

## **Chayenne Jackson**

Junior Division Environmental Sciences

### *Is Your Water Glowing? Water Analysis Of Colorado*

The purpose of this research project was to test water from different areas of Colorado to see the amounts of different compounds such as nitrates, phosphates, copper, hardness, and pH and to determine if any area of the state appears to have high levels. This benefits mankind by showing the public that the water in their area may have high levels of compounds which could lead to cancer and other illnesses. To begin this project, I collected water from Merino, Sterling, Iliff, Denver, Lamar, and Grand Junction. I then tested the water for nitrates, phosphates, pH, hardness, and copper using Hach testing kits. Looking at the data, it appears that Northeastern Colorado showed the highest levels of the compounds tested. Other eastern towns such as Burlington and Lamar were in the mid-range for levels of compounds tested and the lowest amounts were found in Grand Junction and Denver. The control did not contain any compounds. Iliff had the highest amounts of all compounds tested with .40 ppm of copper, .18 mg/L of nitrates, .5 mg/L of phosphates, and 250 ppm of calcium carbonate for hardness. Denver had the lowest amounts overall with 0 ppm of copper, .04 mg/L of nitrates, .36 mg/L of phosphates, and 25 ppm of calcium carbonate for hardness. Overall it appears that Northeastern Colorado had the highest amounts due to the fact that it is farthest from the mountains. The researcher believes that as the water leaves the mountains and travels east it picks up water runoff from fertilized fields causing the contamination.