



Credere Associates LLC

Ian C. Desjarlais  
Geoscientist

## TRAINING

- ▲ GSSI Ground Penetrating Radar UtilityScan-DataProcessing (2015)
- ▲ sUAS/UAV Drone Operator Certification 30 hours -UNH PDT Durham-(2019)
- ▲ Emergency Medical Technician (EMT) 110 Hour Course (2005)
- ▲ Structure From Motion (SFM) Short Course (2019)
- ▲ Mountain Snowpack Course- (2014) UCSB/USACE-CRREL- Mammoth Lakes, CA
- ▲ 40-hour OSHA 29 CFR 1910.120 HAZWOPER Course.
- ▲ 8-hour HAZWOPER Refresher (July 2021)
- ▲ American Heart Association CPR/AED/First Aid
- ▲ USACE/NAVFAC Construction Quality Management (CQM) Training (July, 2021)

## EDUCATION

- ▲ B.A. Earth System Science 2006, University of New Hampshire- Durham
- ▲ M.S. Geology 2017, California State University Northridge, California

## HIGHLIGHTS OF EXPERIENCE

Mr. Desjarlais has over 10 years of experience working for a wide-range of clients and sites across the United States. Early-career work included fieldwork oversight and support of soil and groundwater investigations for a super-major oil company with projects types ranging from retail gas stations to pipeline and production facilities. Mr. Desjarlais gained extensive experience working within the complex California regulatory framework and implementing client's behavior-based health and safety program while performing site assessment activities, UST removal, and construction oversight. During this time frame Mr. Desjarlais also gained experience in performing oversight and monitoring of biological and cultural/archaeological resources for Federal Trustees (NOAA/NPS/USFWS) while working as field scientist during response phase of 2010 Deepwater Horizon Oil Spill. In 2017 he completed a publicly-funded Masters degree investigating Holocene slip rates on the Southern San Andreas Fault system aiding USGS in earthquake forecasting for greater Los Angeles Metro area. More-recent career work includes transition of focus to data management and visualization practices using various software suites including Python-based data-science modules as well as data interpolation tools. Mr. Desjarlais is considered an Advanced-level GIS user specializing in quality control, graphic design and using LiDAR-derived DEM datasets to further CSM development. Mr. Desjarlais is currently working to support Credere's Federal contracts team.

## FEDERAL EXPERIENCE

**Long Term Monitoring (LTM) Event (2021) CENAE- Melville Tank Farm, Melville, Rhode Island.** Provided field support for 2021 LTM sampling effort of onsite groundwater monitoring wells for remedial feasibility evaluation.

## **GIS/Data Manager- USDC Penobscot River Phase III (2016 (While Employed by Wood E&IS)**

Mr. Desjarlais served as the GIS and geospatial data manager for project with remedial design option plans exceeding 5 Bn dollars overseen by Special Master of US District Court-Maine. Tasks included performing data management and quality control for multiple GIS users representing various specialty teams across US. Developed custom Quality Control tier system to advance data quality objectives and ensure geodatabase-data versioning congruence across all teams throughout duration of multiple-year project. Developed project-specific standards for GIS as well as custom document control systems for tracking draft versions of figures and data. Technical work included LiDAR/Photogrammetric analysis of 60+ miles of shoreline to evaluate Marsh Platform/Mudflat morphologies to identify potential sediment deposition/erosion areas. Work also included creation of seamless topobathymetric digital elevation surface using various data sources varying datums for use in hydrodynamic analysis.

## **Field Scientist- USACE Cold Regions Research Engineering Lab (CRREL) (While Employed by Wood E&IS)**

Mr. Desjarlais supported senior geophysicist by performing field oversight of Hydrographic Survey of Connecticut River for characterization of channel morphology. Performed survey of shallow sub-slab infrastructure using Geophysical Survey Systems (GSSI) SIR 3000 Ground Penetrating Radar to aid in and direct in placement of sub slab sampling points within active

research facility. Assisted with Operation and Maintenance (filter changeouts) of indoor air filtration systems. Conducted Indoor Air Quality and groundwater sampling events.

