# ROUX



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#### **EDUCATION**

- MS, Environmental Science Chemistry, Toxicology, and Risk Assessment, Indiana University
- M. Public Affairs, Environmental Policy and Natural Resource Management, Indiana University
- BS, Natural Resource and Environmental Science – Soil and Water Sciences, University of Illinois

**PROFESSIONAL LICENSES** 

**Certified Senior Ecologist** 

## PROFESSIONAL PROFILE

### Sean Weatherwax, CSE

#### **Senior Scientist II**

#### EXPERIENCE SUMMARY

Mr. Weatherwax is an environmental scientist with fourteen years of experience focused on risk assessment and sediment remedial investigations. Mr. Weatherwax's experience includes field investigation sampling and assessment activities at contaminated sites, as well as technical document preparation for state regulatory agencies in California, New Jersey, New York, Ohio, Washington, Pennsylvania, West Virginia, and Virginia, the United States Environmental Protection Agency (USEPA), and the governments of Canada and Bermuda. Additionally, he has provided expert comments and recommendations for proposed updates to the New Jersey Department of Environmental Protection's (NJDEP) Ecological Evaluation Technical Guidance document.

#### **TECHNICAL SPECIALTIES**

Mr. Weatherwax's risk assessment experience includes the evaluation of exposure to environmental stressors for both human and ecological receptors. He has been a key contributor or primary author of human health risk assessments (HHRAs) and ecological risk assessments (ERAs) for projects that fall under federal, state, and international jurisdictions. He has also served as an instructor for Montclair State University's "Risk Assessment in Remediation Course" and as a session chair for the Society of Environmental Toxicology and Chemistry (SETAC) North American conferences.

#### **REPRESENTATIVE PROJECTS**

- **Confidential Business Client, Perth Amboy, New Jersey.** Completed an Ecological Remedial Investigation (EcoRI) for a site within a brownfield development area (BDA) along the Arthur Kill. Developed remedial alternatives to address polychlorinated biphenyls (PCB) and metal impacts identified by the completed EcoRI. Remedial goals for the developed alternatives were based on background threshold values (BTVs) derived from background data collected within the Arthur Kill. Remedial alternatives included mechanical dredging of various depths needed to achieve remedial goals. Shallower dredge depths included the application of sediment amendments or a reactive cap to address the potential migration of PCBs and metals from deeper sediments to shallower depths in the biologically active zone.
- Confidential Business Client, Former Manufactured Gas Plant, Newton, New Jersey. Scoped and implemented a sediment EcoRI for a large, high value wetland impacted by a historical release from a manufactured gas plant (MGP) in northern New Jersey. EcoRI included lateral and vertical delineation of metal and PAH impacts, including forensic analysis of PAHs and a detailed background investigation. Following completion of the EcoRI, an ERA was completed for the wetland complex that included pore water analysis, sediment toxicity sampling, and food chain modeling. Data generated from the EcoRI and ERA were used to establish and achieve delineation of sediment impacts, develop ecological-risk- based cleanup goals, and initiate negotiations regarding risk management and remedial decisionmaking with agencies.
- Former US Naval Air Station Annex, Morgan's Point, Bermuda. Scoped and implemented a multi-phased sediment investigation of two bay areas associated with the former Naval installation in Bermuda. Data collected from the sediment investigation was incorporated into both a HHRA and ERA for the two bay areas. The results of the sediment investigation and risk assessments were used in the design and implementation of targeted remedial action within one of the bays to address concerns associated with PCBs detected in sediment.



- Former Hayward Cleaners, Hayward, California. Developed a HHRA to characterize the risk associated with exposure to chlorinated solvents in groundwater. The risk assessment evaluated compounds in groundwater and assessed the potential for vapor intrusion associated with adjacent residential properties. Risk assessment included the development of site-specific cleanup goals for both groundwater and sub slab soil vapor concentrations.
- Llanerch Shopping Center, Havertown, Pennsylvania. Prepared an Act 2 site-specific HHRA for commercial property located in southeast Pennsylvania. The objective of the risk assessment was to determine the risk to individuals who could be exposed to contaminated soil at the site. The risk assessment included the evaluation of multiple site-COPCs and constituent suites.
- **1666 7th Street, Oakland, California.** Prepared a Health Risk Assessment (HRA) for a proposed development located in Oakland, California. The assessment evaluated the human health risks for surrounding residents who were potentially impacted by exposure to construction exhaust and fugitive dust during the redevelopment of a vacant property. The assessment included the evaluation of multiple site-COPCs and constituent suites.
- Confidential Business Client, Santa Barbara County, California (Region 9). Developed ecological risk-based remediation of a 69-acre former gas plant along the Gaviota Coast of Santa Barbara County under both USEPA and the California Department of Toxic Substances Control (DTSC) oversight for a PCB impacted former natural gas plant. Lead author for ERA and HHRA reports completed to confirm that a risk-based remedy resulted in a remediation that was sufficiently protective of ecological communities and humans at the site.
- Air Products and Chemicals, Incorporated, Former Wharton Facility, Wharton, New Jersey. Identified and proposed measures to address data gaps in the sediment investigation and remediation activities completed within the site's drainage features by the prior consultant. Completed an extensive, multiphased EcoRI of the site's drainage system. The investigation incorporated specialty analytical measures, including PCB congeners, methylmercury, and acid volatile sulfide analysis, to assist in source identification and to evaluate the potential for bioavailability of sediment impacts to aquatic receptors. Developed and implemented an ERA workplan to further address copper, zinc, mercury, and PCB impacts identified in on and off-site sediment, including sediment and pore water sampling, biological surveys, sediment toxicity tests, food chain modeling, and an extensive background investigation to

