



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Scott S. Nelson	Project Number 22848
Project Title Bust the Dust	
Abstract Objectives/Goals My project goal was to determine if the sediments under the Salton Sea are more or less likely be blown into the air than surrounding soils. My question, If the Salton Sea recedes, will wind blow more of the exposed particulates into the air, compared to other soils? Methods/Materials Nine different soil types as well as a sediment sample from the Salton Sea are gathered. These samples are subjected to wind speeds of 10 mph, 20 mph, 30 mph, 40 mph, 50 mph, and 60 mph. Each soil test is replicated three times for a total of 180 trials. The beginning weight of the sample, minus the ending weight of the sample after one minute of wind speed, gave me a number by which to compare all soil types and sediment samples. An electronic scale was used for weighing the materials. A Kestrel 3000 wind meter measured wind speed. Results Two soils were less susceptible to getting blown away, and the other 7 were more susceptible to being blown away. The most susceptible 4 soil types were Sb, Gca, Gdp, It. The least susceptible were Cdc, Nab, and the Salton Sea Sediment sample. The numeric results were the same as the visual results. Conclusions/Discussion The sediments from under the water were not as erodible as most of the other soil samples from the Coachella Valley. Based on my results, I could not conclude that exposed land by a receding Salton Sea would have a greater impact on airborne particulate matter than surrounding soils. However, this experiment and my research has led to many other questions that could be addressed about a declining shoreline and its impacts on Coachella Valley air quality.	
Summary Statement With water use in Southern California on the increase, inflows into the Salton Sea are reduced due to better water utilization, according to my experiment, exposed soil will have no greater effect on air quality than the surrounding soils.	
Help Received My father helped me with the computer formatting, and my mother helped me design the board presentation.	