STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
JOHN D. BEAULIEU, STATE GEOLOGIST

Tsunami Hazard Map of the Gold Beach Area, Curry County, Oregon

2000

IMS-13

Tsunami Hazard Map of the Gold Beach Area,
Curry County, Oregon

By G.R. Priest and others

Funded by Federal Emergency Management Agency
Cooperative Agreement Number EMS-97-CA-0058 (from
funds originally given to the National Oceanic and Atmospheric
Administration for tsunami hazard mitigation) and
the Oregon Department of Geology and Mineral Industries

MAP EXPLANATION

(see accompanying text for complete explanation)

Extreme risk zone for tsunami flooding (300-600 year events)

High risk zone for tsunami flooding (300-600 year events)

Moderate risk zone for tsunami flooding (300-600 year events)

Low to negligible risk zone for tsunami flooding (300-600 year events)

How to use the Map:

Mapped boundaries may be viewed as guides for evacuation planning in the event of an earthquake and tsunami. If an earthquake occurs with 20 seconds or more of shaking that is strong enough to make standing difficult, plan on going immediately to the lowest risk site available. A tsunami could arrive within a few minutes of the earthquake. Such nearby earthquakes and associated tsunamis only occur on the order of 300-600 years. Distant tsunamis (teletsunamis) occur more often, are generally smaller than tsunamis from nearby earthquakes, and arrive hours after a distant earthquake. The West Coast and Alaska Tsunami Warning Center issues warnings for all teletsunamis affecting the west coast of the United States.

Map prepared by:

George R. Priest, Oregon Department of Geology and Mineral Industries, from numerical simulations of Edward Myers and Antonio Baptista, Oregon Graduate Institute of Science & Technology, and Robert A. Kamphaus, Center for the Tsunami Inundation Mapping Effort, National Oceanic and Atmospheric Administration. All of these individuals are co-authors on this map and should be listed in order indicated for bibliographic citations.

Scale 1:12,000

0 1000 2000 4000 Feet

Location Map

DISCLAIMER

The Oregon Department of Geology and Mineral Industries is publishing this map because the subject matter is consistent with the mission of the Department. The map is not intended to be used for site specific planning. It may be used as a general guide for emergency response planning.

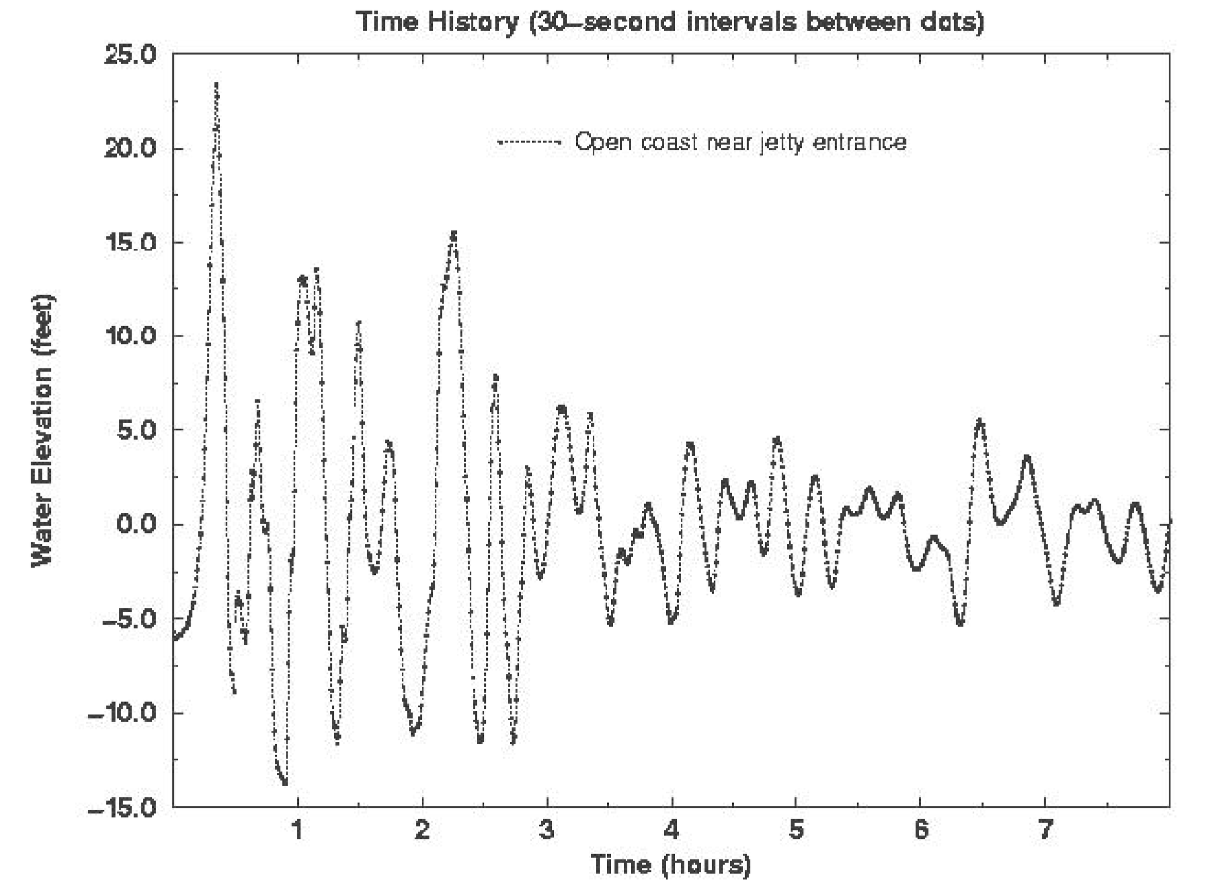

Figure 1. Time history of wave arrivals after a magnitude 9.1 earthquake on the nearby Cascadia subduction zone fault system. Negative wave elevations correspond to surges of water heading seaword; positive elevations correspond to surges up the estuary channels. Observation point is immediately offshore of the main jetties at the mouth of the Rogue River. Note that the first major surge of flooding does not strike this area until about 15-20 minutes after the earthquake. Current direction in the estuary channels could be either seaward or landward during the first 30 minutes after the earthquake, depending on how the fault rupture process occurs. Actual tsunami wave elevation at shoreline sites will be much higher than shown on the figure. The figure should be used to understand approximate timing and relative wave elevation; not absolute wave elevation at the shoreline. A moderately high tsunami run-up scenario (Model 1A of Priest and others (1997) is illustrated

Base map modified from Photogrammetric Data Services, Eugene, OR., 1997
5,000 foot grid ticks (shown in black) Oregon State Plane Coordinate System, south zone
NAD 1983
Public Land Survey System delineated with red ticks and associated section numbers