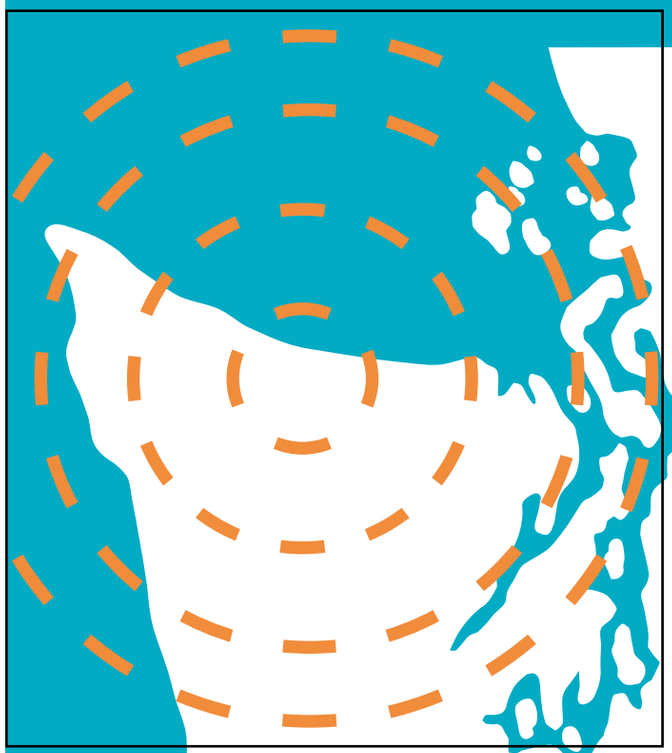
PREPARE + PREVENT + RESPOND + RECOVER + MITIGATE



PENINSULA EMERGENCY PREPAREDNESS 2022 GUIDE

ARE WE READY TO MOVE FORWARD

Our growth of knowledge for the Cascadia Subduction Zone Quake sets the "next stage" of moving forward and understanding what we can expect.

AN ADVERTISING SUPPLEMENT PRODUCED BY PENINSULA DAILY NEWS & SEQUIM GAZETTE

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PREPAREDNESS ON THE PENINSULA

By Blaine Zechenelly, Clallam Country Fire District 3 disaster planner

Welcome! This is the fifth in the series of Emergency Preparedness guides developed for the community to improve its readiness for major disaster events. You will hear us talk about Cascadia Subduction Zone Earthquake a lot because it is the worst-case scenario, and if we handle it, we can deal with anything else. This is because much of the work Cascadia requires is easily applicable to lesser events.

The theme of this insert is "Are we ready to move forward?" In many ways this is a great question! COVID is starting to wind down as vaccines become more widespread, treatments to prevent hospital admission become more readily available, and severe illness is more effectively treated. Many of us are now ready to move forward into a post-COVID-dominated environment. Our knowledge base for the Cascadia Subduction Zone Quake has grown substantially since the 2016 National Cascadia Rising exercise, when the county started its focus on this event. This growth of knowledge sets the next stage of moving forward. It provides a solid understanding of what we can expect in terms of damage so we can develop creative solutions to deal with this event.

For example, we now have more accurate data on ground subsidence along the Pacific Coast and the Strait of Juan De Fuca. This knowledge tells us that the subsidence alone could place parts of Highway 112 at or below sea level, preventing any repairs. This knowledge means we need to move forward with a maritime response to supply north coast residents instead of using highway transportation. Planners need to consider a secure, new long-term route at a higher elevation to north coast communities. Air transportation, land routes, maritime supply, non-traditional shelters, food distribution and interagency co-operation are all new areas we are "ready to move forward" in 2022.

CASCADIA RISING 2022
NLE (National Level Exercise) Update

The Cascadia Rising 2022 exercise is scheduled for June 13 through 16 with an after-action report and summary on June 17. The exercise was originally scheduled to be a full-scale, boots on the ground test of emergency transportation and mass care plans. Due to COVID and its far-reaching effects, the exercise has been scaled back in most areas to a tabletop review and planning exercise. However, here in eastern Clallam County (also known as the Sequim Operational Area), we are planning a boots on the ground exercise to test several aspects of our local transportation and mass care plans.

Transportation

Crews from all of the Sequim Operational Area's transportation departments, including Washington State Department of Transportation (WSDOT), Clallam County public works, City of Sequim public works and Jamestown S'Klallam tribe, will be presented with an exercise scenario predicting earthquake/tsunami damage to their facilities. Each will review their assigned sections of Highway 101 and then gather in the afternoon to review work-arounds and alternate paths that can reestablish at least a single-lane transportation route from the Highway 104/101 interchange to Morse Creek. This cooperative planning and construction response effort will allow us to recover from a Cascadia event much faster than we would otherwise be able to. Successful completion of this exercise will show that we are "ready to move forward" in the realm of transportation. This will provide a model for other parts of the northern peninsula to follow and use for their operational areas.

Mass care: food, water, medical & shelter

Sheltering

Clallam County Emergency Management and the Sequim Operational Area have combined efforts to establish sheltering systems in the event of a disaster where traditional Red Cross shelters cannot be set up. The Red Cross could take several weeks to reach Clallam County after

a Cascadia-type event. The county has agreed to enter formal written facility use agreements with civic and faith groups for the use of their facilities as shelters during an emergency. The formal agreement protects a facility owner from liability while allowing the emergency use of the facility as a shelter. The Sequim Operational Area through the City of Sequim will provide a way for volunteers from participating organizations to staff the shelters as certificated state emergency service workers.

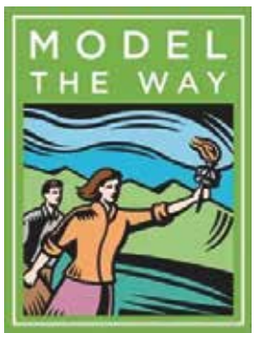
Trinity United Methodist Church in Sequim and Joyce Bible Church in Joyce will both have model shelters set up and ready to operate with volunteer shelter teams for one day during the Casadia Rising 2022 exercise.

If your church or organization would like to become a shelter or provide volunteers for a shelter team, contact Hannah Merrill at the City of Sequim *(hmerrill@sequimwa.gov)* or Blaine Zechenelly at Clallam County Fire District 3 *(bzechenelly@ccfd3.org)*.

We are looking for at least eight teams and facilities as a beginning of implementing this sheltering concept. We hope to add additional facilities and teams in the future. This is yet another way we can show that in the northern Olympic peninsula we are ready to move forward.

'Model the Way' Shelters

Historically when we think of shelters we think of the American Red Cross, but today's disaster challenge is not the same as those 50 years ago and neither is the American Red Cross. Today's disasters are larger, impact more people and infrastructure, and require more sophisticated responses. The American Red Cross adapted to this by concentrating operations closer to the urban centers (for example our headquarters for Red Cross effort is now based in Tacoma). Their response, other than for a local fire, is coordinated out of these urban bases by using resources throughout the state or country. Much of this shift has occurred since 2000 and accelerated since the Cascadia Rising Exercise in 2016. An example of how they operate is a hurricane response where shelters are set up 20 to 30 miles or more from the coast, with hotels booked for shelter volunteers at about 40 miles inland and airports to fly people in major hubs 50 miles or more from the event. This works fine if you know in advance and infrastructure is intact to move resources. Here on the Olympic Peninsula, though, with an earthquake without notice and heavily damaged transportation and/or infrastructure, this approach will not work.