quantify co-mingled contributions from a neighboring Superfund site.

- Fair Lawn Well Field, Fair Lawn, New Jersey (Region 2 and NJDEP). Primary author of a screening level ecological risk assessment (SLERA) and key support personnel for Memorandum on Exposure Scenarios and Assumptions (MESA), Pathways Analysis Report (PAR), and Baseline Human Health Risk Assessment (BHHRA) for a CERCLA site in Fair Lawn New Jersey under USEPA Region 2 lead. The SLERA and BHHRA completed for the site evaluated a groundwater plume, namely one impacted with chlorinated volatile organic compounds. Ecological risk was evaluated for a brook that potentially received impacted groundwater from the site. Additionally, human health risk was evaluated for residents, industrial workers, recreators, utility workers and construction workers who potentially would be exposed to impacted groundwater from the site.
- Delaware City Refinery RCRA Site (Region 3 and DNREC). Assisted in performing a comprehensive HHRA for a petroleum refinery in Delaware City, Delaware. Assisted in tabulating data and completing human health exposure modeling.
- **DuPont, Belle, West Virginia (Region 3).** Designed and implemented an ecological evaluation of a large, impacted area (+600 acres) adjacent to an industrial facility in West Virginia. Results of a soil, sediment, and surface water investigation performed within multiple solid waste management units were incorporated into a SLERA. The SLERA was ultimately presented to the USEPA Region 3 and used in the remedial decision for the impacted areas.
- **DuPont, Martinsville, Virginia (Region 3).** Prepared and implemented a sediment investigation in the Smith River. Data was used to evaluate the impacts associated with legacy contamination associated with a facility adjacent to the river.

#### **PROFESSIONAL AFFILIATIONS**

Society of Environmental Toxicology and Chemistry (SETAC)

Sediment Management Workgroup

Ecological Society of America

#### PRESENTATIONS

- Weatherwax, S., Czajkowski, K.A. and Ueland. S. 2023. The Good, the Bad, and the Confusing Parts of Coordinating a Sediment Remedial Investigation and Design with a Waterfront Brownfield Redevelopment. The Eleventh International Conference on Remediation and Management of Contaminated Sediment. Austin, Texas, January 2023.
- Weatherwax, S. and Czajkowski, K.A. 2019. Quantification of MGP-Related, Ecological Impacts within a High-Quality Wetland Complex. The Tenth International Conference on Remediation





and Management of Contaminated Sediment. New Orleans, Louisiana, February 2019.

- Mayes, M., Beech, R, Czajkowski, K.A., Lees, R, McKeever, K and Weatherwax, S. 2017. Challenges of International Sediment Investigation and Remediation at a Former U.S. Naval Air Station Annex in Bermuda. The Ninth International Conference on Remediation and Management of Contaminated Sediments. New Orleans, Louisiana. January 2017.
- Weatherwax, S. and Czajkowski, K.A. 2016. Ecological Risk Assessment: Crossroads between a NJDEP LSRP-Led and

USEPA-Led Cleanup. 7th SETAC World Congress/SETAC North America 37th Annual Meeting. Orlando, Florida. November 2016

- Weatherwax, S., K.A. Czajkowski, and K. McKeever. 2015. Sediment Characterization and Remedial Action Oversight Associated the Former U.S. Naval Air Station Annex at Morgan's Point, Southampton, Bermuda. Presented at Langan's Environmental Worship. Morristown, New Jersey. November 2015.
- Weatherwax, S., L. Johnson, and T. Royer. Role of Riparian Zones on Denitrification Rates and NO3- Removal in an Agricultural Ditch. Presented at the NABS-ASLO annual Conference in June 2010.