



# CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

<b>Name(s)</b> <b>Brian Ith; Marcus Rodriguez</b>	<b>Project Number</b> <b>S0912</b>
<b>Project Title</b> <b>Examining Invasive Boars' Impact on Water Quality in Tejon Ranch Conservancy in Comparison to Wind Wolves Preserve</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives</b> Examine and deduce a connection between poor water quality in natural parks and the presence of wild boars by analyzing a park with boars living in it to a park without boars.</p> <p><b>Methods</b> Used camera traps given from Tejon Ranch to examine spots where pigs reside. Then take water samples from these locations, while taking water samples from Wind Wolves Preserve (a park without boars). Then compare the water quality between the two parks by examining pH, nitrate, and conductivity.</p> <p><b>Results</b> The pH, nitrate, and conductivity found in Tejon Ranch (the boar park) depicted unhealthy levels of water in the park where the boars reside. While Wind Wolves Preserve, which has no boars, showed optimal levels of water.</p> <p><b>Conclusions</b> The non-native species to Tejon Ranch Conservancy, Wild Boar, has caused major damages to the habitats, biodiversity, and overall health. Their population needs to be reduced to moderate numbers to prevent the contamination of the water. Also, if pig populations are controlled, then species would not have their habitat destroyed and the diversity of wildlife would be at a balance once again.</p>	
<b>Summary Statement</b> We examined water quality in natural parks and examined a connection to where the wild boars lived and poor water quality.	
<b>Help Received</b> Mike Brasier, our teacher and advisor. Ranger Brooke from Wind Wolves Preserve for showing us water areas. Rangers from Tejon ranch for supplying camera footage and water.	