

TDS and PH Levels of Snow vs. Water.

Anais, Andrew, Miguel, Molly, Mia

Question and Hypothesis

- Do snow and water have the same TDS and PH level's in the same area?
- If we test the TDS and PH levels of snow and water in the same area, the snow will be more polluted.

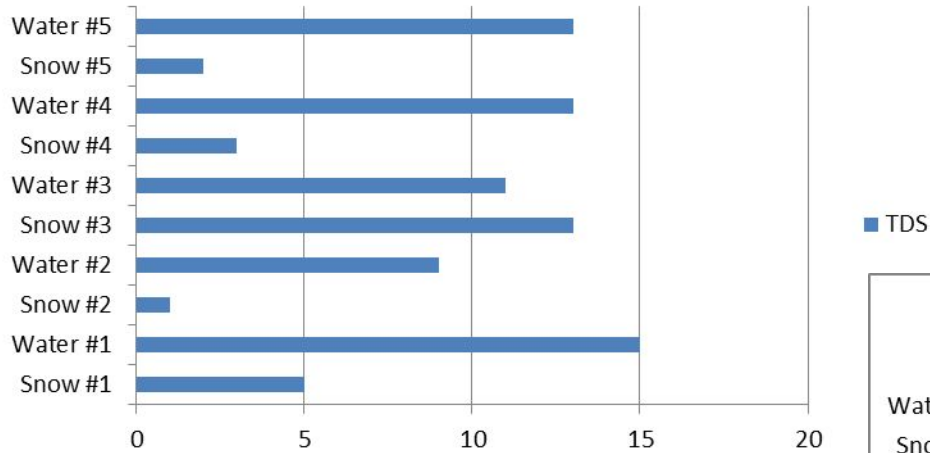
Methods

What did you do?

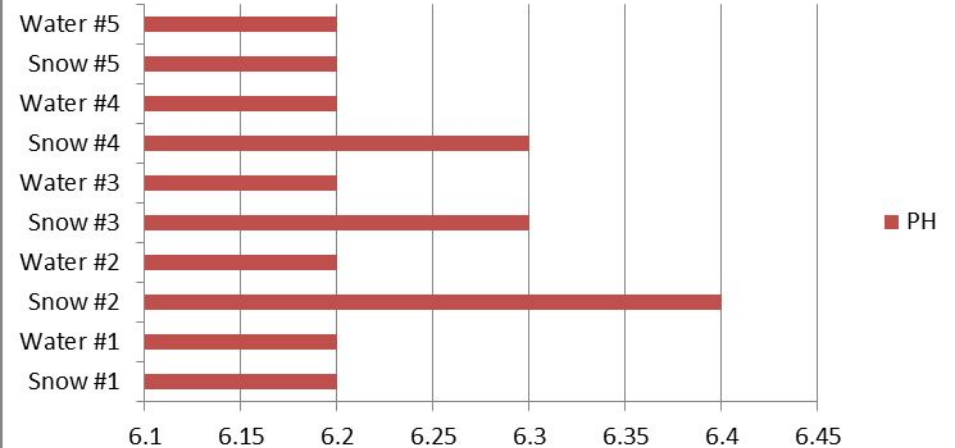
1. Collect 5 samples each of snow and running water from 3 different areas.(Locations are creek by the lodge, street run off by placer county line and North hill)
 - Sample size was 30
2. Melt the snow by placing it in containers by the fire
3. When both are at the same temperature range of 40 to 50 degrees F, test TDS and PH levels
4. Compare between the 3 areas

