



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Forbes H. Bainou	Project Number J1001
Project Title Go with the Flow: An Exploration of the Benefits of Hydropower Technology	
Abstract Objectives/Goals My objective was to develop alternative energy sources to fuel our growing world demand for energy and to reduce fossil fuel emission, by utilizing hydropower. My goal was to design a propeller that would produce the greatest amount of rotations per minute. Methods/Materials I first created my propellers to be unique and very different from each other. From there, I tested each propeller individually five times. I then recorded my results and averaged the data. Results From the data, I concluded that propeller A cut through the water the most efficiently because of its hydrodynamic shape. It rotated on average 105%+ more quickly than Propeller B, C, and D. Conclusions/Discussion I can accept my hypothesis because my data shows that I was correct in stating that propeller A would create the most rotations per minute. I can conclude that propeller A was able to cut through the water the most consistently. I believe this is true because the surface area of the blades of propeller A as well as the angle of the blades proved to be optimal for creating the maximum rotations per minute.	
Summary Statement My project investigates the possible benefits of hydropower technology by testing different propellers.	
Help Received My math tutor Blaine Rhodes helped me brainstorm ways of testing hydropower technology accurately.	