



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Adam L. Berman	Project Number S0802
Project Title Water Works: The Effect of the Density of Water on the Wattage Output of an Hydroelectric Generator	
Abstract Objectives/Goals I was trying to find out if a higher density liquid would create a higher electrical output when passed through an hydroelectric generator at the same rate of flow as a lower density liquid. Methods/Materials I concocted three solutions - water, water with 1/2 the maximum soluble amount of sugar, and water with the maximum soluble amount of sugar - and ran them through a homemade hydroelectric generator. Results The results show that the highest density liquid created considerably more electricity than the medium density liquid or the lower density liquid. Conclusions/Discussion There are no major outliers in the data, and the results support my hypothesis.	
Summary Statement I built a hydroelectric generator and tested it's electrical output based upon the density of the liquids that I ran through it.	
Help Received Borrowed Equipment from Tam High Science Department; Sister (Freshman at Harvey Mudd) helped with technical details; Cousin (Phd from Cornell) helped with density related problems.	