The unique threats of disaster on the Peninsula require us to develop a new approach. Local American Red Cross volunteers are too few to staff our needs without help from outside our area. Discussion began in early 2017 on how to achieve a shelter system to support our community needs. Clallam County's Emergency Management Department led work on a Clallam County Comprehensive Emergency Management Plan (CEMP) to modify it in 2020/2021 to address the need to develop our own system and shelter teams to meet our needs.

Traditionally, schools are the first-place refugees go to for shelter. They have classrooms, gyms, kitchens and shower facilities. Unfortunately, school buildings in Washington are often pre-1970s construction and are at very high risk

See Model the way, page 4

Model The Way, from page 3

of collapse or severe damage. This makes them not your first choice for shelters. Churches and other organizations then became one of the next best choices, because many are built with flexible wood frame construction that does well in earthquakes.

The first area to do this was Joyce and its prototype program at the Joyce Bible Church working in conjunction with Joyce Emergency Planning and Prep (JEPP) program. Forks also began a process to power its newly rebuilt high school to be a shelter by installing generator capacity. Although Joyce's program established a clear way to run the shelter, it did not address a fundamental problem of liability for private organizations who wanted to offer their facility but were hesitant to do so without protection for both the facility and volunteers working in them.

In late 2021/early 2022 Clallam County Emergency Management led by Undersheriff Ron Cameron developed a facility use agreement through the county to provide liability protection to churches and organizations who agreed to allow the use of their facilities. At the same time, the City of Sequim agreed to manage volunteers in the operation of shelters for their area as State of Washington emergency service workers, which qualified them for liability protection from the state. This summer as part of Cascadia Rising 2022 both Joyce Bible Church and Sequim's

Trinity United Methodist Church are going to run demonstration shelters for the media and other churches to see how this would look. Thus "modeling the way forward" for others to launch on a larger scale a number of shelter locations and teams to run them. To learn more about shelters, contact Joyce Emergency Preparation Planning JEPP (*jeppgroup.org*) or in the Sequim area Blaine Zechenelly at *bzechenelly@ccfd3.org* or Hannah Merrill *hmerrill@sequimwa.gov* with the City of Sequim.

'Model the Way' CERT – Search and Rescue

CERT stands for Community Emergency Response Team. It was developed in 1986 in the City and County of Los Angeles to allow citizens to participate effectively and safely in emergency response when the normal police, fire and other emergency responders were overwhelmed in a disaster.

By 2016 the concept of CERT was well established in Los Angeles. It is a sophisticated organization and is integrated into the city's emergency plans. This was not so in many other areas, including Washington state. For the most part, participants took basic 20-hour classes intended to teach these individuals how to assist their local neighborhoods. They were not intended to act as a team or be part of a coordinated emergency plan, let alone be fully integrated with police and fire response.

See Model the way, page 5

Model the way, from page 4

In September 2016, Eastern Clallam (Sequim Operational Area), led by the City of Sequim and Clallam County Fire District 3, began organizing CERT teams. Team members completed a 24-hour class that met not only CERT basic training but provided the additional training to become members of a Type IV Urban Search and Rescue Unit. Graduates were assigned to neighborhood teams. These units are integrated into the Sequim Operational Area formal emergency response plan. They are tasked with the responsibility to search residential neighborhoods, 200 to 900 homes per team or unit; a task not possible with the limited number of professional responders available after a disaster. Each unit was created based on the neighborhood where the members lived to provide the first contact after a disaster with emergency services for these locations.
By 2022, the program trained 708 individuals (including 55 for Jefferson County and other areas of Clallam outside of the Sequim Operational Area) and over 15 teams had been established. Each team averages 32 members, which gives us a total of over 475 active volunteers. Teams train monthly to maintain their proficiency and are engaged in numerous community events, such as Sunshine Festival, Sequim Irrigation Festival, Lavender Festival, Fourth of July, Air Affaire, Diamond Point Celebration, Holiday Food Drive and Wreaths Across America, all being used as ways to train for the "big" disasters. These same teams deployed as front-line responders during COVID to support the community with food distribution, information distribution and traffic control for COVID vaccinations.

CERTs in the Sequim Operational Area (also known as Eastern Clallam) have developed their own areawide communication network, command structure, tactics, forward operating bases (FOBs), policies and procedures, which are integrated into the Sequim Operational Area's Emergency Plans, creating a seamless response effort.

The story does not just end with CERT in the Sequim area. This effort has been used to model teams in Joyce in conjunction with Clallam County Fire District 4, Peninsula College, Forks and teams in Jefferson County to ensure that those areas are ready to meet the challenges of a disaster. To learn more about this story, see CERTs at Services & Programs *(ccfd3.org)* tab and look for CERT Program. If you are interested in joining in the Sequim (including Gardiner and the Miller Peninsula) area, contact Cindy Zechenelly at *cindyiz@hotmail.com* as we are always looking for new members to cover additional neighborhoods. For other areas of Clallam County contact Justine Chorley of Clallam County Emergency Management Department at *jchorley@co.clallam.wa.us*, and in Jefferson County contact Department of Emergency Management | Jefferson County.

'Model the way' Map your neighborhood

Prior to the 2016 National Exercise for Cascadia Rising held here in the Northwest, California had developed a program out of the San Francisco Bay Area called Map Your Neighborhood, or MYN. The program's objective is to leverage the strength of a neighborhood working together, instead of each individual household working separately. The combined resources of a neighborhood often provide solutions that a single household cannot. For example, one neighbor might need to refrigerate their insulin

See Model the way, page 6

Model the way, from page 5

and has lost the power to run their refrigerator. However, their neighbor next door owns a small generator and the neighbor next to them has 25 gallons of gas stored. Combined they can solve the refrigeration need for the insulin and power other critical devices required to assist the neighborhood.

So how would you ever know these resources exist in your neighborhood? Well, that is what MYN does. It starts with a meeting of the neighbors led by a MYN facilitator who helps them organize, establish contacts, develop a plan, map the resources and organize the needs of the neighborhood. Equipped with this information, when a disaster strikes the neighbors know who lives where because they have met them, know who will need the most assistance and what resources can be used to meet these needs.

Although a few MYN meetings occurred as early as 2013 in Clallam County, it was not until 2017 that Eastern Clallam area (Sequim Operational Area) began to have meetings on a large scale. Prior to COVID, MYN facilitators reached over 2,500 community members. COVID restrictions prevented training during the last two years.

Now Eastern Clallam again is reaching out to those existing groups and re-establishing the MYN relationship. It is also starting a new wave of MYN meetings with the goal of touching an additional 500-plus community members in new neighborhoods. The program also has an additional benefit in that it can work in conjunction with CERT. CERT needs to perform its urban search and rescue (USAR) function in the shortest time possible to maximize the saving of lives during the critical hours early in a disaster. MYN can help by having members tell the incoming CERT team the status of people in their neighborhood. If 17 of 20 homes are all OK but three need to be investigated, the CERT team only needs to focus on three homes, not 20, which dramatically speeds up the searching of the neighborhood. The program recently had the benefit through its contact list of a particular MYN neighborhood spreading the word about an intruder in the area. That "be on the lookout" knowledge led to the apprehension of the intruder. Ultimately, we want all communities to have all their neighborhoods be MYN neighborhoods. Again, an example of "model the way."

