

Coastal Geologist

Mr. Bambach is a coastal geologist with eight years of professional experience in marine, coastal, aquatic, and terrestrial natural resource management and policy. Mr. Bambach's specialty areas include site assessment reports and remedial action plans, supervision of drilling operations for ground water monitoring wells, description of sediment cores, interpretation of geophysical logs, and a wide range of field data collection methods. He is an effective communicator with excellent planning, organizational, and negotiation skills as well as the ability to lead, reach consensus, establish goals, and attain results.

**EDUCATION**

M.S., Geology, Florida State University, Tallahassee, FL (2013)

B.S., Geology and Geography, Wittenberg University, Springfield, OH (2011)

**CERTIFICATIONS**

24-Hour HAZWOPER

Geologist in Training Certification (Florida)

**PROFESSIONAL EXPERIENCE**

Scientist, Research Planning, Inc., Columbia, SC (2018-present)

Geologist II, Wood, Tallahassee, FL (2016 - 2018)

Geologist II, Florida Geological Survey, Tallahassee, FL (2014 - 2016)

Sediment Specialist, Florida State Antarctic Research Facility, Tallahassee, FL (2013)

Hydrologist Assistant, USGS Ohio Water Science Center, Columbus, OH (2010 - 2012)

**PROJECT EXPERIENCE**

Groundwater Assessments: As part of Wood. Mr. Bambach conducted groundwater assessments throughout Florida that involved installation of groundwater monitoring wells, water sampling, and geophysical log analysis for projects related to the Florida Petroleum Cleanup Program. Specifically Mr. Bambach worked on projects involving the Abandoned Tank Restoration Program (ATRP), Petroleum Cleanup Participation Program (PCPP), Free Product Recovery Initiative (FPRI) and the Springshed Initiative.

Sediment and Soil Assessments: As part of Wood. Mr. Bambach conducted sediment and soil assessments throughout Florida that involved soil screening with a Flame Ionizing Detector (FID), soil sampling, and excavations of contaminated soil for projects related to the Florida Petroleum Cleanup Program. Specifically Mr. Bambach predominantly worked on projects involving the Navy Fuel Depot in Jacksonville, Florida.

Florida Geologic Survey STATEMAP Program:

As part of the Florida Geological Survey Mr. Bambach established the geologic framework of areas vital to the welfare of Florida. Both bedrock and surficial geology were mapped during the process, analyzing cores and cuttings throughout the state of Florida. Mr. Bambach focused on areas surrounding St. Augustine, Orlando and Jacksonville during his time at the Florida Geological Survey. These maps are used to assess water, aggregate, and mineral resources.

Drinking Water Unusually Sensitive Areas: As part of RPI's work for the Pipelines and Hazardous Material Administration (PHMSA), Office of Pipeline Safety, he is responsible for developing the guidelines by which public water systems are assigned to the appropriate Pettyjohn classification using the GIS model developed by RPI. This work involves work with spatial and tabular data on bedrock geology, surficial geology, glacial drift, sole source aquifers, source water protection areas, and wellhead protection areas for each state.

Surface Water Quality: For the U.S. Geological Survey, this work involved water sampling of lakes, testing the turbidity as well as the density of ecoli and enterococci as part of the Inland Lakes Project, protocol for blue/green algae sampling and analysis, and data interpretation on water quality findings.

Dune and Shoreline Evolution of Western Santa Rosa Island, Florida, 1973-2013: Master's thesis project that used ground elevation profiles, airborne Lidar data, trapezoidal integration, and GIS analyses to quantify impacts of storms (including two hurricanes, Ivan and Opal) on foreshore, dune, and backshore components of a Florida barrier island.

#### Other Specific Skills

- Groundwater sampling experience in the shallow, intermediate and deep wells and soiling sampling according to the state of Florida standard operating procedures.
- Extensive experience using engineering tools such as the FID (Flame Ionizing Detector) for soil screening and YSI for groundwater sampling.
- Experience managing drilling subcontractors and following general well installation procedures.
- Experience managing construction subcontractors following contaminated soil excavation procedures.
- Experience writing different types of reports including site assessment reports, groundwater monitoring reports, remediation system installation reports and contaminated soil excavation reports.
- Described sediment cores containing carbonate and siliclastic sedimentary rocks across the state of Florida
- Used ARC GIS to produce quadrangle surficial geologic maps of specific locations across Florida.
- Used AutoCAD to construct cross-section maps of the specific locations across
- Florida.
- Analyzed sediment cores obtained from Antarctica and surrounding waters, looked for evidence of climate change by examining foraminifera and diatoms. Used Petra to correlate cores.

#### **ADDITIONAL CERTIFICATIONS AND SKILLS**

*Software and Hardware:* ArcGIS, Trimble Total Station,

*Field:* Electrical resistivity ground imaging equipment; direct push, hollow stem auger, and sonic coring techniques; Geophysical logging techniques; FID, YSI water quality meters.