Kathryn Ives

Project Scientist

Expertise

- Data manipulation, presentation, and visualization
- Quality assurance, quality control, and management of geospatial data
- Sediment pre-design and remedial investigations
- Raster/surface geoprocessing and analysis
- ESRI web application and map design
- Unmanned aerial vehicle (UAV)/Remote drone operations

Summary

Ms. Ives is a project scientist with nine years of experience in environmental investigations, remediation, and litigation projects. She has expertise in preparing technical deliverables including remedial investigation (RI) reports, work plans, sampling and analysis plans, and health and safety plans. Ms. Ives specializes in geographic information system (GIS) data presentation/visualization and spatial analysis of vector and raster data. She also has extensive experience in GIS database management, quality assurance and quality control.

Professional Experience

Expert Consultant for Sediment and Uplands Cleanup Cost Allocation (2019–Ongoing)
Confidential Client, New York

TIG Environmental provides litigation support to a private client participating in a Superfund site allocation. The site includes nearly two miles of waterway in a heavily industrialized area of New York state. Contamination at the site includes polychlorinated biphenyls (PCBs) and other chemicals, but PCBs are the primary chemicals of concern. After an initial remedial design phase was completed, regulatory agencies required additional investigation of the study area. Findings from the investigation increased the estimated remedial cost nearly seven-fold. A comprehensive assessment of the watershed is necessary. The client retained TIG Environmental's services for potentially responsible party (PRP) identification and investigation, sampling and data analysis, and expert witness testimony for anticipated cost allocation for remediation of sediments. Since 2019, TIG Environmental evaluated and investigated documents for PRP sites to gather evidence of historical releases related to operations, developed a conceptual site model of the relationships between PRP operations and the contaminated waterway, conducted soil and sediment sampling, and completed forensic data analysis to identify sources of PCB contamination. TIG Environmental also provided and continues to maintain data visualization tools to assist the client in strengthening the connection between contamination in the waterway and adjacent PRPs, identifying PRPs that may not be responsible for contamination, and identifying additional discharge points that may be associated with additional PRPs.

Ms. Ives is responsible for maintaining the spatial components of data visualization tools as well as developing static maps for various memos and reports. She aided in soil sampling field efforts, GPS collection, historic imagery research/georeferencing, and digitization of historical waterways.

Technical Consultation and Allocation/Litigation Support (2019–Ongoing)
Confidential Client, Multnomah County, Oregon

TIG Environmental provides technical expert support for environmental liability assessment and cost allocation for the remediation of sediments in the Portland Harbor Superfund Site, and for the associated Natural Resource Damages claims. The harbor has been the site of numerous industrial

and manufacturing operations for more than a century, including shipbuilding, petroleum storage and distribution, metal salvaging, and electrical power generation. Technical support for this project includes research, sampling, and forensic analysis to determine the specific contaminants associated with activities or facilities. The project also includes evaluating potential historical contaminant sources, determining contaminant fate and transport, and chemical fingerprinting polycyclic aromatic hydrocarbons (PAHs) and PCBs.

Ms. Ives has prepared static maps for expert reports, technical evaluations, presentations, and meetings. She has been responsible for maintaining metadata and maintaining version control and project stewardship of spatial data.

Technical Consultation and Litigation Support (2019–Ongoing)
Confidential Client, New Jersey

TIG Environmental provides technical and ligation support for environmental liability assessment related to sediment remediation in the Newark Bay Study Area (NBSA) - a large Superfund bay estuary complex, part of the larger New York/New Jersey Harbor Estuary. The area hydraulically connects to the Passaic River Superfund Site and includes portions of the Hackensack River, Arthur Kill, and Kill van Kull. TIG Environmental performs investigative services including the acquisition and evaluation of historical records, conducting witness testimony, assessing environmental data, and preparing technical reports for identification and assessment of PRPs associated with the site. TIG Environmental develops deliverables providing detailed information regarding direct and/or indirect discharges to the NBSA from industrial, manufacturing, commercial, public works, and other potential sources. TIG Environmental personnel provided technical support on the remedial investigation and feasibility studies (RI/FS) activities on the NBSA. Such support included identifying and characterizing stormwater and combined sewer overflows that have affected sediments in the NBSA. TIG Environmental also acquired, compiled and evaluated information on publicly owned treatment works (POTWs), including their upstream collection system networks and their role as potential contaminant sources.

