

# Drought and Arsenic in the San Luis Valley

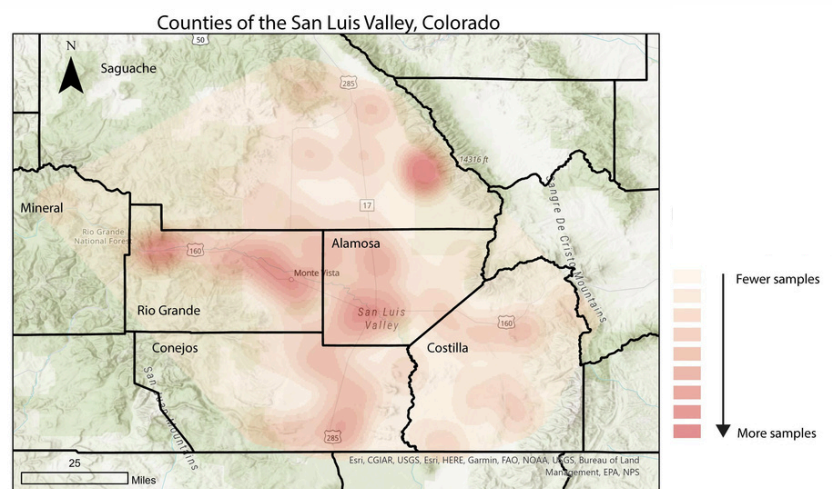
## Executive Summary

### Project Overview

Due to the unique geographic formation of the San Luis Valley, the presence of heavy metals such as arsenic can pose concerns for human health. Research in other regions is suggesting that prolonged drought conditions may increase the presence of these metals in groundwater resources. As drought in the SLV continues to stress regional water resources, our goal is to investigate how it may increase the presence of heavy metals in groundwater.

### Water Sampling, Phase I

From June 2022 through September 2023 we recruited private-well owners to collect water samples from their well. Over 736 samples were collected from the six SLV counties. Our research team analyzed these samples for heavy metals and general water quality indicators, and provided participants with individualized results reports.



### Water Sampling, Phase II

Approximately 45 well owners were recruited to participate in quarterly sampling over the next 2-3 years. These samples will be analyzed for the same heavy metals and water quality indicators.

### Preliminary Findings

- 81% of samples had no concerning levels of heavy metals
- 19% of samples had at least one elevated heavy metal
- 4% of samples had at least two elevated heavy metals

### Moving Forward

As we gather more data, we hope to further assess the following:

- Fluctuation in heavy metals across the seasons (potentially influenced by recharge)
- Spatial distribution of specific metals across the SLV region
- Sources of aquifer recharge
- Other geologic drivers of heavy metals in groundwater

Technical and community reports will be developed to disseminate findings. In collaboration with local and regional partners, we are actively look for funding opportunities to provide interventions for water contaminated with heavy metals.