CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)
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Project Number
S0712

Project Title
How Does Water Quality from Sub-watersheds Affect the Compton Creek Environment?

Abstract

Objectives/Goals
The goal of this project was to determine the quality of the water entering the Compton Creek from sub-watersheds and how the water from these sub-watersheds differ in their effects on the environment and how the percentage of lifestyle and society area usage (industrial, commercial, residential, ect.), which empty out into the sub-watersheds, compare.

Methods/Materials
Access to the different sub-watershed test sites in the Compton Creek was aquired from the city, and each test site had three trials on three seperate days. The test sites used where sub-watersheds 3, 7 and 8, and were chosen though to the different land usuage areas running off into them. Each test trial consisted of testing for nitrate, phosphate, dissolved oxygen, pH, turbidity, and temperature levels. The results where then compared to that of the control, Sparklets drinking water and to each sub-watershed to distinguish the affects that the different land usages that run off into each sub watershed affected them.

Results
The sub-watershed with a higher percentage of governmental and commercial land usage had higher levels of pH and more impurities, while the two other sub-watershed test sites with higher residential land usage had more varied results that where affected by other factors(rest of land percent usage, rain, etc).

Conclusions/Discussion
The conclusion based on the results of the experimental trials was that sub-watersheds with a higher percentage of governmental and commercial land usage would have a bigger chance of having higher levels of pH and impurities, while those that have a higher residential land usage vary depending on other factors. These out comes disprove the original hypothesis, that the sub-watershed with higher residential area runoff would have more impurities and environmental effects.

Summary Statement
This project focuses on the effects that different sub-watersheds emptying out into the Compton Creek have on the water quality and environment based on the different land usages that run off into the different sub-watersheds.

Help Received
I would like to thank Alex Kenefick and Meredith McCarthy from Heal the Bay for thier support in this project and for helping me gain access to the sites so the test could be administered. I would also like to thank my parents for all their support and for helping me in anyway they could, transportation, materials,