inc./USA)

104. Fate and Transport of PCBs and OCPs in the Anacostia River.
Mandar Bokare (University of Maryland, Baltimore County/USA)

105. Fate of Polycyclic Aromatic Hydrocarbons Bound to Asphalt, Charcoal, Coal-Tar Pitch, and Soot in Urban Lake Sediments.
Victoria Boyd (Tetra Tech, Inc./USA)

106. Microplastic in Sediments from the Arctic to the Tropics.
Espen Eek (Norwegian Geotechnical Institute/Norway)

107. PCB in Marine Paint Chips: A Leachability Study.
Allen Uhler (NewFields/USA)

D2. Hydrodynamics and Sediment Transport

108. Sediment Transport Models on Trial: A Lawyer’s Perspective on the Use of Models in the Kalamazoo River CERCLA Litigation.
J.C. Baird.
Christopher Baird (Perkins Coie LLP/USA)

John Barkach (Great Lakes Environmental Center, Inc./USA)

C. Chen and M.H. Garcia.
Marcelo H. Garcia (Ven Te Chow Hydro-systems Lab, UIUC/USA)

111. Comparison of Lower Duwamish Waterway Baseline Sediment Results with Sediment Transport Model Predictions and Historical Data.
Kathy Godtfredsen (Windward Environmental LLC/USA)

M. Graham, P. Chittibabu, and C. He.
Matt Graham (Environment Canada/Canada)

113. Refining Estimates of Sediment Delivery and Sedimentation to Support Waterway Design.
Jeremy Grush (LimnoTech/USA)

M.L. Guarinello and D.A. Carey.
Marisa Guarinello (INSPIRE Environmental/USA)

115. Suspended Sediment Transport Dynamics in the Lower Passaic River.
David Jay (Portland State University/USA)

Frank Selker (SelkerMetrics, LLC/USA)

P. Studds.
Phil Studds (Ramboll UK Ltd./United Kingdom)

118. Extreme Events and Bed Stress along the River-Estuary Continuum.
S.A. Talke and D.A. Jay.
Stefan Talke (Portland State University/USA)

D3. Groundwater/Sediment/Surface Water Interactions

119. Quantifying Groundwater Contaminant Discharge to Surface Water and the Effectiveness of Applied Hydraulic Containment.
E.C. Ashley, M. Annable, and M. Martin.
Ernest Ashley (CDM Smith, Inc./USA)

120. A Balanced Approach to Pre-design Groundwater Data Collection for a Sediment Capping Remedy at a Great Lakes Estuary Site.
J. Beaver, C. Kiehl-Simpson, B. Meyer, E. Dott, and I. Mossberger.
Jamie Beaver (EA Engineering, Science, and Technology, Inc., PBC/USA)

121. Assessing the Importance of Groundwater, Surface Water and Sediment Interactions at a Superfund Tidal Waterbody.
S. Gbondo-Tugbawa, C. Prabhu, S. McDonald, Y. Zou, R. Weissbard, and D. Marulanda.
Solomon Gbondo-Tugbawa (Louis Berger/USA)

122. Coal Ash Constituents in Groundwater and Regulation under the Clean Water Act.
M. Huddleston.
Matt Huddleston (SynTerra Corporation/USA)


126. Remediation of NORM-Impacted Sediments and a Case Study at an Oil and Gas Site. R.P. Faber, R. Kilkenny, and J. Kass. Rhiannon Faber (Arcadis/USA)


129. Canine Source Tracking of Illicit Discharges in an Urban Sewershed. A. Muller, T. Travis, Y. Burhan, and D. Pilat. Antoine Muller (Tetra Tech/USA)


136. Use of Polyethylene Devices (PEDs) at Contaminated Sediment Sites to Support Remedial Planning and Source Tracking. E.M. Kallenberg and L.F. Lefkovitz. Eliza Kallenberg (Batelle/USA)

137. Use of Ex Situ Passive Samplers to Measure Freely Dissolved PAHs in Sediments at a Manufactured Gas Plant Site. S. Kane Driscoll, A. Schierz, S. Ahn, J. McGrath, J. Romer, and J. Clock. Susan Kane Driscoll (Exponent/USA)

138. A Passive Multisampling Method to Measure Dioxins/Furans and Other Contaminant Bioavailability in Aquatic Sediments. S. Katz, R. Lohmann, and M. Khairy. Rainer Lohmann (University of Rhode Island/USA)

139. Passive Sampling-Derived Partitioning, Fluxes and Food Web Dynamics of PBDEs in an Urban River. M. Khairy and R. Lohmann. Rainer Lohmann (University of Rhode Island/USA)


143. Evaluating Polymeric Sampling for Predicting the Bioaccumulation of Hydrophobic Organic Contaminants by Higher Trophic Level Organisms. S.N. Schmidt and R.M. Burgess. Stine Nørgaard Schmidt (U.S. Environmental Protection Agency/USA)


Wendell Wen (AECOM/USA)

Danny Reible (Texas Tech University/USA)

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**SESSION BREAK**
### Wednesday Platform Sessions—10:30am–12:35pm

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<td>11:05</td>
<td><strong>Panelists</strong></td>
<td><strong>Performance of Anaerobic Sediment-Capping Systems: Role of Material Type in Designing Effective Bioactive Caps.</strong> G. Pagnozzi, K. Millerick, D. Reible, S. Carroll, and J. Clock. Giovanna Pagnozzi (Texas Tech University/USA)</td>
<td><strong>Restoring the Elizabeth River from the Bottom Up: A Unique Approach to Sediment Remediation by Restoring along a Habitat Gradient.</strong> J.F. Rieger, D.J. Koubisky, and M.A. Unger. Josef Rieger (The Elizabeth River Project/USA)</td>
<td><strong>EA: Chemical/Toxicological/Biological Measurement and Monitoring</strong></td>
<td><strong>LUNCH &amp; LEARN</strong></td>
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<td>11:45</td>
<td><strong>Moderator</strong></td>
<td><strong>Clayton Patmont (Anchor QEA, LLC/USA)</strong></td>
<td><strong>Effective Integration of Sediment Cleanup with Habitat Restoration in Shelton Harbor, Washington.</strong> C. Patmont, D. McEntee, and S. Seltzner. Clayton Patmont (Anchor QEA, LLC/USA)</td>
<td><strong>Sampling and Testing of Dredged Material for Disposal at the Historic Area Remediation Site for Commercial Pipeline Construction.</strong> M. Martin, L. Parker, C. Martinez, and D. Demkee. Maxwell Martin (Ecology and Environment, Inc./USA)</td>
<td><strong>LUNCH &amp; LEARN</strong></td>
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<td>12:10</td>
<td><strong>Shane McDonald (HDR, Inc./USA)</strong></td>
<td><strong>SESSION BREAK</strong></td>
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<td><strong>SESSION BREAK</strong></td>
<td><strong>Scientific Methods for Determining Anthropogenic Background</strong> (12:35–1:15pm)</td>
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**Wednesday Platform Sessions—1:00pm–3:05pm**

