

Does Drought Affect Water?

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Abstract:

A class started with the question: does climate change induced drought affect water quality: Turbidity, PH, and macroinvertebrate health, dissolved oxygen, salinity, etc.

Those kids got on the bus and went to a local park with a stream. Then the class tested the water for: turbidity, phosphate, nitrate, pH, dissolved oxygen, alkalinity, coliform bacteria, electrical conductivity, temperature and macroinvertebrates.

The hypothesis is yes, climate change induced drought will affect some aspects of water quality such as: macroinvertebrate health, dissolved oxygen, phosphates, nitrates, coliform bacteria & electrical conductivity.

Since the results were inconclusive the class needs to continue researching over a longer period of time.

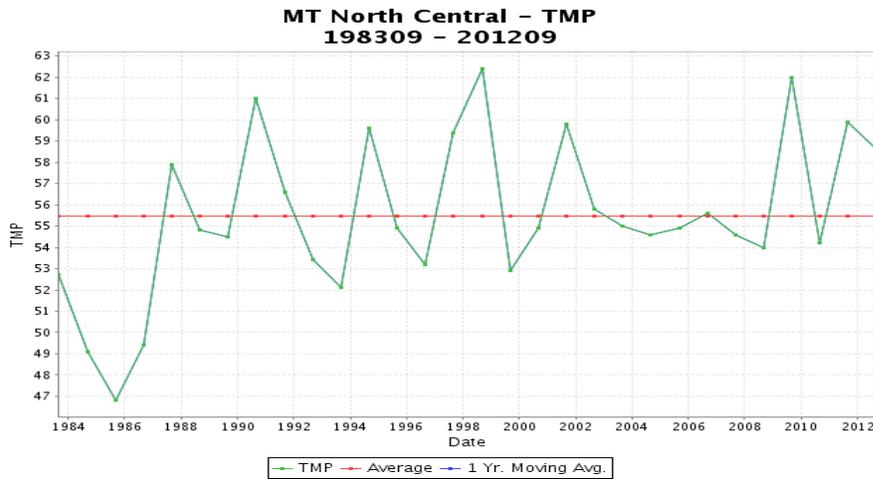
Introduction

The class started with the question: does climate change induced drought affect water quality: turbidity, pH, macroinvertebrate health, dissolved oxygen, salinity, etc? The hypothesis is: yes, macroinvertebrate health, dissolved oxygen, phosphates, nitrates, coliform bacteria & electrical conductivity.

Procedure

The class got on the bus and went to a local park with a stream. Then the class tested the water for turbidity, phosphate, nitrate, pH, dissolved oxygen, alkalinity, coliform bacteria, electrical conductivity, temperature, and macroinvertebrate health.

Observation/data/results



The average temperature is 55 degrees Celsius so 55 degrees Celsius is the average climate for Sept. (The month these tests were taken)

Temperature data from: NOAA website

	Sept. 17 2012	Oct. 4 2012	Apr.2 2013
Turbidity	20jtu	60jtu	0jtu
Nitrate	0-5	5	5
Phosphate	1 ½	1	2ppm
pH	7.5	8	8
Dissolved Oxygen	8ppm	4ppm	4ppm
Temperature	13°C	5°C	11°C
Alkalinity	49	200ppm	0
Coliform Bacteria	Inconclusive	Inconclusive	Positive

“Plants are flowering faster than climate change models predict according to a recent BBC report based on results published in the journal Nature. Longer growing seasons may affect

insects, allergens and animal migrations, and may mean the need for more water -- to name just a few of the potential impacts." (Globe, September 2012). If more water is needed, ponds and streams may dry up which may harm animals including macroinvertebrates.

Conclusion

Since the results are inconclusive the kids will need more tests over a longer period of time. Next year we may continue testing in September, October, and April. We also could talk to older citizens to learn about our climate.

Bibliography

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<http://www.globe.gov/>