Local Source (Cascadia Subduction Zone) Tsunami Inundation Map
Siltcoos Lake, Oregon

Introduction

The Cascadia Subduction Zone (CSZ) is a region where the North American Plate and the Juan de Fuca Plate interact, with the North American Plate moving westward over the Juan de Fuca Plate. This interaction is characterized by periodic earthquakes, which can generate tsunamis. Tsunamis are surface waves in the ocean that can travel vast distances before reaching coastal areas, potentially causing significant damage and loss of life.

Map Explanation

This map depicts the potential tsunami inundation along the Oregon coast, specifically for the Siltcoos Lake area. The map uses color coding to represent different levels of tsunami risk, with areas shaded in varying colors indicating the extent of potential inundation.

The map is based on hydrodynamic tsunami modeling by the United States Geological Survey (USGS), which considers the energy released during a Cascadia Subduction Zone event. The modeling takes into account the bathymetry and topography of the coastal region to predict areas that are most likely to be affected by tsunami inundation.

The map also includes contour lines indicating the wet and dry zones. The wet zone is where tsunami waves reach the land, while the dry zone is where waves have receded. The wet/dry zone represents the boundary between these two areas.

Key to Symbols

- **Yellow**: Areas with the highest tsunami hazard, indicating that tsunami waves are expected to reach the land.
- **Orange**: Areas with moderate tsunami hazard, indicating that tsunami waves may reach the land.
- **Green**: Areas with low tsunami hazard, indicating that tsunami waves are unlikely to reach the land.

The map is intended to help cities, counties, and other sites identify areas at risk for tsunami inundation, thereby enabling better planning and preparedness measures.

References

- Don W.T. Lewis, Rachel L. Smith, Kaleena L.B. Hughes, Sean G. Pickner, T. English, and George R. Priest, Department of Geology and Mineral Industries (DOGAMI), Portland, Oregon.

The map is a comprehensive tool for understanding the potential tsunami hazard along the Oregon coast and is designed to aid in disaster preparedness and emergency response.