

**Kathryn Ives**  
Project Scientist



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**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
- ESRI mobile collection applications
- Unmanned aerial vehicle (UAV)/Remote drone operations

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**Summary**

Ms. Ives is a project scientist with ten 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.

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**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 PCBs and other chemicals. 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 has retained TIG Environmental's services for PRP identification and investigation, sampling and data analysis, and expert witness testimony. TIG Environmental has evaluated and investigated documents for PRP sites to gather evidence of historical releases related to operations, developed recommendations for site sampling, and developed a preliminary conceptual site model of the relationships between PRP operations and the contaminated waterway. TIG Environmental has also overseen additional site sampling and data forensic analysis to determine the deposition of PCBs and other chemicals that could be indicators of historical PCB use. TIG Environmental provided a data analysis report, final conceptual site model, and data visualization tools to assist the client in strengthening the connection between contamination in the waterway and adjacent PRPs, identified PRPs that may not be responsible for contamination, and identified 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)**

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Confidential Client, Multnomah County, Oregon

TIG Environmental provides technical expert support for environmental liability assessment and cost allocation for the remediation of sediments at the Portland Harbor Superfund Site and for the associated Natural Resource Damages claims. The harbor has been the site of numerous manufacturing, shipbuilding, petroleum storage and distribution, metal salvaging, and electrical power generation operations for more than a century. Development of expert reports has included research and forensic analysis to determine the specific contaminant nexus to the sediments for each upland PRP. Specific forensic analysis has included evaluation of potential historical contaminant sources, chemical fingerprinting of PAHs, PCBs, PCDD/Fs, and contaminant fate and transport. Key issues revolve around potential contributions from state-maintained roads, bridges, and other right-of-way properties and supporting facilities. This effort has included collection and evaluation of sediment, stormwater, and bridge paint samples. TIG Environmental is also responsible for evaluating the potential relationship between activities on state-owned submerged lands and the contamination in the river.

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. She has also built models for improved, repeat analyses and has created web applications for viewing spatial data interactively.

#### **Technical Consultation and Litigation Support (2019–Ongoing)**

Confidential Client, New Jersey

TIG Environmental provides technical and litigation support for environmental liability assessment related to sediment remediation at a large Superfund bay estuary complex, part of the larger New York/New Jersey Harbor Estuary. This is hydraulically connected to the Passaic River Superfund Site and includes portions of the Hackensack River, Arthur Kill, and Kill van Kull. TIG Environmental is performing investigative services including the acquisition of historical records, primary witness testimony, environmental data, and technical reports for identification and assessment of PRPs associated with the site. TIG Environmental is developing information on industrial, manufacturing, commercial, public works, and other potential sources with direct or indirect discharges to the Newark Bay Study Area (NBSA). TIG Environmental is helping its client comply with an Administrative Order on Consent and is compiling and developing information on potential sources and associated outlets of potential concern potentially affecting the NBSA sediments.

TIG Environmental personnel were heavily involved in leading RI/FS activities on the NBSA. Activities focused on technical support as it related to investigation and remediation of the NBSA. TIG Environmental personnel were engaged in the support of NBSA RIs/FSs, particularly regarding identification and characterization of stormwater and combined sewer overflows that have played a role in effects to the NBSA sediments. TIG Environmental also actively acquired and compiled 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

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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 co-consultant are conducting pre-remedial design studies aimed at refining the EPA-proposed multi-technology removal action in a contaminated intertidal channel in a highly urbanized area within San Francisco Bay. 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 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 provides 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 contaminant loading in stormwater from state-maintained roads, bridges, and supporting facilities. 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 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

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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.

#### **PFAS Forensic Analysis and Litigation Support (2021–Ongoing)**

Confidential Client, New England

TIG Environmental is providing ongoing PFAS forensics analysis, records acquisition and review, and litigation support to a confidential client involved in a multiparty damage claim. The work includes obtaining monitoring data from state regulators, obtaining state and federal public records, filing freedom of information requests, expert review of information, and historical reconstruction of PFAS usage and disposal practices. Multivariate chemical forensics analysis is being used to characterize PFAS profiles in groundwater, soil, farm products, and wild game. Geospatial patterns in these PFAS profiles are being interpreted in the context of PFAS usage and disposal practices across multiple facilities and disposal sites. The goal of the work is to understand the scope of potential and probable liabilities relating to the historical usage of PFAS in a manufacturing process and the disposal of PFAS containing wastes and to defend the client in the litigation.

Ms. Ives was responsible for record review, obtaining monitoring data from state regulators, and building a geospatial inventory for litigation support. She has prepared numerous visual aids to support communication with the client, such as static maps, graphics for presentations, and an online data viewer.

#### **South Park Marina Remedial Action (2019–Ongoing)**

South Park Marina Limited Partnership, Seattle, Washington

TIG Environmental assists the owner of a recreational marina site in the South Park neighborhood of Seattle, Washington. This site is the subject of remedial action under an Ecology-Administered Agreed Order. Soil and groundwater at the site are contaminated with PCBs, petroleum hydrocarbons, volatile organic compounds, pesticides, and metals requiring cleanup under the State of Washington's MTCA. TIG Environmental's work includes investigation of historical sources of contamination both on- and off-site. As a result, TIG Environmental identified and nominated additional potentially liable persons (PLPs) for release(s) of hazardous materials affecting the Site to Ecology. These PLPs are now involved as participants under the Agreed Order. TIG Environmental, on behalf of South Park Marina Limited Partnership, and the other PLPs are working in partnership to oversee the completion of the tasks required to be performed under the Agreed Order: RI work plan, RI field activities, source control evaluation, and RI Report. TIG Environmental has completed several source control, RI, FS, and preliminary engineering design tasks supportive of efforts under the current Agreed Order and/or future formal program designations.

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Ms. Ives has assisted with figure development for annual reports, memos and other submittals. She is responsible for maintaining metadata, version control, and project stewardship of spatial data. She has also developed mobile collection applications to streamline record keeping for ongoing fieldwork.

**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.

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**Academic  
Qualifications**

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

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**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