

*Zach Weathers*  
*Staff Hydrogeologist, Level 2*  
*zweathers@shomaker.com*

Mr. Weathers has been with JSAI since February 2018 shortly after finishing his thesis draft. His work includes surface and groundwater monitoring, sampling and data interpretation, environmental monitoring and remediation, water-supply well drilling, construction, and pumping test oversight, geophysical well log analysis, 3D geologic modeling, and working on teams building groundwater models. Prior to joining JSAI he worked extensively with the National Park Service, US Fish and Wildlife, Texas Parks and Wildlife Department, and the Rio Grande Research Center in monitoring flow and geomorphological conditions on the Rio Grande in relation to the reintroduction of the Rio Grande Silvery Minnow. His previous work with groundwater includes building a database of the springs in Big Bend Ranch State Park, Texas, including geochemical modeling of rock/water interaction.

*Water Resource Monitoring*

Collecting discharge measurements, field water quality parameters, sample both ground and surface water for laboratory geochemical analysis, and perform field titrations for alkalinity. Document, characterize, and analyze spring ecosystems.

*Data Collection:*

Total station, RTK GPS, drone-based images for photogrammetry, Flowtracker, ADCP, pygmy meter, YSI multi-probe.

*Data Representation*

Collecting data points and subsequent production of maps using ArcGIS suite of software, perform spatial analyses using ArcMap, building geologic, contaminant plume and other models in Leapfrog, preparing graphs and plots in MS Excel, RockWorks, and SigmaPlot.

*Analytical Methods:*

Perform analyses and interpretations of chemical compositions and mineralogy utilizing SEM, XRD and XRF.

*Geochemical Modeling:*

Geochemical modeling using PHREEQC to develop mixing models and determine rock/water interaction.

*Software Experience:*

ArcGIS, Collector for ArcGIS, Leapfrog, Agisoft, MS Word, MS Excel, MS PowerPoint, Adobe Acrobat, PHREEQC, RockWorks, SigmaPlot.

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**EDUCATION**

M.S. Geology, 2019  
Sul Ross State University

B.S. Geology, 2015  
Sul Ross State University

**REGISTRATIONS**

Texas Board of Professional  
Geoscientists - Geoscientist-in-  
Training GIT-310

OSHA 40 hour HAZWOPER

MSHA 40 hour Part 48 Surface,  
Metal, Non-metal, Coal

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