

To: Valdez Residents and Stakeholders
From: The City Office of Emergency and Disaster Management
Date: August 12, 2021
Re: Tsunami Brochure and Response Guidance



Enclosed you will find an educational brochure regarding tsunami influence in Valdez. This brochure was recently created as a pilot project for the state by the Alaska Earthquake Center and the City of Valdez. The yellow line represents the most current science available to depict maximum inundation of a worst-case scenario tsunami in Valdez. It contains important information such as shelter locations, inundation zones, and response guidance. Please take a moment to review the brochure and consider the following:

- **Is your residence or place of business in the maximum extent tsunami inundation zone?**
 - o If not, staying put during an earthquake/tsunami warning is likely your best choice.
 - o Scan the QR code or see the weblink below to learn if you are at risk.
- **The outdoor warning system (siren) might not be initiated at the onset of an event:**
 - o A tsunami may be localized giving little to no time to initiate the siren.
 - o Damage from an earthquake could prevent the siren's use in a given area.
 - o A tsunami warning or advisory may originate several hours away from Valdez, giving the city time to monitor coastal areas near the point of origin prior to initiating sirens.
- **Getting to higher ground does not mean Thompson Pass (2,678')**
 - o Driving to Thompson Pass exposes you to additional hazards and places at least five bridges that could subsequently become compromised between you and needed resources in Valdez. The same risks for further isolation exist from north of the pass as well.
 - o Higher ground is anything above the yellow line depicted in the brochure. If you are in an inundation zone, and the outdoor warning sirens sound in Valdez or the ground shakes for more than 20 seconds and it is difficult to stand, move to the closest higher ground to your current location. Otherwise, staying put is likely your best choice if out of the zone.
- **Sheltering in Valdez:**
 - o Event circumstances may not warrant evacuation or the instant opening of local shelters. Additionally, shelter staff may be attending to their own immediate safety.
 - o Research shows most people prefer to shelter with family or friends in lieu of community shelters, because they typically have more resources. If you are one of these individuals, make arrangements now with friends or family if you are located in an inundation zone.
- **Incident information:**
 - o The City of Valdez uses NIXLE and Facebook to distribute emergent information.
 - o Other resources include: local radio stations, National Weather Service updates, and notifications from the State Emergency Operations Center.

Visit: <https://earthquake.alaska.edu/sites/all/tsuMap/html/tsunami.html> to see Valdez inundation zones

Visit: <https://local.nixle.com/register/> to sign up for local City of Valdez NIXLE alerts and messaging

Visit: <https://www.facebook.com/CityofValdez/> for local updates and information via Facebook

Visit: <https://www.valdezak.gov/> for local updates and information via the city's website



Valdez Inundation Zone



Register for NIXLE



City of Valdez Facebook



City of Valdez Website

Check Your Community Hazard

Knowing your risk before disaster hits could save your life. Explore the online tool at tsunami.alaska.edu to determine whether your house, workplace, or school is in the inundation/flood zone.

Historical Tsunamis

Valdez faces a double threat from tsunamis: those caused by earthquakes and those caused by landslides. Half a dozen tsunamis caused by earthquakes have damaged Valdez in the past 125 years. The most deadly occurred during the 1964 earthquake. Local underwater landslides caused tsunamis that struck within minutes, leaving little to no time for warnings.

Keeping Alaska Safe

Tsunami researchers use cutting-edge science to examine historical tsunamis and earthquakes, along with geologic records from prehistoric tsunamis, then generate possible worst-case scenarios. This information is visualized in maps showing potential flood zones to help communities create emergency plans.