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<td>1:00</td>
<td>Distinguishing Pyrogenic PAH Sources in Sediment from MGP and Other Tar Sources Using Exploratory Data Analysis. D.M. Mauro. David Mauro (META Environmental, Inc./USA)</td>
<td>SESSION BREAK</td>
<td>SESSION BREAK</td>
<td>Facilitating Remedial Design and Stakeholder Engagement at a Mercury-Contaminated Site with Innovative Geospatial Data Visualizations. D. Baldwin, J. Collins, C. Dixon, and N. Grosso. Joshua Collins (AECOM/USA)</td>
<td>LUNCH &amp; LEARN (Cont.)</td>
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<td>3:30</td>
<td>Evaluating the Challenges of Using Disparate Data Sets in Forensic Methods. N.D. Rose, T. Negley, and C. Monti. Nicholas Rose (TIG Environmental/USA)</td>
<td>Cleveland Harbor’s Advancements in Sustainable Dredge Material Management. N.A. LaPointe, Nicholas LaPointe (Cleveland-Cuyahoga County Port Authority/USA)</td>
<td>NAPL Mobility beneath the Newton Creek Study Area: Multi-Stage Testing Process and Results for Creek Mile 0-2. M. Gefell, T. Gross, and S. Messur. Michael Gefell (Anchor QEA, LLC/USA)</td>
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**A SESSIONS**

**EVALUATING THE CHALLENGES OF USING DISPARATE DATA SETS IN FORENSIC METHODS.**

N.D. Rose, T. Negley, and C. Monti.

Nicholas Rose (TIG Environmental/USA)

**THE IMPORTANCE OF VALIDATING SOURCE IDENTIFICATION RESULTS AND EVALUATING ALTERNATIVE HYPOTHESISSES IN A FORENSIC EVALUATION.**

M.J. Bock and L. Brown.

Michael Bock (Ramboll/USA)

**SOURCE ALLOCATION OF PCBS DERIVED FROM QUANTILE ANALYSIS OF CUMULATIVE RESPONSE CURVES COMBINED WITH MONTE CARLO ANALYSIS.**


Eric Butler (Gradient/USA)

**THE APPLICATION OF A MULTIVARIATE STATISTICAL ANALYSIS TO IDENTIFY POTENTIAL ONGOING CONTAMINANT SOURCES TO AN URBAN RIVER.**


John Kern (Kern Statistical Services, Inc./USA)

**INTEGRATED CHEMOMETRIC ASSESSMENT OF PCDD/F CONTAMINATION AND SOURCES IN THE PASSAIC RIVER, NEW JERSEY.**

R.C. Barrick and M.J. Cajas.

Robert Barrick (Infinity Solutions Group/USA)

**CLEVELAND HARBOR’S ADVANCEMENTS IN SUSTAINABLE DREDGE MATERIAL MANAGEMENT.**

N.A. LaPointe.

Nicholas LaPointe (Cleveland-Cuyahoga County Port Authority/USA)

**DIY SUSTAINABILITY ASSESSMENT: SOCIAL, ENVIRONMENTAL, AND ECONOMIC IMPACT AND BENEFIT SUSTAINABILITY ANALYSIS.**


Sabine Apitz (SEA Environmental Decisions, Ltd./United Kingdom)

**ASSESSING SUSTAINABILITY AND ECOSYSTEM SUPPORT IN DREDGING AND NAVIGATION PROJECTS.**

M.E. Bates, C. Fox-Lent, I. Linkov, and T.S. Bridges.

Matthew E. Bates (US Army Corps of Engineers/USA)

**INTEGRATION OF SUSTAINABILITY AND RESILIENCY INTO A REMEDY OPTIMIZATION REVIEW FRAMEWORK.**


Melissa Harclerode (CDM Smith, Inc./USA)

**DREDGING FOR SUSTAINABLE INFRASTRUCTURE: A NEW HOLISTIC APPROACH.**

R. Kolman and P. Laboyne.

Stany Pensdert (DEME Environmental Contractors/Belgium)

**NAPL MOBILITY BELOW THE NEWTOWN CREEK STUDY AREA: MULTI-STAGE TESTING PROCESS AND RESULTS FOR CREEK MILE 0-2.**


Michael Gefell (Anchor QEA, LLC/USA)

**REMEDIATION OF A FORMER OIL WELL, LEAKING INTO A FRESHWATER LAKE.**


Scott Pawlukiewicz (TRC Companies, Inc./USA)

**PANEL DISCUSSION**

Challenges in Evaluating Fish-Sediment Exposure at Contaminated Sediment Sites

**PANEL DISCUSSION**

**EVALUATING THE CHALLENGES OF USING DISPARATE DATA SETS IN FORENSIC METHODS.**

N.D. Rose, T. Negley, and C. Monti.

Sabine Apitz (SEA Environmental Decisions, Ltd./United Kingdom)

Michael Gefell (Anchor QEA, LLC/USA)

**THE IMPORTANCE OF VALIDATING SOURCE IDENTIFICATION RESULTS AND EVALUATING ALTERNATIVE HYPOTHESISSES IN A FORENSIC EVALUATION.**

M.J. Bock and L. Brown.

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**INTEGRATED CHEMOMETRIC ASSESSMENT OF PCDD/F CONTAMINATION AND SOURCES IN THE PASSAIC RIVER, NEW JERSEY.**

R.C. Barrick and M.J. Cajas.

Robert Barrick (Infinity Solutions Group/USA)
Group 2 Posters

Display: Wednesday, 7:00 a.m.–Thursday, 1:00 p.m.
Presentations: Wednesday, 5:45 7:00 p.m.

The following posters will be on display from Wednesday morning through Thursday afternoon. During the Presentations period Wednesday evening, presenters will be at their displays to discuss their work. The poster board number assigned to each presentation appears below.

