INTRODUCTION

Water quality in Anchorage is affected by the increasing human development. It is important to monitor our creeks to ensure they remain clean and able to support the many organisms that live in them. This project will conduct water testing (pH, clarity, etc.). These tests are important because it will show the health of the creek and determine how water quality is affected by changing of weather, pollution, people, and other such factors. The question that we have come up with is will there be a dramatic change within the testing of the weeks when our fall weather turns to winter.

This may help Anchorage in a big or small way to find out what are the major factors of the water quality of the creeks in Anchorage. Obviously, the creeks closer to more developed areas are going to have less quality than the creeks in the mountains or more rural areas.

MATERIALS:

- LaMotte Water Monitoring Kit for Shallow Waters (this includes the test materials for pH, clarity, and dissolved oxygen.
- LaMotte Nitrate kit
- Hanna Meter (reads pH, conductivity, and Total Dissolved Solids (TDS)
- A recording sheet.

PROCEDURE:

1. Head to a creek to fetch some water.

2. Fill the bucket up to around the top so you can place the Hanna meter in.

3. Follow the Citizens Environmental Monitoring Protocol (CEMP) for the dissolved oxygen: Fill the three bottles up with water (sample), so high that there are no air

bubbles. Drop eight drops of the #1 (manganous sulfate) and #2(alk pot iodide azide) drops (there is #'s on the cap). Shake twice. Repeat #5 to the other two bottles. Shake the bottles a lot after this, until all the little specks are gone. To titrate the dissolved oxygen: pour some of the bottled tests into the 20ml circular bottle. Add 5 ml of the thiosulfate and stir. After that, add 8 drops of the starch indicator. Stir. The water should appear black or dark blue. Titrate the thiosulfate until the water is clear. Keep track of how many ml of the little plunger (thiosulfate) are used. Repeat this for each of the three DO bottles.

4. Follow the CEMP for clarity. Fill the turbidity columns that have the letters D and S on them with distilled (D) and sample (S) water to the 50 ml line. Look from a bird's eye view and see what dot on the bottom is clearer. If the distilled water is clearer, add .5 ml of the standard turbidity reagent. Stir. Keep doing this until the sample water is clearer. Record the number of additions required.

5. Follow the CEMP for nitrate: For nitrate, fill the nitrate test tubes up to the line. Do this for both tubes. Add the tablet #1 to both. Shake well. Once dissolved, add the #2 tablet. Shake well. Use the nitrate color indicator to see what color the water in the tubes match to.

6. Fill the 25 ml ph tube with sample water and add 10 drops of the wide range indicator. Compare the color of the water to the color comparator.

7. Clean up.

CONCLUSION

Our data shows that the results of the testing have been about the same. This is because maybe there is no significant difference between the summer and winter seasons.

There has been no outlandish or unusual numbers within the data. This means that the creek is in good condition from our research. If we had ignored the data, it would have been really messed up. That would mean that we would have to do it all over again with a lot of help. We have not

found any really interesting numbers among the data. Well everything is interesting, but not outlandish. Everything is where it's supposed to be.

Some patterns that the data has shown: the colorimetric pH, conductivity, and nitrate. The colorimetric pH has always been about 7.25, the conductivity has been around 300, and the nitrate has always been pale. See graph and results on back page. Our research will hopefully help the Anchorage community care more about the creeks within our city during the different seasons.