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What's in Your Water?

The San Luis Valley is well known for its great farming and artesian water. After comparing the taste of tap water compared to purified water, I began to wonder if the fertilizers contained in our drinking water contained unsafe levels of nitrates due to the leaching of fertilizers into underground water. To get a better understanding, I initially talked to agricultural and water engineers. I received training in how to properly test for nitrates in water and ordered in the needed supplies. Next I plotted several locations on a map that showed the farms that use a high percentage of fertilizers. I went to each location and collected water samples. Returning to the lab, I tested each sample and compared it to the acceptable level of 1.0 mg/L. Findings revealed that 78% of all sites tested, had safe levels of nitrates compared to 12% that did not which proved my hypothesis incorrect as I had predicted that 80% of the sites would show unsafe levels. The relevance of this experiment proves that the SLV farmers are controlling the nitrate levels in the water to a high degree. Methehemoglobonimea, blue baby syndrome, is one of the many horrific diseases that can be caused by too high of nitrate levels. It is imperative that farmers continue to practice safe farming practices, and have water samples checked often. A focus needs to be made on the 28% of the sites that showed too high of levels.