A7. Characterization and Remediation of PFAS-Contaminated Sediments/Media

1. In Situ Stabilization of PFAS-Contaminated Soils at Two Superfund Sites.
   Kavitha Dasu (Battelle/USA)

2. Use of Isotope Dilution Methods and the Total Oxidizable Precursor Assay (TOP) to Evaluate Effectiveness of PFAS Remediation.
   Richard Grace (SGS AXYS/Canada)

3. In Situ Remedy for PFAS Contaminated Source Zone, Groundwater and Sediment.
   Chuck Hornaday (Vadose Remediation Technologies/USA)

4. Occurrence, Distribution, and Bioaccumulation of Per- and Polyfluoroalkyl Substances (PFAS) in Minnesotan Freshwater Environments.
   J. Lemay, N. Slagowski, L. Kerper, and M. Sharma.
   Julie Lemay (Gradient/USA)

5. Detailed Site Investigation for Per- and Polyfluoroalkyl Substances (PFAS) Using Advanced Analytical Tools.
   Ian Ross (Arcadis/United Kingdom)

   I. Ross, E. Houtz, J. McDonough, and P. Storch.
   Ian Ross (Arcadis/United Kingdom)

B8. Evaluating Sustainability

   C. Asher and P. Adolphson.
   Pete Adolphson (Washington State Department of Ecology/USA)

   Rahim Ali (US Army Engineer Research and Development Center/USA)

   F.T. Barranco and M. Ciarlo.
   Frank Barranco (EA Engineering, Science, and Technology, Inc., PBC/USA)

    J.H. Hull.
    John Hull (Hull & Associates/USA)

    Eric A. Stern (Montclair State University/USA)

B9. Field-Scale Application of In Situ Treatment Technologies

    John Collins (AquaBlok, Ltd./USA)
Rosalina Gonzalez Forero (La Salle University/USA)

Kimberly Markillie (U.S. Navy/USA)

C. Owens, A. Reese, and J. Sutter.
Carmen Owens (ApeX Companies, LLC/USA)

16. Evaluation of Porewater Reductions Due to Carbon Placement via Sedimite™ and AquaGate™ at a Contaminated Sediment Site.
Magdalena Rakowska (Texas Tech University/USA)

B10. Understanding Chemistry of In Situ Treatment Amendments

17. In Situ Chemical Treatment of Chlorobenzene and Chlorofluorocarbon DNAPL in Aquifer Materials under a Major River.
D. Bryant, B.A. Smith, and B. Desjardins.
Dan Bryant (Woodard & Curran/USA)

Cynthia Gilmour (Smithsonian Environmental Research Center/USA)

Joseph Jersak (SAO Environmental Consulting AB/Sweden)

Chenju Liang (National Chung Hsing University/Taiwan)

21. Biological Effects of Activated Carbon are Dependent on Particle Size and the Test Organism.
R. Rämö, J. Honkanen, and J. Gunnarsson.
Robert Rämö (Stockholm University/Sweden)

B11. In Situ Stabilization

Kristine Carbonneau (AECOM/USA)

23. In Situ Stabilization (ISS) Treatability Test to Remediate NAPL-Impacted Sediments at a Superfund Site.
Kim Groff (Ramboll/USA)

24. Which Technology Could Be Suitably Applied for the Remediation of Deep-Sea Mining Tailings?
Kyungraeun Kim (Korea Institute of Ocean Science and Technology/South Korea)

25. An Overview of In Situ Stabilization/Solidification Design in Sediment Sites.
D. Meric and C. Robb.
Dogus Meric (Geosyntec Consultants/USA)

26. Laboratory Treatability Study for In Situ Stabilization/Solidification (ISS) of Hydrocarbon-Contaminated Sediments in Kendall Bay, Sydney, New South Wales (NSW), Australia.
Matthew Clutterham (Ventia Pty Ltd/Australia)

27. In Situ Solidification/Stabilization of Sediments: State of the Practice.
D. Payne and T. Olean.
Darin Payne (Geo-Solutions, Inc./USA)

28. In Situ Solidification as a Multi-Purpose Component of Shoreline and Sediment Remediation.
Chris Pray (GEI Consultants/USA)

J. Williams, K. McCarty, and T. Bell.
Jon Williams (GEI Consultants/USA)

C4. Site Management Decision Strategies

Bjorn Bjorkman (GEI Consultants/USA)

31. Interplay of Congeners and Total PCBs to Inform Remedial Decisions.
R. Fox, J. Ramey, D. Kay, and J. Kern.
Rick Fox (OGB, Part of Ramboll/USA)

32. In-Channel, Bank, and Floodplain Remediation: An Update on Progress on the Tittabawassee River.
Scott Hayter (Ramboll/USA)

33. A Multi-Agency Concept of the Marx-Whitaker Slough.
Heidi Nelson (Oregon Department of Environmental Quality/USA)

34. Moving towards More Efficient Site Management Decision Strategies.
L.B. Saban, M. Johns, J. Parker, and B. Church.
Lisa Bauer Saban (Windward Environmental LLC/USA)

35. Unifying Regulatory Programs: CWA and CERCLA Program Realities at Contaminated Sediment Sites.
Amanda Shellenberger (Anchor QEA, LLC/USA)
C5. Restoration and Revitalization Strategies

Natalia J. Cagide Elmer (Parsons Services/USA)

37. Integration of Remediation, Restoration and Revitalization Objectives: A Case Study on the Mercury-Impacted South River, Virginia.
C. Dixon, R. Davis, N. Grosso, M. Liberati, and D. Jones. Cameron Dixon (AECOM/USA)

38. Filling a Freshwater Lake: Sediment Remediation Considering Net Environmental Benefit for Multiple Stakeholder Goals.
M. King, C. Wilson, J. Massingale, and D. Robbins. Jessi Massingale (Floyd|Snider/USA)

G. Mikeska and E. Garnaas-Holmes. Gretchen Mikeska (DC Department of Energy and Environment/USA)

40. Partnership with Stakeholders Incorporates Significant Improvements to an Urban Waterway as Part of MGP Remediation.
M. Thorpe, C. Dixon, and J. Ruspantini. Mathew Thorpe (AECOM/USA)

41. Large-Scale Muck Removal under the Save Our Lagoon Project Plan, Brevard County, Florida.
J. Wagner, M. Culver, and L. Lumbard. Joe Wagner (Wood/USA)

42. Restoration of the East Branch Grand Calumet River.
J.B. Wescott.
James Wescott (Tetra Tech, Inc./USA)

C6. NAPL and MGP Sites

43. Quantifying NAPL Mobility Using NAPL-Specific Hydraulic Conductivity (KNAPL) Measurements in Sediment at the Quanta Superfund Site.
Michael Gefell (Anchor QEA, LLC/USA)

44. Shoreline Remediation of Petroleum Hydrocarbons Using an Oleophilic Biobarrier for Sheen Control on the Portland Harbor Superfund Site.
Jeff Gentry (Jacobs/USA)

