



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

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Project Title From Here to Maine: Is Tap Water All the Same?	
Abstract	
Objectives/Goals I wanted to determine if the quality of tap water across the United States varied. My hypothesis was that there will not be any difference in the tap water quality throughout the United States because of the Clean Water Act.	
Methods/Materials I collected tap water samples from 39 different locations across the United States. I recorded the exact location by latitude and longitude coordinates using a Magellan GPS unit. At each location I collected 2 samples of tap water and tested each sample for total bromine (ppm), chlorine (ppm), pH, and total alkalinity (ppm) using "PoolTime" brand test strips.	
Results 78 water samples were collected. No bromine was found in 46.15% of the samples. Total bromine samples varied from 0 - 3 ppm. No chlorine was found in 91.03% of the samples. Chlorine samples varied from 0 - 1 ppm. A pH of 6.8 was recorded most frequently (23.68%) in the samples with all samples having a pH range of 6.8 - 8.0. Total alkalinity showed the most variability. A total alkalinity of 0 - 40 ppm was most frequently observed (14.47%). The total alkalinity varied from 0 ppm to greater than 240 ppm.	
Conclusions/Discussion I found that tap water quality does vary throughout the United States even though the EPA tries to regulate it. My hypothesis was found to be incorrect. Water quality reports from 6 different locations support my findings that tap water quality does differ throughout the United States.	
Summary Statement My project shows that tap water quality for chlorine, bromine, pH and alkalinity varies across the United States.	
Help Received My parents drove me across the U.S. from California to Maine. They purchased the test strips and supplied the GPS unit.	