If you are interested in the MYN program contact Lynne Schlosser for Eastern Clallam (Deer Park to Sequim to Gardiner Area) at *lynne5977@live.com* and for other areas of Clallam county contact Justine

Chorley of Clallam County Emergency Management Department at *jchorley@co.clallam.wa.us* and in Jefferson County contact the Department of Emergency Management Jefferson County for more information.

'Model the way' Food bank & feeding capacity

One of the lessons learned from COVID is the dependence that the Peninsula has on road transportation. When a disaster strikes that impacts our supply chain the direct results is a lack of product on the shelves for our community. Each day over 600 tractor trailer rigs deliver supplies to Clallam and Jefferson counties. Our stores, businesses and healthcare facilities carry, on average, a one- to three-day supply of merchandise and/or supplies on their shelves and backroom stocks. Now, imagine all that stops when the roads and bridges are destroyed. After a major earthquake, repairs to HWYs 101, 3 and 16 may take or exceed 60 days to construct an even rudimentary road system equal to a logging road. This got us thinking about what level of food supplies we have in our food banks in Sequim, Port Angeles and Forks. It became obvious that the levels we had in 2016 (10% or less of the required food needed for the county) for each of these food banks would only last a few days. That is nowhere near the timeframes we need. Just the levels of food needed during COVID to support those out of work or housebound exceeded our stored capacity. Emergency food distribution was only achieved by just-in-time deliveries and a shift of products to and from warehouse facilities available to the three food banks. This cannot happen if the road system is damaged. This knowledge led to a series of actions by the food bank community. Working with grant opportunities Port Angeles Food Bank moved out of the tsunami zone to a facility near Walmart with expanded storage capacity and office space. This allows Port Angeles to stock more food when supplies are available. In the past, Port Angeles and Sequim had to turn down food when they lacked the space to store it. The new Port Angeles facility has the capacity to sustain the city of Port Angeles for a significant time when fully stocked. This facility only addresses 45% of the county's needs (Port Angeles and the West End). The remaining 55% of the population in the eastern part of the county has, at best, one to two days of supplies in the Sequim Food Bank and grocery stores. To address this shortfall in 2021 Sequim Food Bank began planning a storage facility adjacent to the current facilities that would give it a 16- to -20 day storage capacity. Work is underway to obtain grant funding for the new building. Without question the food bank community is improving its ability to sustain us by a "model the way" innovative approach for the community. For more information, to donate and to volunteer please contact the Port Angeles Food Bank at *info@portangelesfoodbank.org* or the Sequim Food Bank at *sequimfoodbank@olypen.com*.

'Model the way' Distribution

Just as developing food bank capacity is important, so is the ability to distribute food stocks and other supplies. COVID challenged us to find processes to deliver resources on a large scale in Sequim and Port Angeles. Similar processes on a lesser scale were used in Joyce and Forks. Those lessons provide the foundation for food distribution following the Cascadia event. Two things became apparent to us: 1. We learned to manage drive-through community points of distribution (CPODs). We are proficient at coordinating traffic control, assembling supplies and loading vehicles of both food and vaccinations. 2. The Cascadia event requires a different approach. Lack of fuel, damaged vehicles and road damage will prevent people from traveling to CPODs. We would have to take the supplies to the people. So, how would you do that? Load either trucks or buses with supplies and drop them at key drop points in neighborhoods. If you think about this, school districts do this every day with students, but we would do it with supplies. When we combine the front-end logistic skills learned in COVID with the bus route skills we already have, we can create a distribution system that minimizes the use of fuel and still moves supplies to the community. Work still needs to be done to coordinate school districts and Clallam Transit assets, such as route determination and food bank loading logistics, but we now have the beginnings to "model the way" to providing food to the community.

OPENING THE PENINSULA AFTER A DISASTER

Supplying our needs

It's hard to believe this is the fifth edition of the Peninsula Daily News Emergency Preparedness Guide. We want to use this year's guide to explain how local, state and federal agencies are planning to maintain the supply chain to our Olympic Peninsula after a disaster. This involves land, sea and air transportation. The land route from Eastern Washington to the federal staging area (FSA) at Fairchild Airport in Clallam County is called the "Geen Line" and represents the primary land route the feds plan to use to reach their FSA.

AIR

Early planning indicated the fastest way to get supplies to disaster survivors was by air when roads and bridges are broken. State and federal level planning had concentrated on the I-5 corridor airports in their 2016 exercise to achieve this, but the FEMA Region X wanted to survey the airports to confirm this assumption. As part of this survey, in 2019 emergency management leadership in Clallam County aggressively engaged the federal planners and U.S. Rep. Derek Kilmer's office and highlighted the ability of Fairchild International Airport to serve as an FSA. This action and the acceptance of the Fairchild recommendation in late 2019 was the first time state and federal planners began to focus on what Clallam and Jefferson counties needed and led to the land route (road) of the Green Line being extended to Clallam County.

Fairchild International Airport at Port Angeles can handle cargo planes, but it would be a stretch for aircraft to deliver everything needed to take care of 100,000 people per day. Therefore, it alone cannot solve the supply need, but combined with other options (30 days of personal supplies, truck routes and marine deliveries) it can achieve the levels needed. Private pilots from around the Pacific Northwest may also be able to help. They have formed a Disaster Airlift Response Team (DART). Our Clallam County DART volunteers used their own planes and fuel to deliver water and medications to Clallam Bay, Sekiu and Forks when the November floods closed both Highways 101 and 112. Specific critical supplies such as medicine or spare parts for equipment can be delivered this way.

LAND

Prior to 2016 the Olympic Peninsula lacked any comprehensive plan from the Washington State Department of Transportation (WSDOT) that understood the magnitude of damage or the length of time it would take to repair the road system. Since then, to the credit of WSDOT, it has invested in talented emergency planners and begun work with the federal government in surveying and studying the damage impacts to both roads and bridges, and has begun the process of working with the local communities at both city and county level on detailed plans to open the roads, particularly the Green Line corridors.

FEMA and the Washington State Department of Transportation have begun work to harden the highway and bridge infrastructure between Moses Lake International Airport Incident Support Base (ISB) and Joint Base Lewis-McCord Federal Staging Area (JBLM). Moses Lake will be the center for mobilizing disaster relief supplies for western Washington from across the nation. Supplies then move from there to JBLM, which will be the hub for distributing those supplies to areas west of the Cascades.

The I-5 corridor, although challenging, does have a myriad of surface streets to work around infrastructure damage, albeit at reduced speeds and handling capacity. Washington Emergency Management, knowing this was less true for the Olympic Peninsula, is working with Kitsap, Mason, Jefferson and Clallam counties to provide a Green Line road from JBLM to Port Angeles. Geography, though, is working against us along Hood Canal. There are a lot of landslide zones and bridges that may have to be repaired. A better solution may be to use Highways 16 and 3 to the damaged Hood Canal Bridge and ferry supplies across Hood Canal. Both scenarios are being intensively studied by the Washington State Department of Transportation and its internal Emergency Management Department.

Travel by citizens in Clallam and Jefferson counties will be very limited by quake damage and lack of fuel. Knowing this, county road departments are working with state and city public works to preplan routes and locations to provide supplies to the community (CPODs). This last year, lessons were learned about route clearing and emergency distribution during the November floods that can be applied to aid in this planning.

