



**CALIFORNIA STATE SCIENCE FAIR  
2004 PROJECT SUMMARY**

<b>Name(s)</b> <b>Etta Grover-Silva; Kaela Jorgenson</b>	<b>Project Number</b> <b>S0810</b>
<b>Project Title</b> <b>Rapid Bioassessment Macroinvertebrate Madness</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> Our project's objective was to determine the effect of stream restoration on the aquatic macroinvertebrate community of Cummings Creek, Humboldt Co. CA. We predicted that the restoration projects completed on Cummings Creek would have a positive effect on the aquatic community. We predicted increased macroinvertebrate abundance and biodiversity.</p> <p><b>Methods/Materials</b> We used the California Stream Bioassessment Procedure to obtain macroinvertebrate samples from Cummings Creek in 2000 and 2003. One sample was taken from each of the six established sampling sites from both 2000 and 2003. We extracted all of the macroinvertebrates from each sample and identified them to order and family in the laboratory to acquire macroinvertebrate abundance, species richness, and biodiversity estimates.</p> <p><b>Results</b> Statistical analyses of the data suggested that the species richness, community diversity, and total abundance of macroinvertebrates increased following restoration efforts. There was a drastic increase in abundance of important water quality indicator taxa along with significant increases in richness and diversity. This data shows that the stream restoration projects had a positive effect on the aquatic community.</p> <p><b>Conclusions/Discussion</b> Our results indicate that the restoration projects conducted on Cummings Creek between 2000 and 2003 improved habitat for the aquatic macroinvertebrate community, suggesting improvement in the health of the stream. It is important to measure the effect of these restoration projects because recognizing the effects of stream restoration on aquatic communities is important for planning future restoration efforts.</p>	
<b>Summary Statement</b> Our project's objective was to determine the effect of stream restoration on the aquatic macroinvertebrate community of Cummings Creek, Humboldt Co. CA.	
<b>Help Received</b> Karen Lamoncha oversaw our work; Mother called contacts; Mike Camann assisted with statistical analysis; used Humboldt State University laboratory.	