

Abstract

Project Title: Surviving the Surge

Project ID: 561

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A brief explanation of your project. Enables judges to receive a base understanding of your project and work.

This year the Great Lakes water levels were the highest in recorded history. Meaning that more homes are getting damaged due to flooding and beach erosion. I had a hypothesis that if you use curved defenses it will reduce the amount of flooding. To test this I had made a mechanical wave tank and tested 7 defenses. My results were that the recurve step wall had an average 0 mL of water, the recurve with 3.60 mL, the rock armor had 66.66 mL, the block with 251.66 mL, the dike with 343.33 mL, then the mid-break water with 389.66 mL and finally the worst was the control with 1321.66 mL of water. In the end the curved defenses had proven superior to those that did not have a curve.

Items to Include:

- **Introduction:** Why did you do this project and why is it important? How will this effect people and why is it needed. Inspire the reader to continue learning more about your research and read your report.
- **Problem Statement and Engineering Goal / Hypothesis:** What is the problem you were solving and what was your engineering goal or hypothesis.
- **Procedures:** How did you solve the problem and or test your hypothesis. Don't go into details, provide a broad, conceptual view of what you did. For engineering, what was your design criteria.
- **Results:** What was the outcome? Use your data and numbers to describe your result.
- **Conclusion:** Was your hypothesis supported or the engineering goal met?