**Data Analyst/Hydrogeologist- Former Pease Air Force Base- PFAS Investigations (2016-2021) (While Employed by Wood E&IS):**

Developed project-specific data management/analysis and visualization platform for monthly potentiometric evaluation of base-wide groundwater treatment systems. Workflow included using/developing multiple customized SQL databases, Golden Software Surfer, and ESRI ArcGIS tools to develop and implement python-driven task and workflow automation. Effort included evaluation of spatial data density and cluster analyses to optimize monthly data useability and to ensure reproducibility while working with project team to align Data Quality Objectives with reporting needs.

**PAST EMPLOYMENT EXPERIENCE**

**Wood Environment and Infrastructure Solutions, Geoscientist. Portland, Maine 09/2015- 05/2021** Perform data collection events for various media. Site Hydrologist (Poland Spring)-Spring Water production site. Performed comprehensive year-round monitoring of site hydrology/data management/public interface. Provide GIS support for various and dedicated projects ranging from private to federal clients. Extensive use of LiDAR data to create 3D CSM visualizations and analyses. Usage of LIDAR in developing 3D Viewshed and Tree canopy maps for permitting of proposed solar power sites. Extensive application of Golden Software Surfer and Grapher applications for data visualizations and surface interpolations/analysis. Effective experience creating project-dedicated database tools for data management/design using Microsoft Access. Data Analysis using Python- Based tools with Anaconda/Jupyter Notebooks.

**Chevron North America Exploration and Production, Earth Scientist: Midway-Sunset Asset Development Team, Bakersfield, CA. 06/2014 – 08/2014.** Worked closely with Reservoir Engineer on Joint Project Involving intensive review of 1 square mile lease section in southern San Joaquin Valley. Developed stratigraphic/tectonic model, involving correlation of over 200 wells using geophysical Logs and ~12 stratigraphic units. Created 3D Surface Contours using Petrel® (Schlumberger), tied in model to pre-existing work of ADT.

**USGS-NSF Southern California Earthquake Center (SCEC)** - Conducted federally-funded neotectonic research projects with USGS Pasadena office. Studied tectonic geomorphology of southern San Andreas Fault zone section. Work included mega-trench excavation along fault and digital mapping, and remote sensing (LiDAR) of fault scarps and traces across study area. Data collection involved 8 months of full-time laboratory sample preparation work and in-person analysis of samples at Lawrence Livermore National Lab (LLNL-CAMS) using Accelerator Mass Spectrometer. Data used in seismicity forecasting/risk assessments for major metropolitan area of 20 million inhabitants.

**CARDNO ERI, Staff Geologist: Global Remediation, Exxon Mobil Corporation, Monterrey, Santa Barbara, San Luis Obispo, Ventura, Kern, and Northern LA Counties, CA. 06/2008 – 08/2012.** Conducted multi-phase environmental site assessment activities for high profile client. Projects included retail and upstream sites for a super-major U.S. oil company. Delivered high quality report preparation, technical drilling oversight, bore log production, interpretation and digitization, ensuring project safety, implementation of regulatory permit directives, performing operational field audits on project performance, providing exceptional communications to regulators/government inspectors, client representatives, and lead project geologist.

**CARDNO ENTRIX, Field Scientist: Temporary Assignment, British Petroleum (BP). Deepwater Horizon Oil Spill, Houma, LA. 07/2010 – 10/2010.** Conducted field audits for client and performed data collection as directed by US government agencies USFWS, NPS and NOAA. Embedded with US Coast Guard Quick Response Force (QRF) team, performing marine-based patrol and reconnaissance of coastal waterways in southern Louisiana. Worked as intermediate-level client representative providing direction and feedback to cleanup workers to ensure regulatory compliance with BMPs.

