



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Lindsay M. Harrison	Project Number J2013
Project Title Drought Relief: Does Gray Water Harm Plants?	
Objectives/Goals California is in a drought and water conservation is critical. Landscape watering is the largest use of water for average households. Given this, I want to find out if watering plants with gray water (used shower water) will harm plants. I want to test the effects of gray water on four types of plants common to most homes. My goal is to determine if reusing gray water on plants is a viable water conversation tool.	
Abstract Methods/Materials I will test specimens from four plant varieties: Viola, Dwarf Boxleaf Euonymous, Festuca sod and Dracaena Compacta. Half of the plants will be watered with gray water (used shower water) and will be identified with a gray marking. The other half (the control group) will be watered with tap water and will be identified with a blue marking. The plants will be grown under identical conditions and will receive equal amounts of their respective water type for six weeks. I will record my observations, compare plant growth and take photos of the plants after each week.	
Results There was no evidence of damage from gray water use in any of the plant varieties. The plants that received the gray water did not look any different than the control group that received the fresh tap water. Instead of reacting badly to the gray water, the plants exhibited new growth and in some cases, improved.	
Conclusions/Discussion The gray water did not harm the plants in my experiment. This experiment provided useful information regarding whether or not gray water is harmful to many common plants. By applying these results to daily life, it is realistic to presume that reusing my family's shower water could be a reasonable way to conserve water without hurting our garden. It's conceivable that gray water use could benefit thousands of Californians as they try to conserve water during this drought.	
Summary Statement The purpose of this experiment was to determine whether or not gray water (used shower water) would harm common household and landscaping plants.	
Help Received My mother helped me with this project by purchasing supplies and by proofreading.	