Introduction

The Cascadia Subduction Zone (CSZ) is a tectonic boundary where the Juan de Fuca Plate subducts beneath the North American Plate. This subduction process generates a risk for large earthquakes and tsunamis along the Pacific coast of the United States, including Oregon. Tsunamis are caused by the sudden displacement of water in the ocean, often following a large earthquake that results in the sudden movement of the seafloor. Understanding and mitigating these risks is crucial for coastal populations in the region.

Map Production

This map was produced under the guidance of the Oregon Department of Geology and Mineral Industries (DOGAMI). The data used in the map were collected and analyzed by experts in geology and coastal hazards. The map highlights areas that are at risk of tsunami inundation, based on historical earthquake activity and modeled scenarios.

Data References

Coordinate System: UTM Zone 10N, National Geodetic Survey (NAD83/WGS 1984) projection
Projection: Transverse Mercator
Datum: North American 1983
Scale: 1:10,000
Scale Accuracy: ±100 feet

Map created by: Kaleena L.B. Hughes, Sean G. Pickner, Ian P. Madin, Vicki S. McConnell
Map Production: Don W.T. Lewis, Rachel R. Lyles Smith

Tsunami Simulation Maps for Gold Beach, Oregon

Legend

- Red: High Risk
- Orange: Medium Risk
- Yellow: Low Risk
- Green: Very Low Risk

Tsunami Inundation Map Date: Curr-09

Elevations measured in feet above mean sea level at mean tidal range (MTR) for an average month of the year (7-ft MTR).

Map References


Additional References


This work was supported by federal funding awarded by NOAA, DOGAMI has been identifying and mapping the tsunami inundation hazard along the Oregon coast since 1994. In Oregon, DOGAMI manages the National Tsunami Hazard Mitigation Program, which has been administered by the National Oceanic and Atmospheric Administration (NOAA). The DOGAMI Inundation Boundary (DOB) is a critical tool for coastal communities as it helps identify areas that may be affected by tsunami inundation. By understanding and mitigating the risks, coastal communities can take steps to improve safety and reduce potential damage.

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STATE OF OREGON

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