



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Olivia G. Fiori	Project Number J0909
Project Title Are You Sick of Surfing?	
Objectives/Goals My project was to determine if swimming and surfing in more urban areas increase your chance of illness due to contaminates entering the ocean by urban runoff from storm drains, streams and rivers.	
Abstract	
Methods/Materials 7 different samples of ocean water. Water containers. Hanna instruments ecology water testing kit. Protective gear; goggles, apron and gloves. Ocean illness surveys. I passed out surveys and interviewed surfers. I collected 7 different water samples from urban areas and unpopulated areas. I tested the water samples I had collected for dissolved oxygen, acidity, carbon dioxide and PH. I had the samples tested by a professional lab for coliform.	
Results 9 of 10 people surveyed indicated that they had become ill after surfing in urban areas with known storm drains and creek runoffs. Illnesses ranged from skin rashes and sinus infections to flu-like symptoms. No one reported getting ill in the less urban areas. The water close to urban areas did show higher levels of pollution, however those levels were well within the state standards for safe water.	
Conclusions/Discussion My conclusion is that you are more likely to become sick by swimming and surfing in more urban areas as compared to less urban areas due to a higher level of pollution entering the ocean through storm drains, sewage spills, creeks, etc. This year was unusually dry and there had been no recent runoff. I was not able to get samples during a time of runoff. I learned that pollution levels are their highest within 72 hours after a storm or heavy rains. I would like to continue my research throughout the year or more so I can compare results under different conditions.	
Summary Statement My project is about ocean pollution and whether that pollution can actually make you sick from contact.	
Help Received Testing for E-coli and Total Coliforms were done at Bolsa Analytical. I did not perform any part of those tests.	