Road by Placer County

TDS

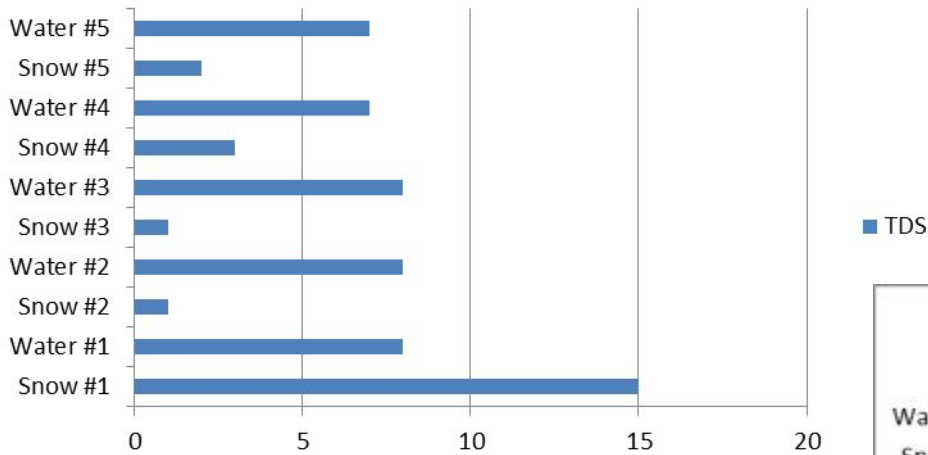


PH

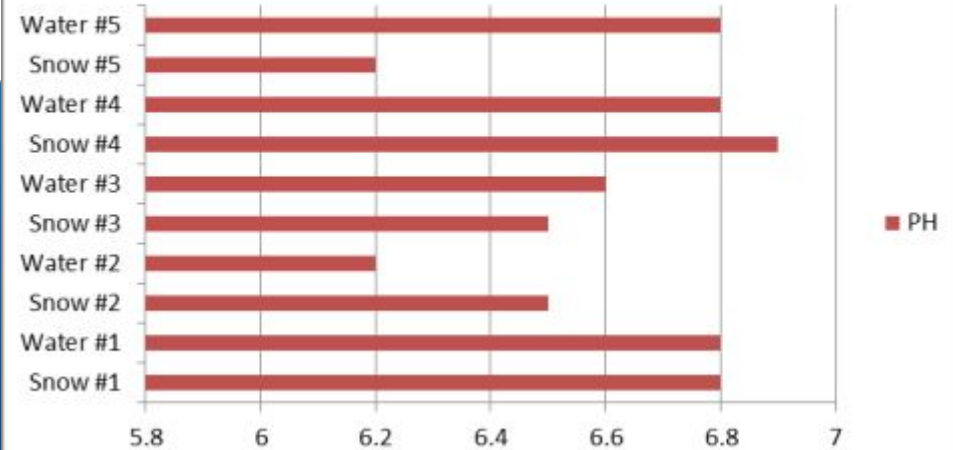


Creek by the Lodge

TDS

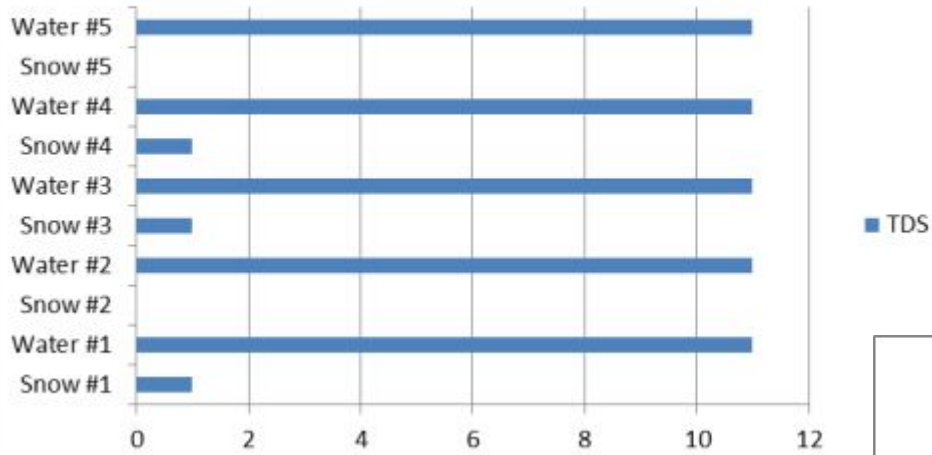


PH

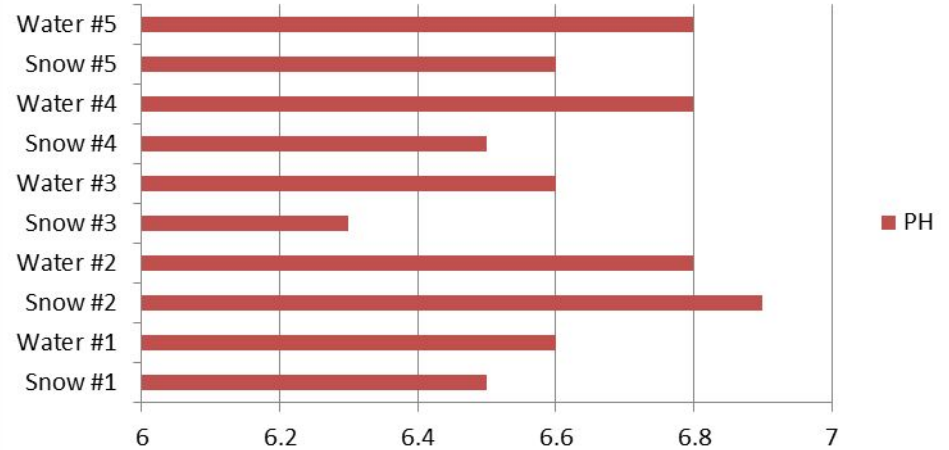


North Hill Creek

TDS



PH

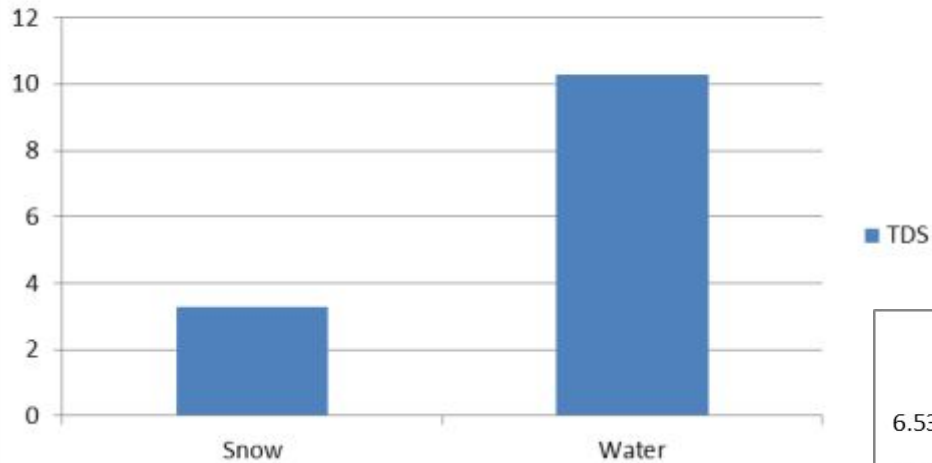