See Supplying our needs, page 8

MARINE

Supplying our needs from page 7

FEMA designated William R. Fairchild as the FSA for the Olympic Peninsula. Supplies are brought to an FSA for distribution to local communities. The best way of doing this is by truck over the Green Line, but air or marine supply will be required.

WSDOT, recognizing that opening U.S. 101 via Hood Canal is challenging, began working on a plan to move supplies from Puget Sound to the Port Townsend Ferry Terminal using ferries from the Washington State Ferry System. Damage to ferry docks and floating or submerged wreckage could delay this plan.

The United States Navy 3rd Fleet is examining the feasibility of using amphibious landing craft to deliver bulk supplies to beaches around the Olympic Peninsula from cargo ships coming from other parts of the nation directly. In 2021 and early 2022 the 3rd Fleet began surveying locations in the Olympic Peninsula (see the graphic on locations). The results were that there are several key locations where beachheads could be established. This is extremely important because marine routes can deliver large amounts of supplies providing the bulk of needs. It should be noted, though, that it may take several weeks to mobilize the ships and have them travel to the Strait of Juan de Fuca. The county is also discussing options for using the Neah Bay Rescue Tug, Blackball Ferry and USNS Arrowhead as well as the USNS Eagle View to move people and supplies along the coast.

The point of all this is to let you know we are working on many different proposals to restore supply as soon as possible after a disaster. It appears it will take days or weeks for all of these plans to take effect. Therefore, it is still important for you to be prepared to "camp in your house" and be ready for "30 days on your own."

LCU - Landing Craft Utility

LCU landing craft are vessels used by amphibious forces to transport equipment and troops from ship to the shore. Depending on size, they can haul between 40 and 170 tons of supplies or vehicles.

LCAC - Landing Craft Air Cushion)

LCAC (Landing Craft Air Cushion) is a high speed, over-the-beach, fully amphibious landing craft capable of carrying a 60-75 ton payload.

Amphibious Landing Beaches Queets to La Push

Amphibious Landing Beaches Strait of Juan De Fuca

Latest News

SHAKEALERT

May 4, 2021, was a big day for the people of Washington, Oregon and California. It saw the completion of a 15-year project to create ShakeAlert. The West Coast is the most likely place in North America for earthquakes. It is a valuable tool to have in our emergency management tool kit, but it has limitations. It is not an earthquake prediction tool. It only activates when a quake is in progress. It can provide a few lifesaving seconds warning before the shaking begins.

Earthquakes occur when large blocks of the earth's crust move. The movement causes two kinds of waves to move through the earth. The first is the pressure wave known as the P-wave. It is the first jolt you feel. The second is the shear wave known as the S-wave, which you feel as a rocking motion.

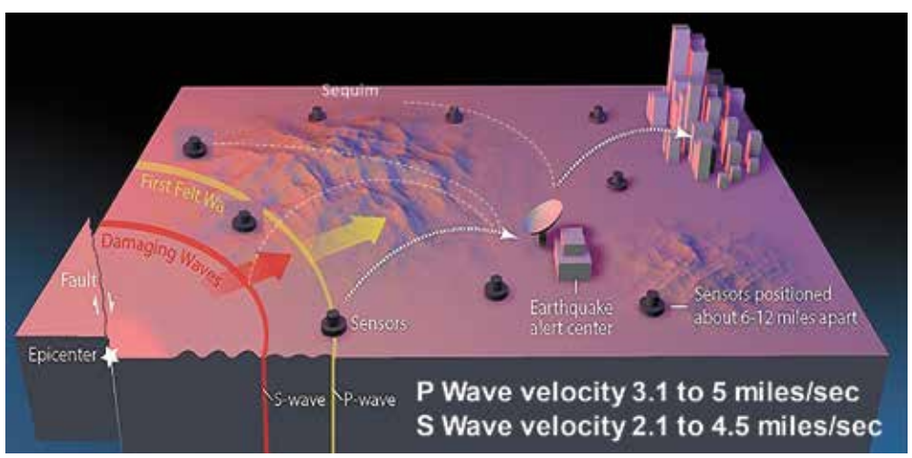
P-waves travel through the earth at 3.1 to 5.0 miles per second. S-waves are slower. They move at about 2.1 to 4.5 miles per second. ShakeAlert uses a coastwide network of sensors to detect these waves. Each sensor sends its data to a computer at the University of Washington. The computer compares the arrival times of the two waves at each sensor, crunches the numbers and identifies the location and magnitude of the quake. If the quake is less than Magnitude 5 or in an unpopulated area, ShakeAlert ignores the event.

If the quake is greater than Magnitude 5, the computer activates the ShakeAlert alarm system in the affected region. How much warning a community gets is dependent on how far away it is from the quake. We will have no warning if the quake is right under Clallam County. We may have 12 to 15 seconds for a Puget Sound quake and anywhere from 13 to 50 seconds for a Cascadia quake off the coast.

These seconds are valuable. People can drop-cover-hold, firehouse doors can open, elevators stop at the next floor, valves can activate to protect water systems and hospitals can halt surgical operations.

You can sign up for ShakeAlert in Washington by going to the state's Emergency Management Division web page to set up your phone and also obtain the app for your phone. Click on this link to their web page. Alerts | Washington State Military Department, Citizens Serving Citizens with Pride & Tradition.

HOW DOES IT WORK?



Latest News

SUBSIDENCE

Most literature about the Cascadia Subduction Zone Earthquake (CSZE) focuses on the violent earthquake and the following mega-tsunami. Quakes and sea waves are relatively short-term events lasting minutes or hours. When these are over, the cleanup and recovery begin. However, history tells of a more sinister CSZE effect that will impact the Olympic Peninsula for decades. That is subsidence. Within minutes of the start of the CSZE, the land along the coast will sink, flooding all low-lying areas. This flooding will not recede for many years.

We have known for a while that when a CSZE occurs the land mass that we live on will drop along the coast and to some degree inland. The earlier consensus was that this would be three to six feet along the Pacific Coast and declining Clallam Bay to Port Townsend from three feet to less than one foot. All of this was reflected in a generalized chart showing decline bands of depths with very little specific definition for any single location, until now. 2021 work by the Department of Natural Resources Geology and Earth Science has now been able to provide specific estimates for key locations, providing an improved look at what we can expect in a worst-case scenario (L1 scenario). The accompanying map shows that the land mass will drop anywhere from half a foot at Discovery Bay to 13 feet at Neah Bay.

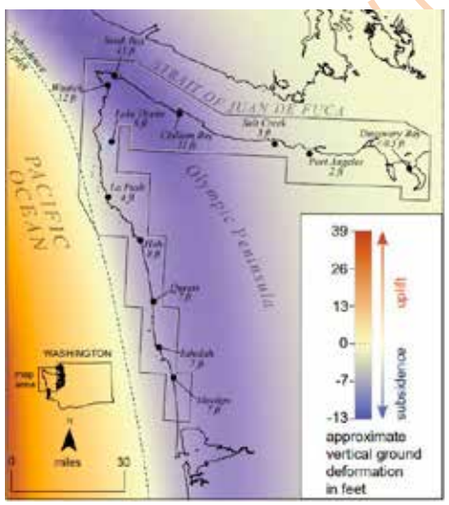
This leaves four very big concerns. The first is the post-quake condition of the Strait of Juan de Fuca coast from the Pysht River to Neah Bay. Subsidence is predicted to range from seven feet near Pillar Point to 13 feet in Neah Bay. This would put much of Highway 112 near the mouth of the Pysht River only six feet above sea level. Most of Highway 112 between the Hoko and Sail Rivers will be at or below the high tide line.

