**NWREC Natural Hazard Emergency Information**

***Please read in full! In addition, read the Emergency Evacuation Procedures Sheet that has actions to be taken during an emergency, and covers emergency evacuation procedures for such as spills, shooters, bombs, etc.***

You are now working in an area with the potential for floods from the Skagit River, major earthquakes (up to magnitude 9), lahars (massive mudflows from Mt Baker), and explosive volcanic eruptions from Mt Baker (not so likely). All are very unlikely, but it’s best to go over material available in case something happens (it’s too late after).

DO sign up for the WSU internal emergency alert system: Sign on to MyWSU <https://my.wsu.edu/> then choose the “Emergency Notification” tile then “Emergency Contact Information.” You can choose the methods by which you want to be contacted. Choose “Extension Office and Research Ctr” so you don’t get Pullman alerts.

We also highly recommend that you sign up for the Skagit County Alert system for the NWREC address and your home county.

Skagit County: <https://www.skagitcounty.net/Departments/EmergencyInformation/emergencyinfo.htm> (“Register Here”).

Whatcom County: <https://whatcomcounty.us/List.aspx>

Snohomish County: https://snohomishcountywa.gov/List.aspx

Island County: https://www.islandcountywa.gov/DEM/Pages/Alert-and-Warning.aspx

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**Earthquakes** strike suddenly, violently and without warning. Identifying potential hazards ahead of time and advance planning can reduce the dangers of serious injury or loss of life from an earthquake. When a big quake hits here, it'll be way bigger and far more crippling than any of the biggest California quakes. California large quakes are often in the 7 range, we can have an 8 or 9 range. Each increased number is an increase in shake magnitude of 10 times. Note that a major earthquake can cause Mt Baker lahars or interruption of the Skagit River levee system or an upriver dam to cause massive flooding.

**Six Ways to Plan Ahead (work and home):**

**Check for Hazards**

-Identify what equipment in your labs/areas should be turned off in case of a quake/other hazard and learn how to turn them off (GA isn't around 24/7!).

-Fasten shelves securely to walls.

-Place large, heavy, breakable, chemical, flammable items in closed cabinets, or if none available, on lower shelves with lips.

-Hang heavy or breakable wall items that might fall such as pictures and mirrors away from beds, couches, and anywhere people sit.

-Water heaters should be strapping to wall studs with earthquake straps.

-Make sure your main gas shutoff valves turn freely and store any tools you need to shut them next to the shutoff.

**Identify Safe Places Indoors and Outdoors to hide during an earthquake**

-Under sturdy furniture such as a heavy desk or table.

-Against an inside wall.

-Away from where glass could shatter around windows, mirrors, pictures, or where heavy bookcases or other heavy furniture could fall over.

-In the open, away from buildings, trees, power lines, overpasses, or elevated expressways.

**Tsunamis** in oceans and large lakes are a common aftereffect of large earthquakes and major landslides, even if the earthquake is across the ocean. The NWREC is not known to be (“not mapped” which means could be possible) in a tsunami zone, but you might live in or have work in areas that are in tsunami zones. Some locations such as Anacortes have warning sirens. For an overall map of known tsunami zones check out <https://www.skagitcounty.net/EmergencyManagement/Documents/2008HazPlanFinal/Section%20II%20Final%20Documents/9aTS-1%20Tsunami%20Inundation_County.pdf> . For an overall map and for more details such as evacuation routes check out : <https://www.dnr.wa.gov/programs-and-services/geology/geologic-hazards/Tsunamis#preparation-and-evacuation.6> (click on icon then scroll down then noting most maps need to be downloaded and are somewhat a paint to go through)

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**Floods**: We live in a very rainy area and the Skagit River has the potential for flooding. Visit <https://www.skagitcounty.net/Departments/Flood/Main.htm> for flood information as well as current river gauge readings.

If you are new to the NWREC and haven’t purchased/rented a house yet, you might investigate flood zones before doing so, and consider flood insurance. FEMA flood maps and other FEMA info can be found at: <https://msc.fema.gov/portal> .

**Evacuation**. Immediately evacuate low-lying areas such as the station. One recommendation for most immediate high ground might be going north to the airport area: via driving west on Hwy 536 then onto Hwy 20 and Farm to Market Rd or Higgens Airport Way. It’s preferable to not be driving towards the river while evacuating.

Determine your driving path now, before you need it in an emergency. Look for road signs are posted on roads “Evacuation Route.”

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**Mt Baker pyroclastic eruptions and lahars** - see <https://www.usgs.gov/volcanoes/mount-baker/volcanic-hazards-mount-baker> for a map of potential Mt Baker hazards. We should not be at too high risk for blasts, ashfall, or lahars but the risk does exist.

**Eruptions**: Mt Baker could potentially erupt like Mt St Helens did, very explosively. According to the USGS maps we ought not be in the blast zone here in Mt Vernon. But, with no guarantees…blast temperatures can reach 750F and can move at 650mph. Upward blasts can produce deadly rocks falling from the sky. If you have advanced warning, shelter behind and under a solid obstacle, turn your back, cover your head, and hope the obstacle stays intact and unburied. Eruptions also can emit highly toxic gasses which cannot be protected against.

Even if blast material does not reach here, we could be inundated by ash clouds depending on wind direction. Stay inside or use a mask if outside, try not to run any vehicles or equipment that might have their moving parts ruined by the ash. Seal off cracks around doors.

**Lahars**: Mt Baker could produce lahars which can result from an eruption, earthquake, or a major landslide, noting that lahars follow river valleys and might breach dams upriver on the Skagit and cause a lahar and or major flooding downriver. Immediately evacuate low-lying areas such as the station, see possible route in the Flood section above.

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**General - Emergency Evacuation Kits**

What are you going to eat and drink at work if a major 9.0 magnitude quake crumples the road system and you can't get home to your home disaster kit? Sorry, your coworkers cannot supply and should not be expected to share due to you not being prepared. Please check out <https://www.ready.gov/build-a-kit> for what you should have. There's other good reading there too. You should have a major kit at home (4wk supply), and a smaller kit at work and in your vehicle (a few day’s supply).

Check expiration dates annually on food and refresh the kit (donate older items to the food bank!). Change out batteries and gloves annually.

**Develop an Emergency Communication Plan**

In case family members are separated from one another during an earthquake (a real possibility during the day when adults are at work and children are at school), develop a plan for reuniting after the disaster. Cell phones don't work when the towers are out. Sometimes texts or out of state calls can get through when local cell calls don’t. Ask an out-of-state relative or friend to serve as the "family contact" and make sure everyone knows the name, address, and phone number of the contact person.

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Dept. of Emergency Management: 360-416-1850

Cellular Phone Users Emergency: 360-336-3131

Skagit County River Level Hotline: (360) 416-1404

The following are television, radio and scanner frequencies that broadcast the Emergency Alert System (EAS) when activated: (formerly the Emergency Broadcast System)

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| TELEVISION STATIONS  KOMO 4  KING 5  KIRO 7  KSTW 11  KVOS 12 | SEATTLE RADIO STATIONS  KOMO 1000 AM  KIRO 710 AM  KJR 950 AM  KVI 570 AM  KMPS 1300 AM / 94.1 FM |
| LOCAL RADIO STATIONS  KAPS 660 AM  KBRC 1430 AM  KLKI 1340 AM |  |