45. Sediment Delineation and Remediation within the New York State Barge Canal at a Former Manufactured Gas Plant Site.
Tamara Raby (AECOM/USA)

46. Surfactant Flushing Column Study to Optimize Field Performance.
Jeff Roberts (SiREM/Canada)

47. Ashland/NSP Lakefront MGP Site Upland and Sediment Remedial Action.
D. Roznowski, S. Garbaciak, B. Symons, M. Raimonde, T. Lee, and A. Buell.
Denis Roznowski (Foth/USA)

C7. International Approaches for Site Identification and Cleanup

R.C. Bost and L. Magyar.
Richard Bost (I2M Associates, LLC/USA)

49. SURICATES: Demonstration through Pilots of Sediment Reuse for Coastal Defense or Climate Change Mitigation.
Bruno Lemiere (BRGM/France)

50. Risk Assessment, Remediation, and Sustainable Rehabilitation in Jeddah City, Saudi Arabia.
Victor Magar (Ramboll/USA)

Tony Walker (Dalhousie University/Canada)

C8. International Experiences in Contaminated Sediment Remediation

52. Piacaguera Channel Cleanup Dredging Project.
Carlos Eduardo Consulim (Consulting, Planning and Environmental Studies/Brazil)

53. Integrating Remedial Objectives into a Capital Improvement Project (Department of National Defence A and B Jetties): Lessons Learned.
S. Davis, B. MacInnis, M. Bodman, and D. Ormerod.
Shauna Davis (Defence Construction Canada/Canada)

C9. Remedy Cost and Cost Allocation Considerations

54. Fairness in Sediment Remediation: Who Bears the Costs? Who Reaps the Benefits?
S.E. Apitz.
Sabine Apitz (SEA Environmental Decisions, Ltd./United Kingdom)

R. Carscadden, B. Starr, L.R. Dunn, and R.K. Roberts.
Reid Carscadden (AECOM/USA)

56. Local Funding Alternatives for Dredging in Great Lakes Port Communities.
M.D. Florian.
Marc Florian (Environmental Consulting & Technology, Inc./USA)
J.A. Glenn, P. Spadaro, and A. Hackett.
Audrey Hackett (TIG Environmental/USA)

D4. Contaminant Bioavailability and Uptake

58. Using Benthic Invertebrate Life History Data to Improve Bioaccumulation Predictions for a Contaminated Northeast Estuary.
Brian Church (Windward Environmental LLC/USA)

59. PCB Concentration Distribution in Collocated Bulk Sediment, Bottomfish Tissue, and Porewater at the Pearl Harbor Sediment Site.
Steve Sahetapy-Engel (AECOM/USA)

60. Effects of Activated Carbon Dosage for Aquatic Bioaccumulation Control.
P.R. Schroeder and B.W. McComas.
Paul Schroeder (U.S. Army Corps of Engineers/USA)

61. Sediment Bioavailability Evaluation: A Comparison between Collocated Fish Tissue and Sediment Sample Concentrations of PCBs in Apra Harbor, Naval Base Guam.
Jocelyn Tamashiro (U.S. Navy/USA)

George Weber (ERM/USA)

63. Testing the Applicability of BSAsFs: A Case Study from the Berry’s Creek Study Area Superfund Site.
Kenia Whitehead (Integral Consulting, Inc./USA)

D5. Ebulition

64. Ebulition-Related Considerations during a Sediment Site Feasibility Study.
K. Jaglal, H. Weitzner, and E. Hritsuk.
Kendrick Jaglal (OBG, Part of Ramboll/USA)

M. Khazraee Zamanpour and K.J. Rockne.
Morvarid Khazraee Zamanpour (University of Illinois at Chicago/USA)

66. Laboratory Investigation of Nonaqueous Phase Liquid (NAPL) Mobilization by Gas Bubble Flow.
J. Wu and K.G. Mumford.
Kevin Mumford (Queen’s University/Canada)

P.Z. Viana, N. Ginsky, and A. Pennington.
Priscilla Viana (Arcadis/USA)

D6. Geospatial Data Evaluation and Data Visualization

E. Thomas, J. Eykholt, M. Buechlein, H. Fogell, and C. Draper.
Heidi Fogell (Wood/USA)

69. 3-D Visualization, Analysis, and Presentation of Active Fluvial Depositional Environments.
R. McKinney and L. Greene.
Robbi McKinney (AECOM/USA)

70. Improving the Accessibility of Geospatial Data Evaluation and Visualization for Project Teams.
T.L. Negley, N.D. Rose, and J. Combes.
Tim Negley (TIG Environmental/USA)

S.T. Sabo and D.A. Carey.
Steven Sabo (INSPIRE Environmental/USA)

D7. Ecological and Human-Health Risk Assessment

72. Oil Concentrations Explain the Observed Toxicity in the Newtown Creek Superfund Site, New York City.
J. Cura, E. Leduc, C. Prabu, R. Weissbard, and J. Kern.
Jerome Cura (Woods Hole Group/USA)

73. Ecological Risk Assessment of Metals and Polychlorinated Biphenyl Impacts in a Freshwater Wetland Complex.
K. Czajkowski and S. Weatherwax.
KariAnne Czajkowski (Langan/USA)

74. Evaluation of Site-Specific Uncertainty in Accounting for Unmeasured Polycyclic Aromatic Hydrocarbons in Toxic Unit Calculations for the Protection of Benthic Organisms.
G.R. Long, G.W. Murphy, R. Sleeper, and S.P. Parker.
Gary Long (EHS Support/USA)

75. Adjusting Arsenic Aquatic Life Criteria: Toxicity Updates, Arsenic Species, and Species Sensitivities.
L. Martello, P. Fuchsmann, L. Brown, and M. Sorensen.
Linda Martello (Ramboll/USA)

76. Screening-Level Risk Assessment for Piacaguera Channel Sediments.
Mariana Masutti (Consulting, Planning and Environmental Studies/Brazil)

77. Investigation of Lead Impacts in an Intermittent Stream from an Outdoor Firing Range.
C. Moody and J. Moore.
Chris Moody (Farallon Consulting/USA)

78. Using Forensics and Sediment Toxicity to Define the Contamination Footprint of the Peter Stuyvesant Shipwreck (Boston Harbor).
T. Ng, S. Clough, M. Kelley, and K. Johnson.
Titania Ng (Haley & Aldrich, Inc./USA)

79. Assessing and Managing Sediment Sites with Fish Consumption Risk.
P. Rodgers, P. White, and A. Hawkins.
Pamela Rodgers (Battelle/USA)
D. Smith and S. Jones.
Daniel Smith (GHD/USA)

