

Elizabeth Small, Wichita State University, Wichita, Kansas, USA for their project: *Storage Conditions of Mafic Recharge Magmas at Newberry Caldera, Central Oregon*.

I'm a first-generation college student from a small community in Lancaster, SC. I began pursuing my B.S. at Clemson University as a chemistry major, a subject I loved, but health complications made that path unsustainable. Changing my major felt like giving something up. What I found instead was that geology did not ask me to leave chemistry behind; it put it to use. My undergraduate mentor made sure of that, and my M.S. research continues it. Now I'm pursuing my M.S. in Earth, Environmental & Physical Sciences at Wichita State University, and I plan to continue with a Ph.D. in volcanology. I found geology by chance, in a place where nobody knew it was an option, and it fits me better than anything I knew to look for.



Through my master's research, I hope to better constrain magma storage beneath Newberry Volcano in Central Oregon. Mafic magmatic enclaves are preserved in the material produced by the eruption ~1,300 years ago that resulted in the Big Obsidian Flow, indicating incomplete mixing driven by recharge. Despite this, only one magma reservoir has been identified. Without constraints on recharge magma storage depth, monitoring data can be difficult to interpret, and the USGS ranks Newberry as the 13th most hazardous volcano in the U.S. I use whole-rock major oxide and trace element geochemistry, electron microprobe data, and mineral thermobarometry to identify the least contaminated enclaves we have collected and reconstruct their storage conditions. This will be the first quantitative petrologic estimate of recharge magma storage depth at Newberry.