

CALIFORNIA STATE SCIENCE FAIR 2007 PROJECT SUMMARY

Name(s)

Aidan D. McCarthy

Project Number

S0713

Project Title

Eutrophication and Industrial Effluents: The Contamination of Earth's Most Precious Natural Resource

Abstract

Objectives/Goals This experiment will identify the major pollutants and possibly pinpoint their source. They will also show the conditions of our so-called 'preserved' urban waterways.

Methods/Materials

By collecting samples, before and after rainfall, and then analyzing them for predicted pollutants, these concentrations can be compared and contrasted with other samples at different locations, different sources, and after drainage from the surrounding area.

Results

Increase at Site C (bottom of creek) for Flurides, Chlorides, Phosphates, Sulfates, Alkalinity, Nitrates. Nitrites showed no concentration whatsoever, due to oxidation. Both pesticides, Bifenthrin and Chlorpyrifos showed an exponential decrease, probably because of they fact they may have been bio-degradable or diluted.

Conclusions/Discussion

My hypothesis was correct to an extent. The surrounding industry and housing developments did have an effect upon the condition of the creek, although not as profound as predicted. This experiment can be taken to the next level in analyzing different sites or the same creek in different seasons.

Summary Statement

The effects of runoff from industry and housing upon a so called 'preserved' urban waterway.

Help Received

Dr. Jay Gan at UCR and Virginia Godoy at The Water Treatment plant of Riverside - Testing. Michele Hampton - Board design and creation / project development. Parents - Financial Support