81. Application of the Sediment Quality Triad in a System Impacted with Flocculant. 
T.L. Sorell.
Tamara Sorell (Brown and Caldwell/USA)

82. Risk Analysis and Sediment Delineation Upstream of a Dam Slated for Probable Removal. 
Jennifer Bell Taylor (Ramboll/USA)

M.P. Rondinelli and D. Tazelaar.
Dusty Tazelaar (OBG, Part of Ramboll/USA)

84. Quantification of MGP-Related, Ecological Impacts within a High-Quality Wetland Complex. 
S. Weatherwax and K. Czajkowski. 
Sean Weatherwax (Langan/USA)

D8. Establishing Remediation Goals

85. Development of Remedial Goals from Quantitative to Qualitative: A Case Study. 
E. Anzinger, S. Damon, and S. Ueland. 
Elizabeth Anzinger (Langan/USA)

L.P. Burkhard, D.R. Mount, and R.M. Burgess. 
Lawrence Burkhard (U.S. Environmental Protection Agency/USA)

87. Balancing Background and Site-Related Contamination in Determining Site Boundary and Remedial Goals in an Urban, Industrial Watershed. 
Matthew Grove (Wood/USA)

88. Background Concentrations of Polychlorinated Biphenyls, Polychlorinated Dibenzo-p-dioxins, and Polychlorinated Dibenzofurans in Soil and Sediments at Superfund Sites. 
Matt Lambert (U.S. Environmental Protection Agency/USA)

89. Establishing Natural Recovery-Based Remedial Action Levels (RALs) and Combined Remedies to Achieve Remedial Goals for Apra Harbor Sediment, Guam. 
Brian Nagy (AECOM/USA)

90. Establishing Representative Site-Specific Background Concentrations: Spatial, Temporal and Regulatory Considerations. 
Sagar Thakali (AECOM/USA)

D9. Long-Term Monitoring Strategies

K. Gobbi, B. Snyder, and M. Desrochers. 
Kimbrtie Gobbi (Wood/USA)

93. Factor Analysis and Variability of PCBs in Ambient Air from Contaminated Sediment, New Bedford Harbor Superfund Site. 
M.W. Morris and D. Lederer. 
Michael Morris (Jacobs/USA)

94. Statistical Analyses of Historical Data to Enhance Monitoring of Polychlorinated Biphenyl Concentrations in Sediments of the Hudson River Operable Unit (OU) 2 Site. 
M. Powell and C. Kielh-Simpson. 
Michael Powell (EA Engineering, Science, and Technology, Inc., PBC/USA)

95. Retrospective: >20 Years of Data: Is It Telling Us What We Need to Know? 
Rod Struck (City of Portland/USA)

96. What Is It Going to Take to Get My Project Closed? 
W. Thomas, B. Bonkoski, M. Gravelding, and J. Dunn. 
Wesley Thomas (Arcadis/USA)

97. Planning and Execution of a Large-Scale Sediment Sampling Program to Support Long-Term Natural Attenuation Monitoring on the Hudson River. 
H. Williams, C. Kielh-Simpson, J. Morris, and K. Farrar. 
Hilary Williams (EA Engineering, Science, and Technology, Inc., PBC/USA)

E3. Field Sampling Methods and Techniques

98. Green Lidar to Map Complex, Shallow Water Bathymetry in Meandering River System. 
E. Thomas, A. Brenner, N. Sheppard, and J. Abid. 
Joseph Abid (Wood/USA)

99. Do’s and Don’ts of PFAS Sampling and More. 
H. Behzadi. 
Harry Behzadi (SGS North America/USA)

100. A Common-Sense Approach to Determine Appropriate Field Gear When Sampling for Per- and Polyfluoroalkyl Substances. 
Marie Bevier (Wood/USA)

M. Ciarlo, J. Beaver, P. Derrick, and F. Barranco. 
Michael Ciarlo (EA Engineering, Science, and Technology, Inc., PBC/USA)

Michael Ciarlo (EA Engineering, Science, and Technology, Inc., PBC/USA)


109. Evaluating PCB Congener Water Sample Contamination from Sampling Equipment. D. Williston, C. Greyell, and J. Stern. Debra Williston (King County Department of Natural Resources/USA)

E4. Chemical/Toxicological/Biological Measurements and Monitoring


112. LEAF Testing of Cement-Amended Sediments from New Jersey/New York. M. Clark and J.A. Bourdeau. Jacob Bourdeau (Key Environmental, Inc./USA)


118. Performance of PCB Immunoassay Screening Analyses as a Proxy for Total PCB Congener Concentrations in Sediment. P.J. White, M. Morris, D. Dahlen, and D. Lewis. Patricia White (Jacobs/USA)

119. Comparison of Conventional Extraction Procedures of 17α-Ethynylestradiol (EE2) from Various Substrates. R.M. Zayyat, M.T. Suidan, and M. Bourghol. Ramez Zayyat (American University of Beirut/Lebanon)

E5. Source ID, Loading Assessment, and Control

120. Source Identification and Influence on Cleanup Costs on an Urban Waterway. C. Moody, P. Jewett, and K. Magruder. Chris Moody (Farallon Consulting/USA)


123. Source Control Challenges in Municipal MS4 Basins. R. Struck, K. Huniu, and L. Smith. Rod Struck (City of Portland/USA)

124. Columbia Corridor Stormwater Program: A New Look at Municipal Source Control. N. Hendrickson, K. Rubin, and R. Struck. Rod Struck (City of Portland/USA)

E6. Innovative Characterization and Assessment Tools

126. Continuous Seismic Profiling and Water-Borne Ground-Penetrating Radar Methods to Support Carbon Amendment Design at the Thomson and Scanlon Reservoirs near Duluth, Minnesota.
M. Bares, P.M. Jones, and E.A. White.
Michael Bares (Minnesota Pollution Control Agency/USA)

Jeffrey Johnson (NewFields/USA)

J.A. Johnson, I. Mamonkina, and D. Blue.
Jeffrey Johnson (NewFields/USA)

129. Application of Advanced Molecular Biological Tools for Characterization of Microbial Diversity in Aquatic Sediments.
Kate Kucharzyk (Battelle/USA)

130. Application of Monoclonal Antibody-Based Biosensor Analysis for Rapid Assessment of PAH Distribution, Fate and Toxicity at Contaminated Sediment Sites.
Michael Unger (College of William and Mary/USA)

E7. Communication and Facilitation with Stakeholders

U. Ghosh and R.C. Borden.
Upal Ghosh (University of Maryland, Baltimore County/USA)

132. The Conceptual Site Model to Manage Furan and Dioxin Contamination in the Tittabawassee River.
T. Konechne, M. Logan, K.S. Bell, K. Konechne, and V.S. Magar.
Todd Konechne (The Dow Chemical Company/USA)

