



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

<b>Name(s)</b> Luciano F. Scarpello	<b>Project Number</b>  34618
<b>Project Title</b> Well, Well, Well	
<b>Abstract</b> <b>Objectives/Goals</b> My goal was to determine whether well water or city water was better in growing longer roots, taller plants, and more leaves. I used ebb and flow hydroponics to truly test the water with no variable of soil. I used twenty basil in well water and twenty basil plants in city water. <b>Methods/Materials</b> My materials consisted of two eighteen gallon plastic buckets, two large, short and long plastic buckets, four, two foot lengths of half inch black hose, two submersible water pumps, four plastic fittings to ebb and flow the water, forty small basil plants, twenty gallons of water per week, thirty teaspoons of Maxigrow nutrients per week, one bag of pea gravel, forty plastic netted pots, fluorescent grow lights, and plug-in timer. <b>Results</b> I found that the well water was more effective in growing basil plants than city water hydroponically. I believe this is because when I tested the two types of water, I found that well water was harder and had more nitrates. This means that it had more magnesium and nitrogen which is essential to plant growth. <b>Conclusions/Discussion</b> After analyzing my data, I found that my hypothesis was correct, that well water would be more effective to grow basil plants. throughout the testing process, the well water was more green and the roots were long and bright white. On the other hand, the city water was brown and the roots looked unhealthy.	
<b>Summary Statement</b> Testing whether well water or city water was more effective in growing basil plants hydroponically.	
<b>Help Received</b> Dad helped with construction	