The second concern is the subsidence impact on Clallam Bay and Sekiu. The map predicts the Salt Air neighborhood, the area between Middle Point and Falls Creek and downtown Sekiu will be only six feet above sea level.

Neah Bay is the third concern. Today, the average elevation of a good part of the townsite is 23 feet. Thirteen feet of subsidence would lower that to 10 feet. Current elevation of the old Air Force base and tribal offices is 16 feet. Subsidence would lower that to four. Makah Bay will cover a good portion of today's beaches and extend back to the Hobuck Road Bridge over the Waatch. The valley of the Sooes River will be 12 feet lower.

The fourth concern is the Pacific Coastline from La Push to Lake Ozette may sink four to six feet. This will threaten all infrastructure at the mouth of the Quillayute River. It may decrease the flow of the Ozette River, raising the water level in Lake Ozette. The new surf line will break directly against the base of the coastal cliffs, causing landslides and increased erosion for decades.

These topographical changes will have profound effects on the economy of the West Eend. It will take about 100 years for subduction to raise the coast three feet. Tourism, fishing and logging will be impacted for years.



Map of seafloor and land deformation. The black polygon outlines the modeled area of the Olympic Peninsula and the black dots represent locations with modeled subsidence values in feet. Source: *Department of Natural Resources*

Latest News

TSUNAMIS

So, what is new this year? The Department of Natural Resources Geology Division embarked on a two-year study to determine a more exact prediction by actual location taking into account the area's underwater features and the effects of subsidence of the land based on the expected quake scenario (L1). Now, much more specific effects can be predicted.

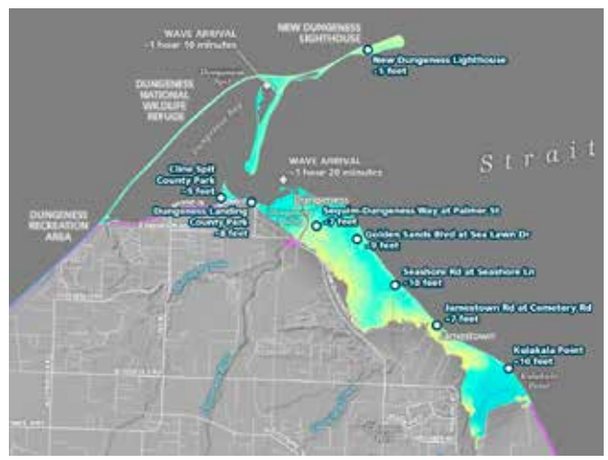
Here are specific examples. These maps now show water levels over specific points adjusted for subsidence. This can be as much as 33 feet of water above the ground level at State 20 and 101 bus stop. What the model does not include is tides. So, if the tides are +5 feet at the bus stop it would not be underwater by 33 feet but 38 feet. All data shown is without tides, which could be either plus or minus. Some locations are under as much as 43 feet of water and combined with a 12-foot-high tide could reach 55 feet. From Clallam County Emergency Management Department's perspective, our advice of high ground being at 50 feet may need to be revised to 60 feet, especially on the West End of the county if the quake hits at high tide to achieve an appropriate safety zone for the public.

Predicted Tsunami Wave Height, Speed and Arrival Time

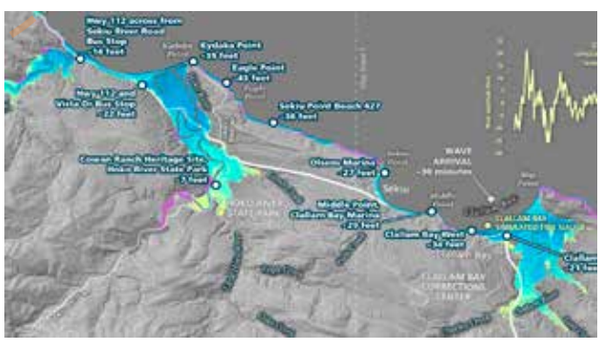
LOCATION	MAX DEPTH (Ft)	MAX CURRENT (Kn)	ARRIVAL TIME
Queets Community Garden	29	19	20 min
Kalaloch Ranger Station	16	12	20 min
Kalaloch Campground	35	12	20 min
Hoh River Mouth	100	22	20 min
Lower Hoh Tribal Center	43	22	20 min
La Push Post Office	45	18	20 min
Yellow Banks, ONP near Ozette	100	12	10 min
Lake Ozette Seiches	12	UNK	0 min
Ozette River Mouth, ONP Ozette	60	16	10 min
Point of Arches, ONP Ozette	51	15	10 min
Shi Shi Beach, Neah Bay	39	15	15 min
Neah Bay Fish Hatchery Admin Bldg	19	14	20 min
Makah Food Bank, Neah Bay	35	13	20 min
Neah Bay HS, Neah Bay	20	13	20 min
Shipwreck Point	26	9+	24 min
Chito Beach	23	9+	24 min
Sekiu River Road Bus Stop	14	9+	27 min
Vista Drive Bus Stop	22	9+	28 min
Kydaka Point	39	9+	28 min
Olson's Marina, Sekiu	27	9+	30 min
Middle Point Marina, Clallam Bay	29	9+	30 min
Clallam Bay West	34	9+	30 min
Clallam Bay Bus Stop	21	9+	30 min

Port Townsend Tsunami Map

Sequim Tsunami Map

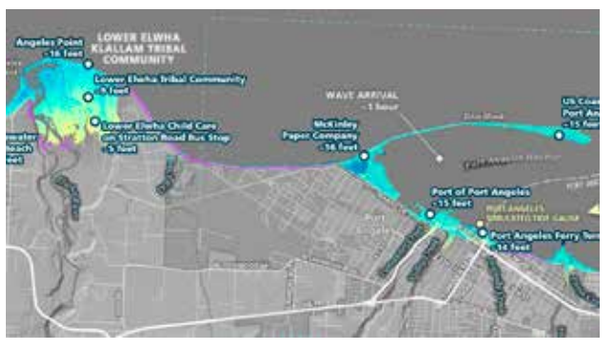


Seiku Tsunami Map



Neah Bay Tsunami Map

Port Angeles Tsunami Map



All maps are without tidal effects. So actual high may be +/- 12 feet from the points shown SOURCE: DEPARTMENT OF NATURAL RESOURCES

TSUNAMIS

Remember your objective is not to see who gets their feet least wet. Go to high ground and live. It may take 36 hours for the seas to calm down before it is safe to go back to the shore. Be prepared to shelter where you are for at least that time.

These schematic diagrams show the chronologic events following a Cascadia Subduction Zone earthquake and tsunami for the Pacific coast.

