



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

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Project Title
Water Works

Abstract

Objectives/Goals
 This project is a comparative test of reclaimed water from Lake Balboa with and without rain runoff to Los Angeles tap water, using distilled water as a control. These types of water were tested for coliform bacteria, dissolved oxygen, nitrate, pH, phosphate, temperature, and turbidity using the Low Cost Water Monitoring Kit made by Earth Force and the LaMotte Company.

Methods/Materials
MATERIALS:
 1. Low Cost Water Monitoring Kit
 2. 4 Jars or Containers (to hold the water)
 3. Samples of Reclaimed water with and without rain run off
 4. Tap water
 5. Distilled water
METHODS
 Refer to the Low Cost Water Monitoring Kit instruction booklet

Results

	Reclaimed Water	Reclaimed Water(w/rain)	L.A. Tap Water	Distilled Water (Control)
Nitrate (PPM)	40	5	0	0
pH	8	7	7	7
Phosphate (PPM)	1	2	0	0
Turbidity (JTU)	40	0	0	0

Conclusions/Discussion
 From our tests we found that the reclaimed water from Lake Balboa was not safe to drink or come into primary/physical contact because of the high level of fecal coliform bacteria. The other impurity levels in the reclaimed water were acceptable except in the nitrate level for reclaimed water without rain runoff. Los Angeles tap water was amazingly as pure as distilled water. **INDEPENDENT VARIABLES:** The independent variables are the types of water tested which include: reclaimed water from Lake Balboa with and without rain runoff, Los Angeles tap water, and distilled water. **DEPENDENT VARIABLES:** The dependent variables were the levels of coliform bacteria, nitrates, phosphates, dissolved oxygen, pH, and turbidity. The control that we compared the lake water and tap water to was the distilled water. We could improve or expand the experiment by testing more water samples, such as water stored in L.A. reservoirs

Summary Statement
 This project was to find out how the reclaimed water and L.A. tap water differ from each other in purity.

Help Received
 Teacher helped us with problem; tutor helped us with board layout; mothers drove us