



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Elena M. Tessler	Project Number J0929
Project Title Water Quality in Klopp Lake	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My goal was to determine how animal pollution affects the water quality in Klopp Lake, at the Arcata Marsh.</p> <p>Methods/Materials First, I obtained a permit that allowed me to take a boat out on Klopp Lake. Once a rented canoe was in my possession, two testing sites in Klopp Lake in the Arcata Marsh and Wildlife sanctuary were chosen. The first was about ten meters from the shore of Klopp Lake (where there are few birds), and the second site was about one meter from the center island (where there are hundreds of birds). For the purpose of water quality comparison, I used plastic collection bottles to take water and plankton samples from each of the two sites, then tested the water samples from each site, using water quality testing kits for ammonia, plankton, pH, turbidity level, and dissolved oxygen.</p> <p>Results Results from my testing showed that the dissolved oxygen level near the shore was consistently 13 ppm, while dissolved oxygen was 11 ppm the first trial, and 10 ppm the second trial. There was no ammonia found in the water near either testing site. The turbidity level of the shore water was 9.09 NTU, and island water had a turbidity level of 9.99. Both sites had 9.0 ppm for their pH levels. No plankton was found in either the shore water or the island water, although traces of microscopic plants were found in both. Low oxygen level, high ammonia level, high pH level, and high turbidity level are all indicators of a less-than optimal environment.</p> <p>Conclusions/Discussion From the data and results I had gathered, I was able to determine that the water near the island of Klopp Lake was of a somewhat lesser quality than the water near the shore. I believe my testing was important, for if the island water had been heavily polluted, the accumulative effects of the animal pollution could have significantly influenced the wildlife in a negative way. Wild birds not only use the water as a drinking source, but they live in the water their whole lives, and are forced to rely on their nearest water source, regardless of its quality.</p>	
Summary Statement The focus of my project was to determine how animal pollution affects the water quality in Klopp Lake.	
Help Received Parents helped attain canoe and permit; Water testing supplies were borrowed from Mr. Luis Armin-Hoilin, biology teacher at Arcata High School; Testing was done under the supervision of Mrs. Calisa Holm, science teacher at Pacific Union Elementary School.	