



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Jacqueline C. Peterson	Project Number J1724
Project Title It's the Source, of Course! How Different Sources of Water Affect Lima Bean Plant Growth	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective is to determine how different sources of water affect lima bean plant growth. The hypothesis states that lima bean seeds watered with marsh water will produce healthier plants than those watered with other water sources in terms of plant height, leaf color, leaf size, and the amount of leaves.</p> <p>Methods/Materials Two lima bean seeds covered in fungicide were planted in eight 1-gallon pots approximately three feet below a fluorescent light for 18 hours a day. The seeds were watered with well, delta, marsh, hot tub, tap, sparkling mineral, distilled and bottled water with fluoride, and measured for 50 days. Leaves were measured and pictures were taken at 10 day intervals.</p> <p>Results Roughly half the seeds germinated. The experiment showed intriguing results with plants from six water sources having strange colors and unique leaf deformities. The only plant that appeared to look healthy was the plant watered with well water. It had a rich green color, large leaves and was slightly taller than the rest of the plants. The plant that grew the worst was the one watered with hot tub water. It was small and yellowish in color and the leaves were very dry and brown.</p> <p>Conclusions/Discussion The hypothesis was incorrect because the seeds watered with marsh water did not germinate. Only the plant watered with well water had many sets of green, healthy, large, well formed leaves. Perhaps this was because all the other water sources had chemicals or impurities in them that harmed the plant. Chlorine in the hot tub water dissolved quickly but may still have caused the plant to grow poorly.</p>	
Summary Statement This project analyzes how eight different sources of water affect lima bean plant growth.	
Help Received Mom helped type the report and assisted in creating graphs and tables.	