133. Regulatory Management and Remedial Strategies for Comprehensive Watershed Remediation at the Savannah River Site (U).
James Kupar (Savannah River Nuclear Solutions/USA)

134. Risk Communication: Challenges, Opportunities When Emerging Contaminants Are at Issue.
J.K. Phillips.
Karen Saucer (TRC Companies, Inc./USA)

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| 1:00  | Bioavailability, Uptake, Bioaccumulation, and Biomagnification of Per- and Polyfluoroalkyl Substances in Sediments.  
K. Kinsella,  
Karen Kinsella (GZA GeoEnvironmental, Inc./USA) | Field Pilot Studies for In Situ Stabilization/Solidification (ISS) of Hydrocarbon-Contaminated Sediments in Kendall Bay, Sydney, New South Wales (NSW), Australia.  
Matthew Clutterham, N. Sparkes, A. Nolan,  
K. Herman, C. Tuit, M. Sharma, and J. Kneeland.  
Kurt Herman (Gradient/USA) | Measuring Success in Cleanup: Portland Harbor Baseline Sampling Design.  
Sean Sheldrake (U.S. Environmental Protection Agency/USA) | Stakeholder Roadmap: A Guide to Effective Active Engagement Using Social Methodologies.  
R. Ridsdale and M. Harclerode, Melissa Harclerode (CDM Smith, Inc./USA) |
| 1:25  | Priority of Exposure Pathways at Sediment Sites Impacted by Per- and Polyfluoroalkyl Substances.  
J.A. Arblaster, J.M. Conder, and E.S. Larson.  
Jennifer Arblaster (Geosyntec Consultants/USA) | Evaluating Impacts of In Situ Solidification/Stabilization of Sediments.  
D. Tazelaar, T. Olean, and B. Paulson.  
Dusty Tazelaar (OBG, Part of Ramboll/USA) | A Review of Allocation Methods and Rationale for Method Selection.  
K. Lasseter, D. Farley, and E. Pyne.  
Katherine Lasseter (TIG Environmental/USA) | Thea Foss and Wheeler-Osgood Waterways Superfund Site: Approach to Long-Term Monitoring with Urban Ubiquitous Contaminants.  
J. Massingale, E. Cosnowski, and M. Henley.  
Jesi Massingale (Floyd/Snider/USA) | Connecting with Refugee and Immigrant Communities.  
R. Struck and J. Devlin.  
Rod Struck (City of Portland/USA) |
| 1:50  | Potential Human Exposure to Perfluoroalkyl Substances (PFAS) via Consumption of Fish from U.S. and International Sources.  
B. Ruffle, U. Vedagiri, D. Bogdan, and M. Maier.  
Betsy Ruffle (AECOM/USA) | Stabilization of Contaminated Sediment for Re-use at the Port of Helsinki, and Other Finland Sites.  
Andrew Nicholson (Integral Consulting, Inc./USA) | Evaluating Post-Remedy Monitoring Data at Mercury-Impacted Sites: Separating the Signal from the Noise.  
Joshua Collins (AECOM/USA) | Jervis Bay Range Facility: PFAS Investigation Stakeholder Engagement Is More Than Ticking the Boxes.  
A.W. Kohlrusch.  
Andrew Kohlrusch (GHD Australia/Australia) |
| 2:15  | Stabilization of Marine Sediments at a New Jersey MGP Site.  
J. Williams, G. Onorato, and B. Raus.  
Jon Williams (GEI Consultants/USA) | Solidification of Marine Sediments at a New Jersey MGP Site.  
J. Williams, G. Onorato, and B. Raus.  
Jon Williams (GEI Consultants/USA) | How Can the Cost Allocation Process Adapt to an Adaptive Remedy?  
E. Guyer, B. Petri, A. King, S. Gheen, and K. Peterson.  
Benjamin Petri (Integral Consulting, Inc./USA) | Distinguishing a True Trend: Co-Variation in Lipid Content and Fish Tissue PCB Concentration: A Case Study in the Hudson River.  
John Kern (Kern Statistical Services, Inc./USA) | Innovative Sediment Project Driven by Diverse Stakeholder Requirements.  
F.J. Kirschheiter and S.A. McNulty.  
Barrett Culp (TRC Companies, Inc./USA) |
| 2:40–3:00 p.m.—Refreshments (Chemin Royale) | 2:40–3:00 p.m.—Refreshments (Chemin Royale) | 2:40–3:00 p.m.—Refreshments (Chemin Royale) | 2:40–3:00 p.m.—Refreshments (Chemin Royale) | 2:40–3:00 p.m.—Refreshments (Chemin Royale) | 2:40–3:00 p.m.—Refreshments (Chemin Royale) |
| 3:00  | 3:00–4:00 p.m.—CLOSING ROUNDTABLE (A Sessions Room) | 3:00–4:00 p.m.—CLOSING ROUNDTABLE (A Sessions Room) | 3:00–4:00 p.m.—CLOSING ROUNDTABLE (A Sessions Room) | 3:00–4:00 p.m.—CLOSING ROUNDTABLE (A Sessions Room) | 3:00–4:00 p.m.—CLOSING ROUNDTABLE (A Sessions Room) |
Conference Sponsors

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AECOM is a premier, fully integrated infrastructure and support services firm with a leading sediment management and remediation practice. AECOM scientists and engineers work on a wide variety of development, cleanup and restoration projects, including some of the most complex sediment management problems. Our expertise includes sediment site assessment under a variety of regulatory programs, strategic Superfund consulting, dredging and dredged material disposal programs, restoration of water bodies and watersheds, shoreline and site development, natural resource damage assessment support, risk analysis, and design and implementation of complex remediation projects. We connect knowledge and experience across our global expert network to solve our clients’ most complex challenges. aecom.com

AquaBlok provides a full range of materials that allow firms to implement lower cost and more protective contaminated sediment remediation solutions. Both in-situ treatment materials and low-permeable thin capping materials are supplied under the AquaGate and AquaBlok names. Key benefits of AquaGate and AquaBlok products include the use of powder materials for a higher rate of adsorption than granular materials, uniform delivery of a high surface area with less mass of treatment material, and a high specific gravity, which allows placement through the water, as well as uniform mixing and placement with other materials. aquablok.com

Arcadis is the leading global Design & Consultancy firm for natural and built assets. Applying our deep market sector insights and collective design, consultancy, engineering, project and management services we work in partnership with our clients to deliver exceptional and sustainable outcomes throughout the lifecycle of their natural and built assets. We support UN-Habitat with knowledge and expertise to improve the quality of life in rapidly growing cities around the world. arcadis.com