How the tide will run up on land

1

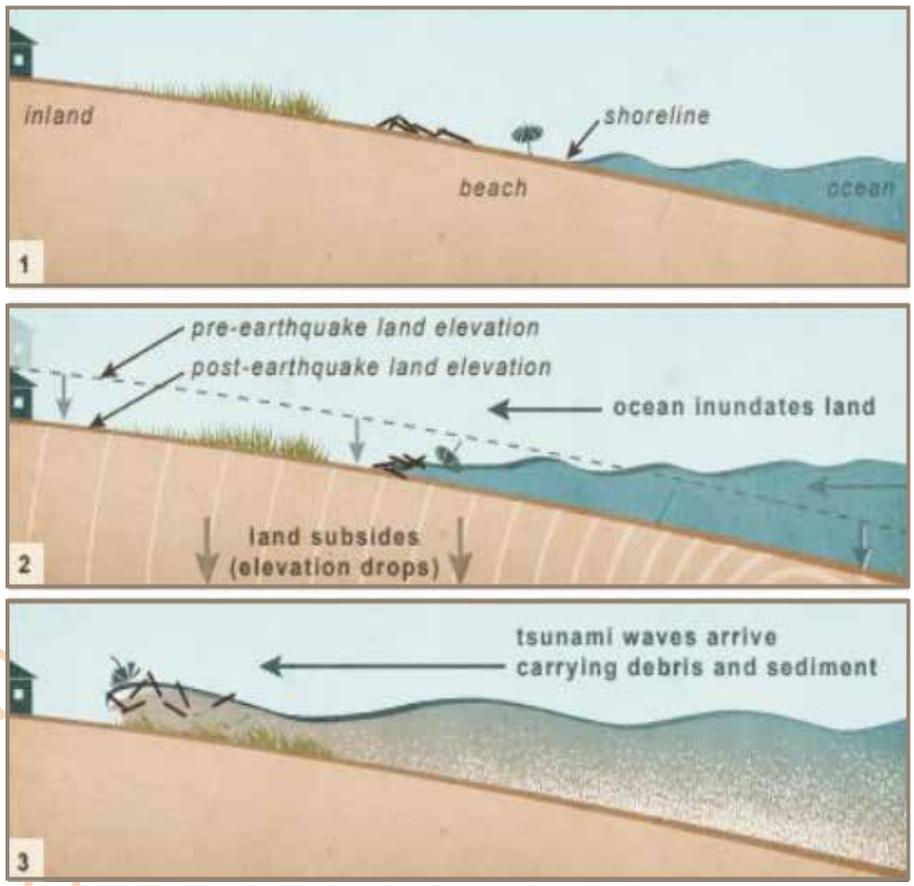
The modern-day pre-earthquake topography

2

A large earthquake on the Cascadia Subduction Zone produces strong shaking that may last several minutes. During the earthquake event, the land and local sea level subsides or drops, causing local flooding of low-lying areas within minutes of the earthquake. Note that within the Strait of Juan De Fuca, a leading wave trough of the tsunami still occurs following any local flooding prior to the arrival of the first tsunami wave crest. Submarine landscapes triggered by seismic shaking are also possible, which could result in locally generated tsunamis with leading rising waves.

3

Tsunami waves begin to arrive. These powerful waves carry sediment and debris onshore and to higher elevations. The wave inundation may continue for at least eight8 hours locally, posing a hazard to search, rescue and recovery efforts. Once tsunami inundation floodwaters recede, a new shoreline is established many feet higher in elevation than before.



Latest News

SCHOOL SEISMIC SAFETY

By Jim Buck and Blaine Zechenelly

Earthquake damage to Washington schools has been a major concern since 1986. Many schools in use today were built prior to 1976, before earthquake considerations were part of the building code. Moderate code changes during the 1980s and 1990s failed to meet today's newly discovered earthquake risks. It was not until 2006 that building codes addressed the quake risk we live with here. Schools designed since than are designed to provide "life safety." The building is designed to not collapse on the occupants, even though it may be too damaged for further use. This poses two problems: First, our kids could be at imminent risk if they are at school when a quake occurres, and second, the damaged schools cannot be used as emergency shelters. For the last five years Jim Buck and I have testified and spoken, along with many others in the state, on the need for Washington to follow Oregon's, California's and British Columbia's example and provide state funding to retro-fit unsafe schools. Three years ago the Washington Legislature decided they would allocate fuinds to study if this was a real concern.

On June 30, 2021, The Department of Natural Resources released the School Seismic Safety Project 2019-2021 Legislative Report (SSSP). This report summarizes how 578 school buildings across the state would hold up during an event similar to the 2001 Nisqually quake.

The study concluded that 93% of the school buildings examined are likely to collapse during a design-level earthquake leading, to death, injury and entrapment of students and staff. An additional 4% of school buildings examined are likely to partially collapse, resulting in injury, entrapment or death of students. The remaining 3% examined are unlikely to experience severe structural damage and loss of life, but will be too damaged to serve as shelters or schools.

Last September, two separate mailings detailing school safety deficiencies were sent to 2,391 school principals, 254 fire chiefs, 313 fire district secretaries, 274 homeschool coordinators, 300 school district administrators, 57 Washington state PTA leaders, 13 WSSDA board members, all the county commissioners and eight members of the press. That is nearly 8,000 contacts.

The school safety mailings provided a great deal of information about schools all over the state. All you really want to know is, "Are my Clallam County schools on the list and if they are, are they safe?" Page 13 shows the Earthquake Performance Assessment Table for Clallam County schools. The table shows all school buildings in Neah Bay and Clallam Bay are in the tsunami zone. Any repairs to make them safe in an earthquake will be destroyed by the following tsunami. They need to be relocated to higher ground. Roosevelt Elementary's main building and three buildings in Forks are the only other Clallam County buildings in the study. That means the remaining 34 buildings in the Port Angeles, Quillayute Valley, Sequim and Crescent school districts and others in Jefferson County are not included in the study and have yet to be evaluated. We don't know how they will hold up in an earthquake like the 2001 Nisqually quake, but many are pre-1976.

See Schools, page 13

Schools, from page 12

Key to interpreting the information

Source: Washington State Department of Natural Resources

Each row in the table represents a single building. Pink shading means the building is in a tsunami zone. The first row represents the big gym at Clallam Bay Elementary. Reading across the columns tells you it is a wood frame building built in 1962.

Predicted damage — If the earthquake happened today, it is predicted to be 70% damaged. If the building is retrofitted before the earthquake, the predicted damage lowers to 17%. If the building was brought up to current building code before the earthquake, the predicted damage lowers to 14%.

Life Safety — If the earthquake happened today, life safety risk to occupants is predicted to be very high. If we retrofitted the building before the earthquake, life safety risk to occupants is predicted to be low If the building was brought up to current building code, life safety risk to occupants is predicted to be very low.

Post-quake usability — If the earthquake happened today, the building is predicted to be red tagged (unusable). If we retrofitted the building before the earthquake, the building is predicted to be yellow/green tagged (usable after repairs). If the building was brought up to current building code, the building is predicted to be green tagged (usable after cleanup).

Additional engineering and sources information is in the remaining columns.

