



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Wiley D. Strahan	Project Number S0915
Project Title What's in Your Water?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals To determine the levels of lead, chlorine, copper, nitrate, nitrites, hardness, alkalinity and pH present in selected water samples and to quantitatively measure whether the levels were affected as a result of contact with plumbing fixtures, meters, or filtration devices.</p> <p>Methods/Materials Lead Check- 1. Fill collection bottle to the line with water sample. Use #First Draw# water# water that has been in the pipes for several hours for the highest levels of particles. Add tablet from #LeadCheck# pouch to water sample. Shake vigorously until the table is dissolved. Add content of the small bottle marked #LeadCheck Carrier Solution# to the water sample. Shake for 30 seconds. Let the capped bottle sit undisturbed for one minute. There should be a blue layer below a layer with clear or yellow liquid. Insert a #LeadCheck# strip into the neck of the bottle and let it hang by the label so that the bottom of the strip extends into the top layer of liquid no more than 1/4# only. Let the stip sit undisturbed for 5 minutes. When the liquid has migrated to within 1/4# from the top of the strip, remove the strip from the bottle and place it on a clean plastic wrap. Allow the strip to air dry for one minute. After the strip has dried, activate a #LeadCheck# Swab by crushing it at points #A# and #B# and shaking to mix the chemicals. Drip two drops of the Swab solution onto the test strip about 1/2# up from the bottom of the strip. Immediately observe the strip for the presence of a pink line about 1/2# from the bottom. Rinse with a small amount of water to remove excess dye color from the surface. If a pink line or partial pink line forms across the strip 1/2# from the bottom of the strip, then the test is positive for lead. The thicker and darker the pink line, the more lead in the sample.</p> <p>Results I fund two different sources of lead and with a filter there was none left and when I tested various other sources all from faucets there was no lead in the water.</p> <p>Conclusions/Discussion As a result of my experimentation I came to the conclusion that because there was lead and hardness present before the faucets and not after, which was probably due to the filter or water softener, the faucets were not the source of the lead and hardness. In Assembly Bill 1953 lead was the major concern expressed in the bill and due to my experiments the claim of the bill that the faucets were the source of lead can be invalidated in this case.</p>	
Summary Statement I tested lead along with various other particles to determine if the faucets and pipes were the causes of the lead and other chemicals which was addressed in AB 1953 or other sources were the culprits.	
Help Received Mother found the lead tests on the internet due to the difficulty in finding one that measured to parts per billion	