Dredging innovations have taken major steps throughout history. However, the basic design of most clamshell buckets in use today has not changed for more than a century. At Cable Arm, we ask ourselves how we can improve the environmental clamshell design, the answer is with a product that surpasses expectations. Cable Arm is constantly innovating based upon job specifications, environmental limits and procedures, and site-specific obstacles. Therefore, all of our buckets are individually customized and built to order. Cable Arm clamshells and ClamVision positioning software can provide the best solutions for your dredging needs. cablearm.com

CDM Smith provides integrated solutions in water, environment, transportation, energy and facilities to clients worldwide. As a full-service consulting, engineering, construction and operations firm with more than 5,000 employees, we deliver exceptional client service, quality results and enduring value across the entire project life cycle. CDM Smith is a national leader in environmental remediation and has completed more than 100 sediment projects across the United States for a range of industrial and public sector clients. CDM Smith’s services for contaminated sediment remediation span the entire project life cycle, from characterization and assessment of sediments, surface water and biota through selection, design and construction of sediment cleanups. cdmsmith.com

For over 25 years, Foth has provided strategic design and remediation for some of the largest, most complex sediment remediation sites in the U.S. Restoring waterways by managing contaminated sediment is complex and challenging. And, it can carry a heavy price for responsible parties. Foth starts with the end in mind, balancing our clients’ needs for 100% regulatory compliance, with effective schedule and budget management. With offices coast to coast, Foth efficiently brings the knowledge and experience required to provide comprehensive sediment management, including site investigation, remediation design, permitting, remedial action, disposal management, sediment capping, dredge residuals, beneficial reuse, and closure. From initial discovery, though long-term monitoring, Foth gets the project done right the first time. foth.com

Geosyntec excels in working with private and public-sector clients on new ventures and complex issues involving the environment, natural resources, and civil infrastructure. Geosyntec is a consultant of choice for sediment site investigation and remediation from small sites to mega-sites. Recognized as an innovator, Geosyntec is pioneering sediment investigation techniques. We have developed unique methods for sediment core and porewater sampling on challenging field sampling scenarios and in our treatability laboratory. We are currently developing and applying next-generation passive porewater samplers. Our strong geotechnical practice allows us to effectively design dredging and capping remedies in soft sediments and provide shoreline stabilization designs including bulkheads. geosyntec.com

At Charter, we tackle complex challenges with underlying environmental liabilities, often where land meets water, by looking for alternatives that enhance communities. We bring fresh perspectives to high-visibility, long standing projects, paired with a commitment to quality and safety, resulting in successful project executions and exceeding stakeholder expectations. Charter specializes in complex, environmental dredge projects that involve specific characteristics, such as precision dredging around obstructions while working in fast-moving currents, tidal fluctuations, and difficult weather conditions. Our dredge projects take place in all settings and in all weather conditions, from large, congested harbors to rural ponds and streams. charter.us
Heritage Environmental Services, LLC. (Heritage) is the largest privately held asset-based environmental firm in the United States and is recognized as an industry leader in the transportation and disposal of TSCA regulated PCB Remediation waste and RCRA hazardous waste. Heritage owns an intermodal rail fleet used to ship contaminated solids to our RCRA Subtitle C landfill, RCRA incinerator and RCRA treatment facility. The rail fleet is primarily employed to ship from remediation project sites in the Northeast, Mid-Atlantic and Southeast. Trucks are utilized for projects located closer to our facilities. Since 2005 Heritage has shipped in excess of 1 million tons to our facilities utilizing our rail fleet. heritage-enviro.com

Jacobs leads the global professional services sector delivering solutions for a more connected, sustainable world. Jacobs provides a full spectrum of services including scientific, technical, professional and construction- and program-management for business, industrial, commercial, government and infrastructure sectors. jacobs.com

J.F. Brennan Company, Inc. offers flexible approaches and innovative solutions to successfully restore contaminated waterways and wetlands. For nearly 100 years we have been providing quality services through innovative approaches and safe practices. Through hydraulic, mechanical, amphibious, and diver-assisted micro dredging we have emerged as an industry leader in environmental dredging, transport and disposal. Our clients can expect us to not only deliver a successful outcome, but a well-coordinated, collaborative process in which it is achieved. jfbrennan.com

Louis Berger provides comprehensive services in environmental sciences and engineering, natural resource restoration, solid/hazardous waste management, water/wastewater, archaeology, waterfront/ports and other A/E planning, design and construction-phase services. Louis Berger possesses one of the nation's strongest integrated teams for providing contaminated sediments science, engineering and restoration services. We use state-of-the-art forensic methods to build a sound understanding of each system and maximize benefit of the overall approach, also paying special attention to the concerns of local communities and stakeholders to ensure long-term protection of restored areas. louisberger.com

Advanced Manufacturing. Energy. Environment. Water. For more than 70 years, OBG has specialized in engineering and problem solving, but the company's real strength is creating comprehensive, integrated solutions for its clients. OBG's sediment team uses extensive technical expertise and broad regulatory experience to develop and implement cost-effective, sustainable approaches to restore and enhance water bodies and associated infrastructure. OBG is an industry leader in dredging-related water management, air monitoring, odor management and habitat restoration associated with sediment remediation. obg.com

Parsons is a digitally enabled solutions provider focused on the defense, security, and infrastructure markets. With nearly 75 years of experience, Parsons is uniquely qualified to deliver cyber-physical security, advanced technology solutions, and other innovative services to federal, regional, and local government agencies, as well as to private industrial customers worldwide. Parsons conquers the toughest logistical challenges and delivers landmark projects across the globe. Parsons has been combining strong forward-thinking and cutting-edge technology to improve the way people connect with the world since 1944. Our success has been in striking the balance between big ideas and the technical ability to bring them to life. Thanks to Parsons' global network of resources, we have the power to combine leading-edge technology with unparalleled quality and control. parsons.com

Sevenson is one of the only pure environmental remediation firms that has successfully transitioned from land-based remedial action projects into contaminated sediments remediation. This transition began in 1993 when Sevenson was awarded and successfully completed the first large-scale Superfund site sediment remediation project at the Marathon Battery Site on the Hudson River. Sevenson has gained significant insight and operational knowledge in environmental dredging, dewatering and water treatment since the Marathon Battery project and has continued to work on some of the nation's most visible contaminated sediment sites. Today Sevenson partners with clients and consulting engineers to address difficult process design and field implementation issues at sediments sites throughout the United States. sevenson.com

