CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY

Name(s)
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Project Number
S0601

Project Title
How Water Density Affects Wave Height

Abstract

Objectives/Goals
To determine the height of waves between water of different densities caused by a simulated earthquake.

Methods/Materials
Built wave tank.Next,filled with distilled water.Pulled simulater to water surface and repeated motion for each trial. recorded with marked ruler and slow motion camera.Repeated process with the difference of adding salt that matched ocean concentration. Material:50-gallon tank, refractometer, weights, rope, wood, distilled water, table salt, camera, wheel, and tools.

Results
Average wave height was taller in fresh water than in salt water.Time for wave settling favored fresh water and all data was constant.

Conclusions/Discussion
The density of salt water made smaller waves because the plunger moved through the water slower than in fresh water.Showing that more force is needed to create larger waves in salt water than in fresh water. Hypothesis was correct.

Summary Statement
To test whether density plays a factor in creating waves.

Help Received
Used lab equipment at university UCI under supervision of Mrs.Mauzy-Melitz