Ms. Ives has assisted in preparing figures for PRP evidence summary packages, presentations, and meetings. She has preserved metadata and maintained version control and spatial data used in data visualization tools. She has aided in the review, evaluation, and coding of PRP historical document productions to identify new relevant and/or significant findings.

Design for Sediment Removal, Capping, and Natural Attenuation (2019–Ongoing)
Yosemite Slough Cooperating Parties Group, San Francisco, California

TIG Environmental and a design team with engineers and scientists from multiple specialist firms are conducting pre-remedial design studies for a contaminated intertidal channel in a highly urbanized area within San Francisco Bay. U.S. Environmental Protection Agency (EPA) had originally proposed a time-critical removal action for removing more than 20,000 cubic yards of contaminated sediment, however TIG Environmental helped its client achieve agreement with EPA on the application of risk-based multi-technology approach, which will result in significant reduction in removal volume and cost.

Pre-remedial design studies include specialized evaluations of sedimentation rates, depth of the biologically active zone, bulk sediment and pore water chemistry, erosion and particle transport, and geotechnical parameters. Overall, the studies will support the design for dredging, capping, and monitored natural recovery of the contaminated sediments.

Ms. Ives developed figures and conducted a spatial analysis of sediment data used to determine various alternatives for remediation efforts. She has been responsible for maintaining metadata, version control, and project stewardship of spatial data.

Technical Consultation and Allocation/Litigation Support (2020–Ongoing)
Confidential Client, Seattle, Washington

TIG Environmental is providing litigation support to a Washington State agency participating in a Superfund site allocation. The Superfund sediment site consists of five miles of urban and industrial estuarine waterway. The key issues revolve around potential stormwater loads from state-maintained roads, bridges, and properties. TIG Environmental has prepared expert reports that evaluate whether there is a potential relationship between the Superfund site sediment contamination and the discharge of hazardous substances from the state-owned facilities, potentially resulting in the need for remedial action and associated response costs. TIG Environmental is developing an allocation strategy based on sampling and statistical analysis of stormwater, historical and scientific research, drainage pathway delineation, and sediment transport modeling. TIG Environmental is also assisting the state agency with the development of source control plans in accordance with Washington State Department of Ecology's source control strategy.

Ms. Ives was responsible for developing drainage delineation pathways and creating static maps for 104(e) responses, technical evaluations, presentations, and meetings. She has been responsible for maintaining metadata, version control, and project stewardship of spatial data.

PCB Liability Investigation (2019–Ongoing)
Confidential Client, Oregon

TIG Environmental is providing technical expert consultation for environmental and natural resource damage alleged to result from releases of polychlorinated biphenyls (PCBs) in the state of Oregon. The primary objective of this work is to provide expert support to estimate the past, current, and potential future costs that have been or may be incurred by the client to investigate and remediate upland and in-water sites as a result of damages caused by the presence of PCBs throughout the environment. To accomplish this, TIG Environmental is responsible for developing a comprehensive project database that contains available analytical chemistry data for all matrices (for example, sediment, tissue, surface water) collected from state lands and waterways.

Ms. Ives is responsible for maintaining and assigning the spatial components of database locations, including georeferencing and digitization of locations from historic documents, coordinate conversions for consistency, and spatial joins to geographic features. She has assisted in preparing figures for presentations and meetings.

Kathryn Ives
Project Scientist

Environmental Scientist/GIS Specialist/UAS Remote Pilot (2013–2019)
ARCADIS U.S., Syracuse, New York

Ms. Ives had over six years of experience working on projects with GIS components and two years of experience as a Federal Aviation Administration (FAA) certified (UAS)/Drone Pilot at Arcadis. She assisted with data presentation, spatial analysis, and data visualization of mainly sediment and waterfront project data. She aided in the development of work plans, RI reports, and technical memoranda, as well as engaged in quality control and database management tasks associated with the spatial component of project databases. As a certified UAS pilot, Ms. Ives had over 110 flight hours logged as pilot in command, organizing drone flight missions, photographing remediation efforts for documentation/marketing, conducting topographic surveys, and developing orthoimagery for mapping.

Academic Qualifications

BS in Environmental Studies, State University of New York College of Environmental Science and Forestry, 2012

Professional Training

- ArcGIS 9.3–10.6/ArcGIS Pro 2.5
- 40-Hour OSHA Hazardous Waste Operations (HAZWOPER) Safety Training (29 CFR 1910.120)
- FAA Licensed UAS/Drone Pilot #4041792
- NYS Boater Safety Certificate