Learn More about Tsunami Hazards in Valdez

Emergency and disaster preparedness

City of Valdez office of Emergency and Disaster Management

www.valdezak.gov/294/Emergency-and-Disaster-Management
EDM@ValdezAK.gov

City of Valdez incident updates

www.facebook.com/CityofValdez

Barry Arm potential landslide information

dggs.alaska.gov/hazards/barry-arm-landslide.html

Full scientific community report and maps

dggs.alaska.gov/pubs/id/25055

Maritime response report

earthquake.alaska.edu/tsunamis



Explore the online tool
tsunami.alaska.edu

Learn More about Tsunami Safety in Alaska

Preparing for tsunamis

Alaska Division of Homeland Security and Emergency Management
www.ready.alaska.gov/Plans/Mitigation/Tsunamis



Tsunami warning information

National Tsunami Warning Center
www.tsunami.gov

National Tsunami Hazard Mitigation Program

nws.weather.gov/nthmp/

To request brochures, contact 907-474-7320 or uaf-aec@alaska.edu

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Know Your Tsunami Hazard in Valdez



Big Waves in the Biggest State

In Alaska, tsunamis can strike within minutes of an earthquake. Tsunami awareness and safety are crucial to anyone who lives, works, or travels along Alaska's coast.

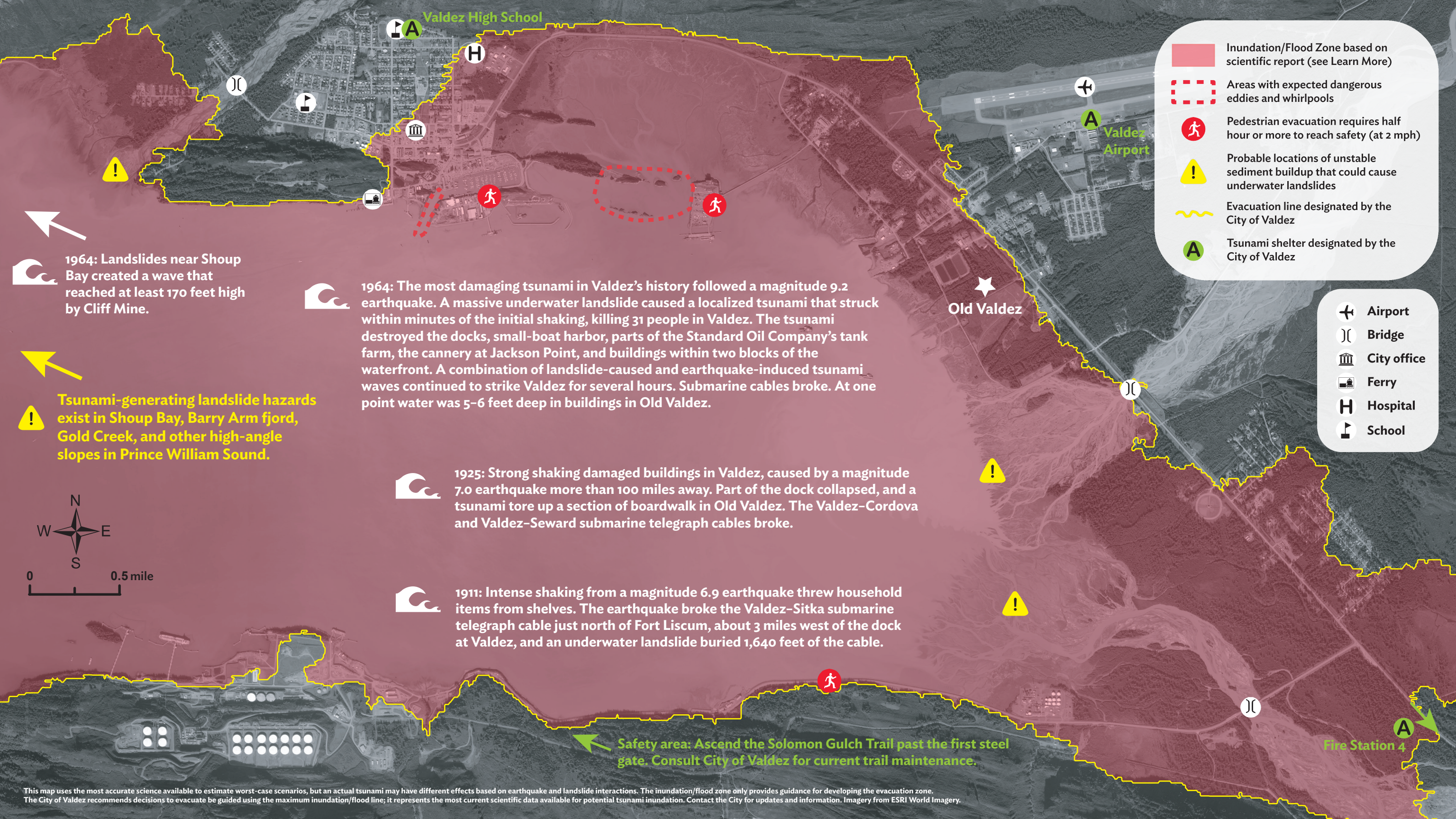
Earthquakes frequently rumble coastal Alaska. Just offshore, the Pacific Ocean plate scrapes under the continental plate of mainland Alaska, causing much of this activity. Many places along Alaska's rugged coast are poised for landslides above or below the ocean's surface. A major earthquake or landslide near the coast could generate a tsunami.







