



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

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Project Title The Implementation of Recycling at Retail Businesses	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this study was to determine how receptive a cross-section of retail business owners would be to implementing a recycling program, how much of an impact the recycling would make, and what factors would influence the recycling behavior of business owners and their customers.</p> <p>Methods/Materials Nine retail business owners/managers were asked to participate in a trial recycling program. A 32 gallon barrel was placed in front of each business for three weeks, and the number of cans, bottles, and trash items that came in each day were counted and sorted. Various factors, such as adding two types of educational signs, were varied to determine if the amount of recycling could be increased. A questionnaire was given to each of the participating businesses at the end to determine how the managers/owners felt about the program.</p> <p>Results In the three weeks of recycling at six businesses, a total of 2,516 cans and bottles were recycled. One business, a car wash, accounted for 52% of all the recycling. Adding an educational sign to the barrels increased the amount of recycling an average of 50%. The humorous educational sign generated 40% more recycling than the serious educational sign. The questionnaire to the business owners/managers revealed that all of the participants were either positive or neutral about the recycling program before and after the program was implemented. All of the owners/managers said that they would either definitely be interested in participating in a long-term program, or they might be interested.</p> <p>Conclusions/Discussion Although recycling in American households is at a record high, recycling at businesses is largely ignored. If cities were to implement recycling for selected businesses, it would have a major impact on the environment and landfill use. Although there was previously no recycling program for businesses for the City of Rancho Palos Verdes, most people affected were receptive to implementing a trial recycling program. This trial demonstrated that a significant amount of recycling can be generated by customers and employees of retail businesses. There are various factors that cities can consider to increase the amount of recycling that is collected. These factors include choosing businesses that produce large amounts of recycling and educating the public about the benefits of recycling, especially using a humorous educational technique.</p>	
Summary Statement This project quantifies the impact of adding recycling barrels, with and without educational signs, to a variety of retail businesses.	
Help Received City official helped choose retail businesses, Father helped create computer images for recycling signs.	