



CAPABILITIES STATEMENT

MEANINGFUL DATA ANALYSIS INFORMING ENVIRONMENTAL DECISIONS

Fristachi Scientific, established in 2010 and based in Los Alamos, New Mexico, is a multi-disciplinary environmental consultancy focused on providing practical, efficient and innovative solutions to complex environmental data problems through the application of statistics, computer programming and decision science in support of environmental remediation and compliance monitoring activities.

Our goal is simple.

We aim to provide world-class technical support for companies that operate within and across the environmental remediation and public health markets.

CORE CAPABILITIES

ENVIRONMENTAL SERVICES

- **Environmental Impact Assessments (EIA)** – Efficient process management and documentation to ensure compliance with the National Environmental Policy Act (NEPA) and state regulations;
- **Environmental Permitting & Regulatory Interface Support** – permit application preparation and submission, modifications and compliance monitoring under CERCLA, RCRA, CWA and CAA;
- **Phase I and Phase II Environmental Site Assessments (ESA)** – identification of locations of recent and historic contamination and the subsequent design and implementation of intrusive site investigations;
- **Risk Assessment** – application of appropriate analytical techniques in the identification, assessment and management of human health and ecological environmental risks in support of consent orders, permitting requirements, EIA and due-diligence audits;
- **Exposure Assessment** – development and application of advanced concepts in quantitative exposure assessment for single chemicals and mixtures, including probabilistic methods for quantification of uncertainty;
- **Fate and Transport Modeling** – We routinely provide expert evaluations covering a broad spectrum of chemical contaminants in media such as air, groundwater, soil and subsurface vapor intrusion.

ANALYTICAL SERVICES

- **Data Management** – update or manipulate research data from a wide variety of databases or spreadsheet formats as well as parsing data out of XML and HTML documents. Provide recommendations for appropriate data structure(s) for delivering the most effective analysis. ;
- **Statistical Analysis** – Our extensive experience with a wide range of statistical methodologies from basic descriptive and graphical analyses to complex modeling of correlated data enables us to assist with most data analysis problems. We document and communicate those analyses to a variety of audiences with different levels of technical skills;
- **Programming Services** – We employ a range of statistical and mathematical approaches to help conceptualize and solve data problems through strong computing skills in R, SAS and Matlab. We are also experienced with specialized software packages such as ProUCL, Visual Sample Plan, RBCA Toolkit, BMDs, CalPUFF , RESRAD and many others.
- **Data Validation** – We assure that the data you use to make decisions is of known quality and prepare data validation summary reports that assess the “usability” of a dataset.

OUR DIFFERENTIATORS

We are specialists, not generalists. We are a specialist environmental consulting firm, blending structured consulting skills found in large traditional consultancies with the detailed knowledge that only comes from having worked in the industry as a direct participant. We help our clients deliver solutions every day. We have extensive experience providing retainer-based support as an extension of a company’s in-house environmental service functions or project-based support towards clear, short-term deliverables with a well-defined scope.

Our people. People are our critical assets. Our team consists of qualified professionals in the fields of geology, hydrology, chemistry, toxicology, ecology, statistics, geographic information systems, air quality modeling, risk assessment, exposure science, contaminant fate and transport modeling and environmental regulations. We ensure that clients benefit directly from the involvement of senior professionals in all facets of a project.

Insight. We are practitioner-led. Although we are a young company, our people are very experienced, averaging 15-20 years in the industry. We recognize that our clients are experts in their field. Hence we engage them by never letting our knowledge and ideas stand idle and constantly striving to demonstrate an immediate and clear understanding of issues and use rigorous analysis to develop compelling approaches to help solve problems.

Approach. We are relationship-driven and always plan our delivery to exceed expectations. We understand crucial buyer-values and institutionalize them within our DNA: insight, expertise, independence, teamwork, integrity, building relationships, respecting confidentiality and delivering results.

NAICS AND OTHER PERTINENT CODES

DUNS Number: 968097688 CAGE Code: 6D4N3

541690 Other Scientific and Technical Consulting Services

541620 Environmental Consulting Services

541990 All Other Professional, Scientific & Technical Services

541511 Computer programming services, custom

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PROJECT HISTORY

A few example projects that involved risk assessment and statistical activities include:

Los Alamos National Laboratory – Senior consulting risk assessor providing risk assessment and statistical support for human health and ecological assessments involving chemicals and radionuclides in soil and rock via multiple scenarios, including vapor intrusion modeling, for the S-Site Aggregate Area Investigation Reports and Potrillo/Fence Canyon Aggregate Area Supplemental Investigation Reports.

US Department of Energy – Senior consulting risk assessor for human health and ecological assessments for the Miamisburg, Ohio closure project.

Rocky Mountain Oilfield Testing Center (RMOTC) – Provided data validation support for landfill groundwater sampling program.

NuWest North Maybe Mines – Calculated bioaccumulation factors for plant tissue in support of ecological risk assessments at East Mill Dump and North and South Open pit mines. Estimated Tier1 and Tier2 risk values. Developed a sampling plan to define the distribution of concentrations representative of background for the area and specified methods for development of site-specific background threshold values and comparison of background concentrations to site concentrations.

Magnablend, Inc, Mills, WY site – Related to the presence of arsenic and selenium in soil and selenium in groundwater in excess of default criteria, developed a background sampling design that utilizes use of background soil data collected previously as part of a remedial investigation process at the nearby BP/Amoco Former Refinery North Properties. BP North Properties soil boring logs were reviewed to identify locations with comparable lithology Magnablend site. The resulting data set consisted of selenium and arsenic soil samples considered for developing background threshold values, which were compared to site data using several non-parametric two-sample hypotheses testing approaches.

Lower Passaic River Study Area – Estimated the distribution exposure durations for residents in the Lower Passaic River Study Area, consisting of Bergen, Essex, Hudson and Passaic counties inn New Jersey based on the probability of a resident moving out of the study area during a 5-year age group and the probability that a the said resident will die during that period using U.S. Census Bureau data and N.J. Department of Health Center for Health Statistics mortality data for 2000-09.

NAVFAC Bangor – Performed a cluster analysis of 4770 potential sampling locations based on biology, engineering and hydrological clustering parameters in support of the sampling plan for the Nearshore Functional Assessment Tool calibration area in Puget Sound. Using a probabilistic mixture model while implementing a maximum likelihood estimation, 22 sampling clusters were identified.

FE Warren Air Force Base Landfill-C501/Landfill 8 long-term monitoring – The goals of the statistical evaluation were to determine the presence of a statistically significant concentration increase (SSI) for any of the laboratory-analyzed constituents. The statistical evaluations included both inter-well and intra-well tests, as well as the presence of spatial variability or trends. To further evaluate the potential for an SSI, a non-parametric prediction limit statistical test for future median was performed at a 97.5% level of confidence.

OUR PEOPLE

Tony Fristachi has over 15 years experience conducting human health and ecological risk assessments and analyzing environmental data for CERCLA, RCRA, tribal and state program hazardous waste facilities and drinking water quality investigations. Tony's expertise includes human health and ecological risk assessment, environmental statistics, complex survey data methods and modeling contaminant fate and transport, air quality, vapor intrusion, dose-response, probabilistic quantification of uncertainty. He has strong statistical computing experience using R, SAS, Matlab, ProUCL, SQL, RBCA Toolkit, Visual Sample Plan, BMDS and others. His publications on chemical mixtures have been used by the U.S. Environmental Protection Agency in developing drinking water regulatory guidelines.

ALLIANCES and PARTNERS

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