



**CALIFORNIA STATE SCIENCE FAIR  
2013 PROJECT SUMMARY**

<b>Name(s)</b> <b>Anthony D. Sorace</b>	<b>Project Number</b> <b>S1118</b>
<b>Project Title</b> <b>e-ROAD-ed</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My objective was to determine if using modern road building techniques implemented by the Mendocino County Resource Conservation District, would reduce sediment load to our local streams.</p> <p><b>Methods/Materials</b> During the same storm event, water samples were collected above and below culverts on stream crossings from a road with recent improvements from M.C.R.C.D. and from a road without recent improvements. The samples were filtered and weighed using a 1 milligram scale and the results recorded.</p> <p><b>Results</b> In all instances except one the amount of sediment sampled below the road was greater than above the road. There was a greater percentage increase in sediment below the road on the unimproved road than on the improved road.</p> <p><b>Conclusions/Discussion</b> It was demonstrated that using modern road building techniques helped to reduce sediment delivery to streams. These techniques help to "hydrologically disconnect" the road system from the stream system. This will greatly improve water quality and fish habitat in the future.</p>	
<b>Summary Statement</b> My project was to test water samples to determine if the road improvements made by M.C.R.C.D. help to reduce sediment delivery into Forsythe Creek.	
<b>Help Received</b> Elias Steinbuck gave some guidance and direction throughout the project via email and telephone. My biology teacher, Ms. Pealaterre reviewed my notes and gave suggestions for my presentation. My Mom took photos during the experiment. My Dad helped me read topo maps for the sites studied.	