T Test

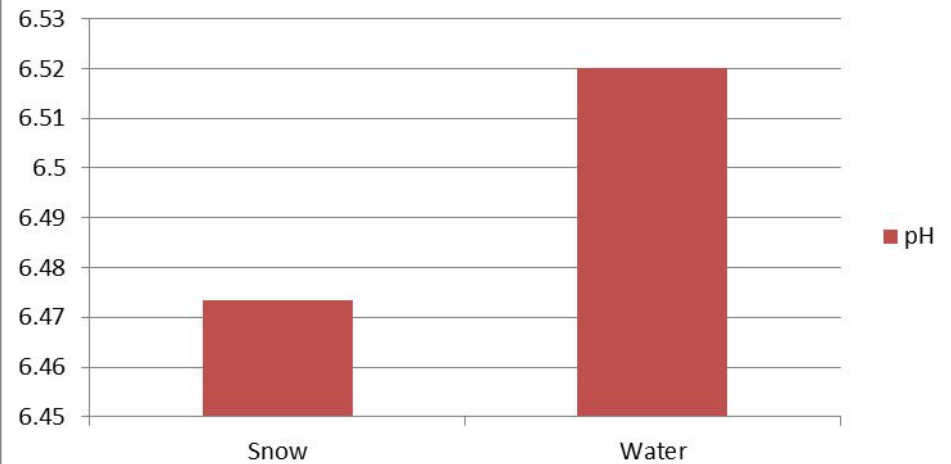
- Probability that the value differences will be smaller if the experiment were repeated
- Water vs. Snow pH: 0.6287p
 - Not statistically significant
- Water vs. Snow TDS: 0.0001p
 - Very statistically significant

