



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Amanda K. Fee	Project Number 22023
Project Title Electricity Generated by Water	
Objectives/Goals My science fair project is on hydroelectric power. I wanted to prove that the voltage created by the generators of a dam would be greater if the height of the water behind the dam was increased. In a real dam, the generator sits above the impeller and is connected by a shaft. The impeller is in a watertight case so that no water gets onto the generator. If water were to get into the generator it would short out. Abstract The force of gravity on the water above the impeller will spin the impeller. The higher the level of water, the greater the force of gravity, the faster the impeller will spin. The amount of water behind the dam will only effect how long the impeller will turn. Methods/Materials To prove this I had to create my own impeller. I used spoons connected to two aluminum plates mounted on a shaft. This shaft is connected to a small DC generator, which is connected to a multimeter to measure the voltage produced. For the dam part I used a six-foot long, four-inch diameter clear tube. I mounted this tube to the side of my house above the impeller. I marked the tube at two, four, six, eight, ten, and twelve liters. These marks were for a height level and not a volume level. Results My hypothesis was right the weight of the water behind the dam had more voltage. Conclusions/Discussion I then put water in the tube, at two, four, six, eight, ten, and twelve liters, opened the valve, and recorded the highest voltage. I did this three times at each mark to get an average reading.	
Summary Statement My project Electricity Generated by Water is proving that the taller the dam the more electricity I can get.	
Help Received Dad helped build impeller to turn water	