



Emergency Preparedness for Alaskans: Tsunamis, Storm Surges & Floods

by Derylee Hecimovich and Valerie Barber

With almost 34,000 miles of tidal coastline and hundreds of rivers and streams, flooding is a serious threat in Alaska. Whether caused by distant earthquakes, hurricanes, snowmelt, spring ice jams or excessive rain, floods result in millions of dollars in damage as well as loss of property and life. Flooding may develop slowly or it may be sudden, like a catastrophic flash flood. Although you can't always predict flooding, you can take steps to prevent or reduce its impact.

Basic emergency preparedness involves risk assessment, preventative measures and mitigation. Is your property in a flood zone? If you live near a river or stream or on land with a low elevation, then chances are you live in a flood zone. Government maps and information will assist you in making this determination. If you do live in a flood zone, consider purchasing flood insurance. Avoid building in a floodplain unless you elevate and reinforce your home, although even that may not be enough if the riverbanks erode up to and under your home, as is happening in parts of Alaska today. Rivers in Alaska are not static, and the changing dynamics of a current can alter a river's course. Many rivers carry high glacial silt loads, and as this silt gets deposited in different areas, it can create new channels, eroding tons of material out of the riverbanks. Coastal erosion is also increasing as the climate warms and shore ice freezes later, allowing fall storms to batter the unprotected coastline.

Flooding can strike quickly, so it's important to know how to evacuate and what to take. If flooding threatens your area, listen to the radio or television for weather and evacuation reports and follow the direction of local authorities. If you live in a remote location, you will be on your own and you must be prepared.



Flooding caused by ice jams at Eagle, Alaska

You may be able to build flood barriers or drainage devices or take other potential control measures. If your home is more than one level, you may want to have your main level above the ground and store valuable items there, with waterproof items and items of lesser value in the garage at or below ground level. It may also be advisable to raise utilities and furnaces, water heaters and similar equipment off the ground and add sewer line check valves to prevent floodwater from backing up into your house drains. Consider sealing lower-level interior floors with waterproofing materials.

If your property is within a mile of a coastline, additional concerns arise, particularly during a tsunami or other storm-related surges. Tsunamis, ocean waves caused by earthquakes and other disturbances, can be many feet high and cause significant damage. The National Oceanic and Atmospheric Administration (NOAA) is responsible for issuing tsunami warnings and alerts, often based on events thousands of miles away. If you experience an earthquake lasting more than 20 seconds or observe the coastal waters receding to an excessive distance,

evacuate to higher ground. Evacuation routes are usually marked, but it is important to be aware of these routes ahead of emergencies. Check to see what procedures your community has in place for evacuation. Many communities already have emergency plans in place — make sure you know what yours is. If your community does not have a plan, you might want to help develop one. Check to see if your community has a Local Emergency Planning Committee (LEPC) and get involved.

Storm surges may also be caused by distant hurricanes or other weather events and can cause flooding similar to that caused by tsunamis. Tidal fluctuations can also impact the surge and the effects of flooding. Remember, there are certain times of the year when high tides are extra high. These are called spring tides and occur when the moon is full or new (they have nothing to do with the spring season) and when the Earth, moon and sun are lined up. Sea level has also been rising, so flooding from storm surges is expected to increase over time. Know your potential risks.

Having sufficient emergency supplies on hand for at least 72 hours is recommended. The Alaska Cooperative Extension Service publication SAL-00007, *Emergency Preparedness for Alaskans*, and other lists provide suggestions for creating an emergency supply kit. Emergency supplies should be portable in case an evacuation is necessary. A contact list, building evacuation map and predetermined meeting place are also helpful. Be sure to discuss and practice evacuation plans with your family, and remember to plan for individuals with special needs as well as pets.

Pay attention to warnings during a storm surge or flood event. In the event of an earthquake, hurricane, excessive rain, etc., flooding is often predictable. Flood watches or warnings are usually sent out on commercial radio, local warning systems, weather stations or other systems.

When preparing to evacuate, it is advisable to secure outdoor items and shut off utilities. If you must evacuate, remember the six “Ps:”

- ▶ **People and pets** and other livestock
- ▶ **Papers**, including important documents (Hopefully, these are all together and easily accessible.)
- ▶ **Prescriptions**, including medication, eyeglasses and hearing aids
- ▶ **Pictures** and irreplaceable memories
- ▶ **Personal computer** (It is always a good idea to have a backup on a small portable hard drive that is easy to carry.)
- ▶ **Phone** (Always keep your phone charged and ready to take with you, and remember that texting may be a better way to communicate.)

While traveling, avoid canyons or steep-sloped terrain and do not drive in flooded areas. As little as six inches of water may stall a car and will knock a grown man off his feet; a foot or so of water will float many vehicles.

After floodwaters have receded and emergency personnel consider it safe to return home, continue to use caution when entering buildings and other affected areas. Report and beware of any downed power lines. Inspect utilities, septic areas and roads and avoid water that may be contaminated. Wet or damp items may need to be cleaned and disinfected. Mold can be a huge problem and is a potentially dangerous health issue that may affect you and your family. Your community may offer resources and information for flooding and other emergencies. Additional resources are also available from:

- ▶ American Red Cross
- ▶ Department of Homeland Security, Federal Emergency Management Agency (FEMA)
- ▶ Extension Disaster Emergency Network (EDEN)
- ▶ ready.alaska.gov

www.uaf.edu/ces or 1-877-520-5211

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