CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY

Name(s)
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Project Number
36369

Project Title
Cyanobacteria at Pinto Lake

Abstract

Objectives/Goals
The goal of my project is to see if there is less cyanobacteria in the middle of Pinto Lake, or in the water near the dock's side during a cyanobacteria bloom.

Methods/Materials
I used a microsystin testing kit that I was able to buy, and a photo spectrometer that I was able to borrow from the City of Watsonville Water Resources. I only had the photo spectrometer available for four tests out of the six total that I did. When I didn't have it to use, I based my data on the color change of the water in the test tube.

Results
Based on my photo spectrometer results, the water in the middle of the lake has 8.2 percent less cyanobacteria than the water near the dock. Based on the test kit results, the middle of the lake still had less cyanobacteria. This means that there are less toxins in the middle of the lake than there are in the water near the dock.

Conclusions/Discussion
My conclusion is that the middle of Pinto Lake has less cyanobacteria than the water at the dock's side. When the county of Santa Cruz tests the lake to see if there is an unsafe amount of cyanobacteria, they only test at the dock. My sailing group is most likely to come in contact with the toxins in the middle of the lake, which, based on my results, is safer than the water near the dock during a cyanobacteria bloom.

Summary Statement
I tested the amount of cyanobacteria in two different locations in Pinto Lake, and found that the middle of the lake has less cyanobacteria than the shore of the lake.

Help Received
My dad helped me with transportation and understanding how the testing kit and the photospectrometer worked. Michael Crane, from the City of Watsonville Water Resources provided the photo spectrometer, data from the county and he let me tour his lab.