Lindsey Sydow

GIS in Water Resources, Fall 2011

Dr. David Maidment

Title: Aqueous Geochemistry in Hydrothermal Features at Yellowstone National Park

Objective: To create a map or series of maps showing geochemical data in hydrothermal features of interest.

Background: I am currently researching the aqueous sulfur gas chemistry at Cinder Pool in Yellowstone National Park. Cinder Pool is located in the One Hundred Spring Plain of Norris Geyser Basin. This backcountry hot spring has some interesting and unique qualities, such as floating sulfur spherules (where the name “cinder” pool is derived from). Finding other hydrothermal features to sample with geochemical makeup similar to that of Cinder Pool would increase the scope of my research.

Method: Use basemaps available through ArcGIS online and geochemical data available from USGS to draw meaningful conclusions about Yellowstone’s hydrothermal features, specifically those in Norris Geyser Basin. Because microbial populations can also tell an interesting story about the hydrothermal environment in which they live, I may also incorporate this information into a map layer.