Wood Environment & Infrastructure Solutions (Wood, a product of merging Amec Foster Wheeler Environment & Infrastructure and The Wood Group) is a global leader in the delivery of engineering, consulting, and construction. With technical experts across the US, Canada, UK, Europe, Australia and Latin America, we’re committed to providing solutions to improve our customer's operations, reduce environmental liabilities, and increase efficiencies. We provide cost-conscious solutions to sediments projects for sampling and analysis, data gap analysis, designing for navigation, nutrient-laden or chemically-contaminated remediation, stream and marsh restoration, and construction management. woodplc.com
GEI focuses on strategic, client-centered support for the evaluation and remediation of contaminated sediments. We are an employee-owned firm with national reach, and we excel at developing site-specific practical solutions considering land use, environmental drivers, and regulatory needs to ensure success for our clients. Our integrated team of environmental scientists and engineers develop solutions for the evaluation, remediation, permitting, and risk management of contaminated sediment sites, large and small. We have experience at many of the Superfund “mega” sites, but also with wetlands, estuaries, lagoons, or creeks where contaminated sediments emerge as sometimes unexpected concerns. Our specialty is the generation of cost-effective solutions that are protective, defensible, and scaled to local conditions. We find that the most cost-effective remedies may range from natural attenuation and ecological restoration to using our nationally-recognized expertise with in-situ stabilization, capping, treatment, and removal of contaminated sediments. GEI consists of 850 dedicated people at 38 offices coast to coast. We are known nationally for our strong commitment of client service, teamwork, collaboration, and innovation. Our sediment-related specialties include water resources, geotechnical engineering, data sciences, ecological services, and environmental risk, all in support of strong risk management, strategic planning, and quality work. geiconsultants.com

The CARYLON SEDIMENTS GROUP is a recognized leader in sediment, waste and ash management services throughout North America and the Caribbean regions. The Carylon companies have been providing environmental services to government and private clients for over 65 years. The Carylon Sediments Group consists of three Carylon Companies located in Chester, PA; Columbus, OH; and Charlotte, NC. These companies are Bio-Nomic Services Inc., Metropolitan Environmental Services Inc., and Mobile Dredging and Video Pipe Inc. The Carylon Sediments Group has completed projects from Nova Scotia to Mexico and the Caribbean. The Carylon Sediments Group provides turnkey sediment and ash remediation services and has significant experience with environmental dredging, sediment dewatering and excavation, and placement of environmental capping materials. The Carylon Sediments Group owns and operates dredges, pumps, work barges, tanks, high volume hydro-cyclone and rapid dewatering screen systems, belt filter presses, recessed chamber filter presses, centrifuges, clarifiers, and specialized and conventional excavation equipment. This equipment has been used for removal and treatment of sediments and sludge in lakes, rivers, lagoons, waste pits, abandoned landfills, mine sites, marine sites, tidal marshes and ash sites. Our experienced team has assisted clients and engineering firms with design, development, and completion of difficult environmental remediation projects. caryloncorp.com

Anchor QEA is an internationally recognized environmental and engineering consulting firm with expertise in contaminated sediment management, habitat restoration, and coastal development. Anchor QEA’s core business is managing sediment remediation cleanup through all phases of work, and our 350 technical staff have successfully managed and designed complex sediment remediation projects in North America. Our designs integrate the experience of our engineers, scientists, toxicologists, and construction specialists to develop defensible and cost-effective solutions. We ranked 24th in ENR’s Top All-Environmental Firms 2018 list in the U.S., and our staff serve as board and environmental commission members for the Western Dredging Association and contribute to the development of international guidance documents on contaminated sediment management. Through collaboration and innovation, we solve some of the most challenging problems in the environmental arena. anchorqea.com

ENR's Top All-Environmental Firms 2018 list in the U.S., and our staff serve as board and environmental commission members for the Western Dredging Association and contribute to the development of international guidance documents on contaminated sediment management. Through collaboration and innovation, we solve some of the most challenging problems in the environmental arena. anchorqea.com
### MONDAY, February 11
- 7:00-8:00 a.m. Morning Course Check-In
- 12:00-1:00 p.m. Afternoon Course Check-In
- 2:00-9:00 p.m. Conference Registration

### TUESDAY, February 12
- 7:00 a.m.-7:00 p.m. Registration, Exhibits, Poster Group 1 Display
- 7:00-8:00 a.m. Continental Breakfast
- 9:00-9:45 a.m. AM Beverage Break
- 11:30 a.m.-1:00 p.m. Lunch
- 2:30-3:15 p.m. PM Beverage Break
- 8:00 a.m.-5:35 p.m. Platform Sessions
  - A1. Innovation and Improvement in the Design Process
  - A2. Monitoring and Evaluating Remedy Effectiveness
  - A3. Remediation of Urban Waterways
  - A4. Successfully Combining Remedies

### WEDNESDAY, February 13
- 7:00 a.m.-7:00 p.m. Registration, Exhibits, Poster Group 2 Display
- 7:00-8:00 a.m. Continental Breakfast
- 9:00-9:45 a.m. AM Beverage Break
- 11:30 a.m.-1:00 p.m. Lunch
- 2:30-3:15 p.m. PM Beverage Break
- 8:00 a.m.-5:35 p.m. Platform Sessions
  - A5. Habitat Mitigation and Restoration
  - B1. Cap Design and Modeling
  - B2. Cap Construction and Operation
  - B3. MNR and Enhanced MNR
  - B4. Dredging Design and Operation

### THURSDAY, February 14
- 7:00 a.m.-1:00 p.m. Registration, Exhibits, Poster Group 2 Display
- 7:00-8:00 a.m. Continental Breakfast
- 9:00-9:45 a.m. AM Beverage Break
- 11:30 a.m.-1:00 p.m. Lunch
- 8:00 a.m.-2:40 p.m. Platform Sessions
  - A7. Characterization and Remediation of PFAS Contaminated Sediments/Media
  - B7. Beneficial Use of Contaminated Sediments
  - C4. Site Management Decision Strategies

Complimentary wireless Internet access is available in the Exhibit Hall and session rooms. **SSID:** Hilton Meetings  
Password (case-sensitive): Sediments2019

5:30-7:00 p.m. Plenary Session  
7:00-9:00 p.m. Welcome Reception, Exhibits, Poster Group 1 Display

5:45-7:00 p.m. Poster Group 1 Presentations and Reception  
See page 18 for sessions in Poster Group 1.

5:45-7:00 p.m. Poster Group 2 Presentations and Reception  
See page 30 for sessions in Poster Group 2.

2:40-4:00 p.m. 2019 Conference Recap: Takeaways and What’s Next?  
Refreshments provided.