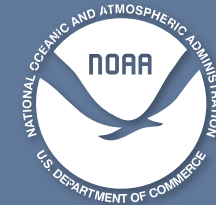


Kalaloch Tsunami Evacuation Walk Times



WASHINGTON STATE DEPT OF
**NATURAL
RESOURCES**
WASHINGTON
GEOLOGICAL SURVEY



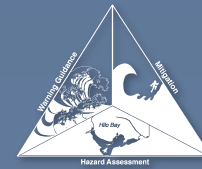
WASHINGTON GEOLOGICAL SURVEY
OCTOBER 2024



**IN CASE OF EARTHQUAKE, GO
TO HIGH GROUND OR INLAND**



Washington Military Department
Emergency Management Division



National
Tsunami
Hazard
Mitigation
Program



This map is a planning and preparation tool. Learn the evacuation routes for you and your family where you live, work, and play—evacuation maps may not be on hand during an actual emergency.

This evacuation walk time map for the Kalaloch area provides an estimate of the amount of time it would take to evacuate from within the modeled inundation zone of a Cascadia-sourced subduction zone earthquake. This map provides the inundation extent for a magnitude 9 earthquake, the L1 event. Time estimates on this map are modeled assuming a slow walking pace of 2.46 mph (~24 minute/mile), equivalent to the pace used for the timing of cross walks. Estimated wave arrival times shown on the map indicate the time between the beginning of the earthquake and modeled wave arrival at that location.

- Evacuation should begin as soon as earthquake shaking stops and it is safe to move from your drop, cover, and hold position or as directed by a tsunami warning siren, NOAA weather radio, or other official announcements.

- Make your way uphill to high ground and follow the designated evacuation routes shown on this map. These routes were selected for pedestrian evacuation, but may be affected by post-earthquake hazards, such as collapsed bridges, landslides, and downed power lines. Use situational awareness when evacuating and be prepared to take alternate paths if necessary.
- Post-tsunami assembly areas on forest service roads east of the South Beach Campground, Kalaloch Campground, and Kalaloch Ranger Station are places of high ground for displaced people. Assembly areas are typically in open outdoor spaces or in large structures just beyond the tsunami inundation zones and likely will not have immediate services or shelter.
- Do not re-enter or cross back into the inundation zone until instructed to do so by local officials. Tsunamis are multi-wave events. The first wave may not be the highest, and danger of tsunami inundation may persist for many hours after the initial wave has subsided.

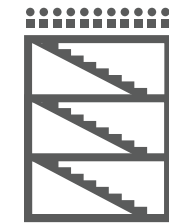
In some places a slow walk may not be fast enough to evacuate before waves arrive. In these cases a faster evacuation pace will be necessary. Some areas may require vertical evacuation structures for successful evacuation.



FAST WALK



RUN



VERTICAL
EVACUATION

This item was funded by NOAA Award #NA23NWS4670022. This does not constitute an endorsement by NOAA.

Tsunami inundation data from:

Dolcimascolo, Alexander; Eungard, D. W.; Allen, Corina; LeVeque, R. J.; Adams, L. M.; Arcas, Diego; Titov, V. V.; Gonzalez, F. I.; Moore, Christopher; Garrison-Laney, C. E.; Walsh, T. J., 2022, Tsunami hazard maps of the Olympic Peninsula—Model results from an extended L1 Mw 9.0 Cascadia subduction zone megathrust earthquake scenario: Washington Geological Survey Map Series 2022-01, 14 sheets, scale 1:48,000, 21 p. text.

[https://fortress.wa.gov/dnr/geologydata/tsunami_hazard_maps/ger_ms2022-01_tsunami_hazard_olympic_peninsula.zip]

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PACIFIC OCEAN

124°23'W

124°22'W

47°37'N

47°37'N

ESTIMATED WAVE ARRIVAL TIME: 20 MIN

Assembly Area
high ground

15

15

K-1000 Rd

Kalaloch
Campground

ESTIMATED WAVE ARRIVAL TIME: 30 MIN

30

Kalaloch
Creek

Kalaloch
Lodge

45

30

45

60

45

15

45

60

45

30

Beach 2
Trailhead

30

15

45

high
ground

30

Beach 1
Trailhead

ESTIMATED WAVE ARRIVAL TIME: 20 MIN

30

South Beach
Campground

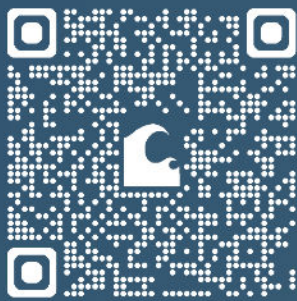
15

Assembly
Area
high
ground

47°36'N

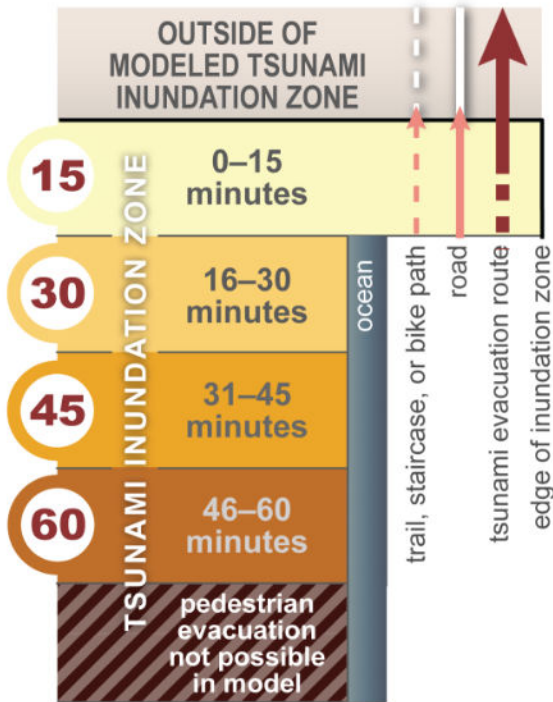
47°35'N

47°34'N



Use the QR code to open this map on your phone

Approximate tsunami evacuation slow-walk times (~24 minute/mile)



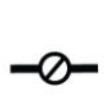
tsunami siren



stream, lake, or pond



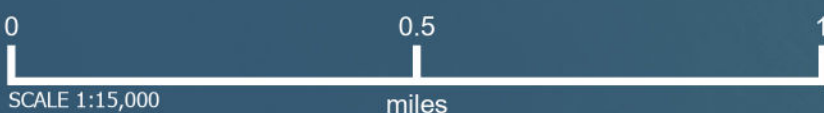
post-tsunami assembly area



bridge inaccessible in model



impassable slope



124°23'W

124°22'W

124°21'W