WSSDA AREA 4 CONSOLIDATED EPAT Report Earthquake Performance Assessment Tool (EPAT) Spreadsheet showing School District and Name of Bldg Facility PINK SHADING = TSUNAMI ZONE YELLOW = NOT ELIGIBLE FOR SEISMIC FUNDING	Construction Type =WOOD FRAME, RM = REINORCED MASONRY, C2 = CONCRETE SHEAR WALLS, URM = UNREINFORCED MASONRY, S= STEEL FRAME	Construction Date	If quake happened today, we can expect this much damage	If we got "life safety" retrofit before the quake happened, we can expect this much damage	If we got Bldg to current building code retrofit before quake happened, we can expect this much damage	If the quake happened today, the "life-safety" risk would be	If quake happened after a "life-safety" retrofit, the life safety risk would be	If quake happened after the Bldg was brought to current Bldg code standards, the life safety risk would be	If quake happened today the Bldg would most likely be tagged	If quake happened after a "life safety" retrofit, the Bldg would most likely be tagged	If quake happened after the Bldg was brought to current Bldg code standards, the Bldg would most likely be tagged	MEASURED SOIL SITE CLASS OF SCHOOL PROPERTY	LIQUEFACTION HAZARD	DANGER OF AMPLIFIED SHAKING	REPLACEMENT PRIORITY	Phase # - Project BLDG # Phases 1 or 2	Page # in Report	ICOS Facility ID - Superindent of Public Instruction School District ID	ICOS Bldg ID - Superintendent of Public Instruction Bldg ID
Cape Flattery, Clallam Bay, Elem Big Gym	W2	1962	0.7	0.17	0.14	Very High	Low	Very Low	RED	GREEN/YELLOW	GREEN	D	MOD/HI	LOW/MOD	HIGH	1-17	F-49	11636	13292
Cape Flattery, Clallam Bay, Elem bldg	RM1	1962	82	25	21	Very High	Low	Very Low	RED	GREEN/YELLOW	GREEN/YELLOW	D	MOD/HI	LOW/MOD	HIGH	1-18	F-52	11636	18373
Cape Flattery, Clallam Bay, Elem Gym	RM1	1980	74.0%	25.0%	21.00%	Very High	Low	Very Low	RED	GREEN/YELLOW	GREEN/YELLOW	D	MOD/HI	LOW/MOD	HIGH	1-19	F-55	11636	11357
Cape Flattery, Clallam Bay High School Bldg	C2a	1972	86.0%	25.0%	21.00%	Very High	Low	Very Low	RED	GREEN/YELLOW	GREEN/YELLOW	D	MOD/HI	LOW/MOD	VERY HI	1-20	F-58	11636	18300
Cape Flattery, Clallam Bay, Shop & Art Bldg	RM1	1980	74.0%	25.0%	21.00%	Very High	Low	Very Low	RED	GREEN/YELLOW	GREEN/YELLOW	D	MOD/HI	LOW/MOD	HIGH	1-21	F-61	11636	18358
Cape Flattery, Neah Bay Elem School Bldg	RM1	1961	87.0%	26.0%	22.00%	Very High	Low	Low	RED	GREEN/YELLOW	GREEN/YELLOW	D	MOD/HI	LOW/MOD	VERY HI	1-22	F-64	11547	19336
Cape Flattery, Neah Bay Jr/Sr High, Classroom Bldg	W2	56-87	65.0%	18.0%	14.00%	Very High	Very Low	Very Low	RED	GREEN/YELLOW	GREEN	D	MOD/HI	LOW/MOD	HIGH	1-23	F-67	12040	24280
Cape Flattery, Neah Bay Jr/Sr High, High School Gym	C2a	1972	87.0%	26.0%	22.00%	Very High	Low	Low	RED	GREEN/YELLOW	GREEN/YELLOW	D	MOD/HI	LOW/MOD	VERY HI	1-24	F-70	12040	24281
Cape Flattery, Neah Bay Jr/Sr High, High School Shop	S3	1972	95.0%	52.0%	40.00%	Very High	Moderate	Low-Mod	RED	RED	YELLOE/RED	D	MOD/HI	LOW/MOD	HIGH	1-25	F-73	12040	24282
Cape Flattery, Neah Bay Jr/Sr High/Mid School & Gym	W2	2002	16.0%	IB CODE	IB CODE	Very Low	IB CODE	IB CODE	GREEN	IB CODE	IB CODE	D	MOD/HI	LOW/MOD	LOWER?	1-26	F-76	12040	12393
Crescent, Crescent Caferteria/Kitchen	NOT IN SSSP	1973					UNDEFINED	OSPI NUMBER	EQUALS ====	62.71									
Crescent, Crescent Elem, Main Bldg	NOT IN SSSP	1974					UNDEFINED	OSPI NUMBER	EQUALS ====	69.81									
Crescent, Crescent Gym Bldg 3	NOT IN SSSP	1970					UNDEFINED	OSPI NUMBER	EQUALS ====	80.26									
Crescent, Crescent Jr/Sr High, Bldg 5	NOT IN SSSP	1991					UNDEFINED	OSPI NUMBER	EQUALS ====	74.37									
Crescent, Crescent Library Admin Bldg	NOT IN SSSP	1991					UNDEFINED	OSPI NUMBER	EQUALS ====	79.41									
Crescent, Crescent Playshed	NOT IN SSSP	1970					UNDEFINED	OSPI NUMBER	EQUALS ====	48.77									
Crescent, Crescent Voc & Science Bldg	NOT IN SSSP	1960					UNDEFINED	OSPI NUMBER	EQUALS ====	77.85									
Port Angeles, Dry Creek Elem, Main Bldg	NOT IN SSSP	1996					UNDEFINED	OSPI NUMBER	EQUALS ====	76.39									
Port Angeles, Franklin, Covered Play	NOT IN SSSP	1978					UNDEFINED	OSPI NUMBER	EQUALS ====	90.00									
Port Angeles, Hamilton, Main Bldg	NOT IN SSSP	1956					UNDEFINED	OSPI NUMBER	EQUALS ====	68.66	1978								
Port Angeles, Port Angeles High, 0400 Bldg	NOT IN SSSP	1958					UNDEFINED	OSPI NUMBER	EQUALS ====	56.91	1978								
Port Angeles, Port Angeles High, 0600 Bldg	NOT IN SSSP	1960					UNDEFINED	OSPI NUMBER	EQUALS ====	63.25									
Port Angeles, Port Angeles High, 0900 Bldg	NOT IN SSSP	1978					UNDEFINED	OSPI NUMBER	EQUALS ====	68.64									
Port Angeles, Port Angeles High, 1000 Auditorium	NOT IN SSSP	1978					UNDEFINED	OSPI NUMBER	EQUALS ====	67.17									
Port Angeles, Port Angeles High, 1100 Bldg, Living Ctr	NOT IN SSSP	1979					UNDEFINED	OSPI NUMBER	EQUALS ====	84.76									
Port Angeles, Roosevelt Elem, Main Bldg	W2	1978	44.0%	19.0%	15.00%	Moderate	Very Low	Very Low	RED	GREEN/YELLOW	GREEN	C	V LOW/LOW	V LOW/LOW	MOD	1-153	F-463	11703	14120
Port Angeles, Stevens Middle, Gym	NOT IN SSSP	1960					UNDEFINED	OSPI NUMBER	EQUALS ====	85.38	1978								
Port Angeles, Stevens Middle, Main Bldg	NOT IN SSSP	1972					UNDEFINED	OSPI NUMBER	EQUALS ====	72.95									
Quillayute Valley, Forks Elem, Main Bldg	W2	1969	69.0%	20.0%	16.00%	Very High	Very Low	Very Low	RED	GREEN/YELLOW	GREEN	C	V LOW/LOW	V LOW/LOW	VERY HI	2-253	2-276		59199
Quillayute Valley, Forks Jr/Sr High, 1949 Portion	W2	1949	69.0%	20.0%	16.00%	Very High	Very Low	Very Low	RED	GREEN/YELLOW	GREEN	C	V LOW/LOW	V LOW/LOW	VERY HI	2-254	2-277		59193
Quillayute Valley, Forks Intermediate, 1952 Portion	W2	1952	78.0%	20.0%	16.00%	Very High	Very Low	Very Low	RED	GREEN/YELLOW	GREEN	C	V LOW/LOW	V LOW/LOW	VERY HI	2-255	2-278		59203
Quillayute Valley, Forks Elem, Covered Play 1	NOT IN SSSP	1989					UNDEFINED	OSPI NUMBER	EQUALS ====	81.21									
Quillayute Valley, Forks Elem, Covered Play 2	NOT IN SSSP	1989					UNDEFINED	OSPI NUMBER	EQUALS ====	76.98									
Quillayute Valley, Forks Elem, Main Bldg		1970					UNDEFINED	OSPI NUMBER	EQUALS ====	74.14	1989								
Quillayute Valley, Forks Intermediate, Covered Play	NOT IN SSSP	1989					UNDEFINED	OSPI NUMBER	EQUALS ====	89.38									
Quillayute Valley, Forks Intermediate, Gym	NOT IN SSSP	1989					UNDEFINED	OSPI NUMBER	EQUALS ====	87.14									
Quillayute Valley, Forks Intermediate, Main Bldg	NOT IN SSSP	1956					UNDEFINED	OSPI NUMBER	EQUALS ====	76.11	1989								
Quillayute Valley, Forks Jr/Sr (ALT?) High, Main Bldg	NOT IN SSSP	1956					UNDEFINED	OSPI NUMBER	EQUALS ====	84.68									
Quillayute Valley, Forks Jr/Sr High, Auto Shop	NOT IN SSSP	1970					UNDEFINED	OSPI NUMBER	EQUALS ====		2009								
Sequim, Greywolf Elem, Main Bldg	NOT IN SSSP	1991					UNDEFINED	OSPI NUMBER	EQUALS ====	76.53									
Sequim, Helen Haller Elem, Bldg A	NOT IN SSSP	1967					UNDEFINED	OSPI NUMBER	EQUALS ====	36.63									
Sequim, Helen Haller Elem, Bldg B	NOT IN SSSP	1978					UNDEFINED	OSPI NUMBER	EQUALS ====	43.44									
Sequim, Helen Haller Elem, Bldg C w/Playshed	NOT IN SSSP	1978					UNDEFINED	OSPI NUMBER	EQUALS ====	34.46									
Sequim, Helen Haller Elem, Bldg D	NOT IN SSSP	1978					UNDEFINED	OSPI NUMBER	EQUALS ====	37.33									
Sequim, Sequim Community School, Gym	NOT IN SSSP	1979					UNDEFINED	OSPI NUMBER	EQUALS ====	55.78									
Sequim, Sequim Community School, Main	NOT IN SSSP	1979					UNDEFINED	OSPI NUMBER	EQUALS ====	59.88	2012								
Sequim, Sequim Middle School, Main Bldg	NOT IN SSSP	1998					UNDEFINED	OSPI NUMBER	EQUALS ====	76.70									
Sequim, Sequim Sr High, Art, Bldg C	NOT IN SSSP	1967					UNDEFINED	OSPI NUMBER	EQUALS ====	49.64	1999								
Sequim, Sequim Sr High, Classroom Bldg A	NOT IN SSSP	1967					UNDEFINED	OSPI NUMBER	EQUALS ====	48.00	1999								
Sequim, Sequim Sr High, Classroom Bldg B	NOT IN SSSP	1967					UNDEFINED	OSPI NUMBER	EQUALS ====	47.07	1999								
Sequim, Sequim Sr High, Classroom, Bldg H	NOT IN SSSP	1998					UNDEFINED	OSPI NUMBER	EQUALS ====	80.14									
Sequim, Sequim Sr High, Library, Bldg D	NOT IN SSSP	1967					UNDEFINED	OSPI NUMBER	EQUALS ====	31.81	1999								
Sequim, Sequim Sr High, Voc Ed, Auto Shop, Bldg E	NOT IN SSSP	1967					UNDEFINED	OSPI NUMBER	EQUALS ====	58.68									