Average Water vs. Snow Data

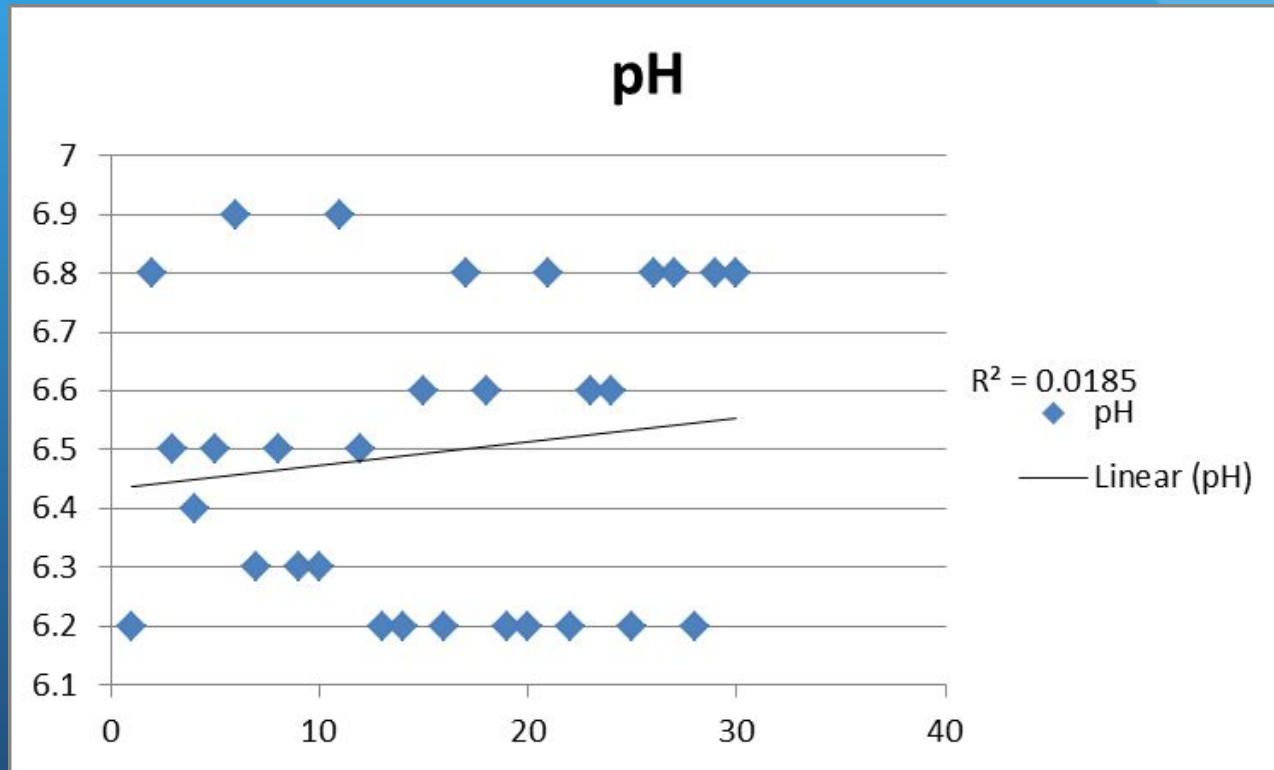
TDS



pH



All Data



Discussion

- Explain your results:
 - Snow has a lower TDS level and a pH level closer to neutral (7)
- The bigger picture of this project is to see if water has similar TDS and PH levels as snow.

Discussion

- Our data does not support our hypothesis
 - Our results show that the water we collected has higher TDS levels than snow in this case

Discussion

- What are some improvements you could do next time?
 - Bigger sample size
 - More consistent temperatures
 - Equalize sample amounts
 - Compare with other similar case studies
- What other questions or research could you do building off of what you found in your project?
 - Why are the TDS levels lower in melted snow?