Cameron R. Chambers – ITASCA Denver

Staff Hydrogeologist

Expertise Groundwater Modeling, GIS, Python

Education

M.S. (Geological Sciences), 2023
University of Colorado, Boulder, Colorado, USA

B.S. (Geosciences), 2020
Virginia Tech, Blacksburg, Virginia, USA

Honors

Hydrological Sciences Graduate Certificate (2023)

W.A. Tarr Award (2020)

Professional Experience

2024 – Present	ITASCA Denver, Lakewood, Colorado Staff Hydrogeologist
2023 – 2024	Shannon & Wilson, Inc., Wheat Ridge, Colorado Hydrogeologist
2021 – 2023	CU Boulder, Department of Geological Sciences, Boulder, Colorado Geohydrology Graduate Researcher
2021 – 2023	CU Boulder, Department of Geological Sciences, Boulder, Colorado Teaching Assistant
2018 – 2020	Virginia Tech, Department of Geosciences, Blacksburg, Virginia Research Assistant

Project Experience

Numerical Pore Pressure Model Development for Groundwater Injection: Developed a three-dimensional, regional-scale pore pressure model using *TOUGH2-MP* and *Esri ArcMap* for Sustainable Water Initiative for Tomorrow (SWIFT), an aquifer recharge project near Hampton Roads, Virginia. The ongoing project utilizes the model for the design and deployment of seismic monitoring stations throughout southeast Virginia.

Numerical Modeling and Dewatering Analysis for Infrastructure Projects: Developed a groundwater flow model using *Groundwater Modeling Software* (*GMS*) and *ArcGIS Pro* to estimate pumping rates for dewatering processes at an ongoing water infrastructure project in South Dakota. The model was used to determine effective drawdown while adhering to budget.

GIS Analysis: Performed geospatial analysis and constructed maps for a variety of projects in the private industry and for government agencies, including the USGS and DOE. Utilized *ArcGIS Pro* to develop a comprehensive, large-scale contour map of bedrock elevation, incorporating rock properties such as shear strength and rock quality, for a major bridge foundation project. Conducted geostatistical and geospatial analysis of fluid-induced seismicity in oil- and gas-producing regions in Oklahoma and Colorado.

Python Programing: Developed custom Python scripts to perform complex hydrogeology tasks and to enhance the functionality of *ArcGIS Pro*, enabling specialized tasks beyond the software's standard capabilities. Developed algorithms to estimate regional-scale surface elevation changes due to deep wastewater injection, enabling back-calculation of deep reservoir hydrogeological parameters and calibration of complex models using surface measurements.

Geology Field Investigations: Oversaw geotechnical field investigations, including infiltration tests, well installation, soil/rock sample collection, and permitting processes.