High-risk Areas






If the ground shakes for more than 20 seconds and it is difficult to stand, and/or the tsunami siren is heard, anyone within the inundation/flood zone should move to higher ground or a tsunami shelter (see map).


Pay attention to unusual sounds and sights when on or near the ocean. Tsunami impacts are greatest near ocean beaches, low-lying coastal areas, and waterways such as harbors and estuaries. Always avoid these areas during tsunamis. A tsunami can be a series of waves that may last for hours, so wait for local authorities to announce when these areas are safe. In addition to wave action, tsunamis can stir up currents that threaten harbors, facilities, and boats.


tsunami.alaska.edu





-  Inundation/Flood Zone based on scientific report (see Learn More)
-  Areas with expected dangerous eddies and whirlpools
-  Pedestrian evacuation requires half hour or more to reach safety (at 2 mph)
-  Probable locations of unstable sediment buildup that could cause underwater landslides
-  Evacuation line designated by the City of Valdez
-  Tsunami shelter designated by the City of Valdez


-  Airport
-  Bridge
-  City office
-  Ferry
-  Hospital
-  School

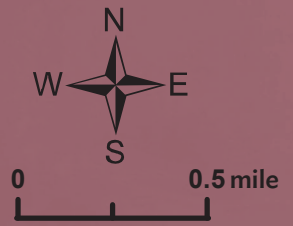
 1964: Landslides near Shoup Bay created a wave that reached at least 170 feet high by Cliff Mine.


 1964: The most damaging tsunami in Valdez's history followed a magnitude 9.2 earthquake. A massive underwater landslide caused a localized tsunami that struck within minutes of the initial shaking, killing 31 people in Valdez. The tsunami destroyed the docks, small-boat harbor, parts of the Standard Oil Company's tank farm, the cannery at Jackson Point, and buildings within two blocks of the waterfront. A combination of landslide-caused and earthquake-induced tsunami waves continued to strike Valdez for several hours. Submarine cables broke. At one point water was 5-6 feet deep in buildings in Old Valdez.

 Tsunami-generating landslide hazards exist in Shoup Bay, Barry Arm fjord, Gold Creek, and other high-angle slopes in Prince William Sound.

 1925: Strong shaking damaged buildings in Valdez, caused by a magnitude 7.0 earthquake more than 100 miles away. Part of the dock collapsed, and a tsunami tore up a section of boardwalk in Old Valdez. The Valdez-Cordova and Valdez-Seward submarine telegraph cables broke.

 1911: Intense shaking from a magnitude 6.9 earthquake threw household items from shelves. The earthquake broke the Valdez-Sitka submarine telegraph cable just north of Fort Liscum, about 3 miles west of the dock at Valdez, and an underwater landslide buried 1,640 feet of the cable.



 Safety area: Ascend the Solomon Gulch Trail past the first steel gate. Consult City of Valdez for current trail maintenance.

 Fire Station 4

This map uses the most accurate science available to estimate worst-case scenarios, but an actual tsunami may have different effects based on earthquake and landslide interactions. The inundation/flood zone only provides guidance for developing the evacuation zone. The City of Valdez recommends decisions to evacuate be guided using the maximum inundation/flood line; it represents the most current scientific data available for potential tsunami inundation. Contact the City for updates and information. Imagery from ESRI World Imagery.