CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY

Name(s)
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Project Number
35776

Project Title
Nurdles and Ports

Abstract

Objectives/Goals
The purpose of my project was to determine if the amount of nurdles found on the shoreline could be affected by the distance from a port. Nurdles are the raw form of plastic products and are found in small, lightweight pellets. The site closest to the port seems the most likely to have the largest amount of nurdles since they could be easily spilled during transportation.

Methods/Materials
Three different sites on the south side of the Long Beach port were chosen to conduct nurdles counts in five trials. A measuring tape was used to mark off a 60 centimeter square in the sand. Nurdles were collected using a sifter and counted from that square. The average of the trials were taken for each site and compared to one another.

Results
My results show from the three sites I went to, the site farthest from the port had the largest amount of nurdles. In contrast, the site closest to the port had the least amount of nurdles on the shoreline.

Conclusions/Discussion
The amount of nurdles I found on the shore supports the idea that nurdles are not necessarily concentrated at ports since there was not a correlation. Ports are protected by a wall to prevent large waves from entering the port. The currents may have greater impact on the amount of nurdles which may expain why there were more nurdles outside of the protected port. This is important because by knowing ports are not a main source of nurdle spills helps to narrow down where the real problems occur during the transportation of nurdles.

Summary Statement
My project addresses the issue of whether or not there is a concentration of manufactured plastic pellets at ports due to the presence cargo ships that potentially transporting them.

Help Received
Mother drove me to sites.