



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> <b>Dale J. Risk, III</b>	<b>Project Number</b> <b>J1224</b>
<b>Project Title</b> <b>The Effect of Physical Contaminants on Surface Water Pollution</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> To test various types of bodies of water from the U.S./Mexican border to the Arctic Ocean in Alaska for physical pollutants and determine if more the more populated areas of the south are more polluted.</p> <p><b>Methods/Materials</b> Using test kits, test various bodies of water for dissolved oxygen saturation, nitrates, nitrites, turbidity, pH, alkalinity, and hardness. Using a GPS, measure latitude, longitude, elevation for location of sample; also measure air and water temperature for each sample.</p> <p><b>Results</b> 58 samples were taken; 36 percent (21 samples) were from lakes and other bodies of standing water, 48 percent (28 samples) were from rivers and streams, 4 samples from oceans, 3 samples from geysers, 2 samples from glaciers, and 1 waterfall sample. Dissolved oxygen, nitrates, pH, and alkalinity all indicated higher pollution levels in the south (areas of higher population). Standing bodies of water tended to have more physical pollutants than moving bodies of water.</p> <p><b>Conclusions/Discussion</b> Pollution levels from physical contaminants are higher in the south in more populated areas.</p>	
<b>Summary Statement</b> I wanted to test a variety of samples from the Mexican border to the Arctic Ocean in Alaska to see if physical contaminants in surface water were higher in the southern latitudes where population density is heavier.	
<b>Help Received</b> Father drove me to take samples; Mother helped type report.	