



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

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Project Title Salty Science: How Much Salt Is in Ballona Creek?	
Abstract Objectives/Goals The objective of this project is to measure the salinity at various points along Ballona Creek at both high and low tide. Methods/Materials Water samples were taken at various points along Ballona Creek at both high and low tide. Density, electrical resistance, pH, and non-volatile residue (NVR) tests were used to evaluate the amount of salt in the water samples. The results were graphed versus the distance inland from the ocean and the amount of residue determined in the NVR testing was calculated in parts per thousand (ppt). Bottled fresh water, rainwater, and salt water taken from the ocean were used as control samples. Plant and animal life was observed along the creek giving clues to the presence of salt in the water. Results At both low and high tide, the water at the ocean outlet of the creek tested comparable to the salt water control sample. As the samples progressed inland, the salinity levels decreased. At low tide, samples taken 2700 feet and more inland from the ocean end of the creek tested similar to the fresh water control samples. At high tide samples had to be taken much further inland to reach fresh water. The presence of bay mussels and California sea mussels at various points along the creek, gave evidence as to the general salinity of the sections of the creek. Conclusions/Discussion My conclusion is that the salinity level of Ballona Creek varies depending upon the tide. At high tide, the saltwater reaches much further inland than at low tide.	
Summary Statement Water samples were taken along Ballona Creek as it enters the ocean to see the changes of the salinity levels in the water.	
Help Received My parents drove me to the creek so I could collect test samples.	