See Schools, page 14

Schools, from page 13

Reaction to the mailings was impressive. The press picked up the story. Between October and January, a group of activists and experts coalesced. The team included many individuals from the Department of Natural Resources, Reid Middleton Engineers, Office of the Superintendent of Public Instruction, University of Washington Pacific Northwest Seismic Network, various school districts, numerous emergency management experts, first responders, amazing journalists, families and community members. These organized a statewide grassroots campaign to convince the Legislature to take action.

It is a pleasure to let you know the Legislature took unanimous bipartisan action to start making your schools earthquake safe. The legislation they passed is Senate Bill 5933. It was sponsored by Sen. David Frockt (D) of Seattle, Sen. Mark Schoesler (R) of Ritzville, Sen. Mark Mullet (D) of Issaquah, and Sen. Jim Honeyford (R) of Sunnyside. Every mom and pop in Clallam and Jefferson County needs to thank them for their leadership. They also need to thank their legislators for their yes votes.

Senate/House Bill 5933, "Establishing a School Seismic Safety Grant Program" does this:

1. Sets the ground rules for the Office of Superintendent of Public Instruction (OSPI) to assist school districts in preparing seismic safety planning grants.

2. Requires OSPI to combine school modernization and seismic retrofit programs to save money.

3. Sets up the ground rules for OSPI to build a school seismic safety grant program for at-risk earthquake- and tsunami-endangered schools.

4. The 5933 bill sets up the Seismic School Safety Account with the treasurer to accept money from Senate Bill 5651.

SB 5651, the Capital Budget, appropriated $100 million dollars to the 5933 Seismic School Safety Account to kick-start OSPI's new program. Ultimately this will require years to upgrade our schools. Current estimates are between $3 billion and $5 billion, based on what we know right now and may take up to 20 years to complete, but only if we continue to fund the grant process to achieve this. This can be done. California faced a similar daunting task of upgrading every column in their freeway system to meet earthquake standards, but over a course of 30 years and reasonable levels of yearly expenditures they achieved it.

The Legislature mounted a fine bipartisan effort in the 2022 session. That needs to continue. It will only happen if voters let every candidate in the coming November elections know this is a priority issue and that they expect action.

Learn how to make a difference in your community

Know how to respond to each kind of hazard.

Some advice has changed over the years. Even if you think you know, give it a quick scan; you'll probably see at least one new thing. Take a look at 2019's Preparedness Guide online for detailed info on some of the Peninsula's most likely natural hazards, *bit.ly/2019PEPG*.

Prepare your home.

Home adjustments and maintenance can be done beforehand for earthquakes, wildfires and winter weather. Specific recommendations can be found online in Washington's Preparedness Guide at *bit.ly/WashingtonEPG*.

Be self-reliant.

Gather and store enough supplies for you, your family and pets for at least seven days. If you can (or slowly over time), increase your supplies to 30 days or more; response timelines show Peninsula residents should not discount the possibility of up to three months' isolation in severe, community-wide disasters.

Expand your skills.

Learn CPR/first aid.

Join a community emergency response team (CERT), volunteer in police service (VIPS), search and rescue or community policing team or other emergency-related education programs.

Get licensed and become a member of amateur radio emergency services (ARES).

Become a volunteer firefighter. There are several districts that run only on volunteers.

EMERGENCY MANAGEMENT CONTACTS

CLALLAM COUNTY

CLALLAM COUNTY EMERGENCY MANAGEMENT (CCEM)
- 223 E. Fourth St., Suite 12, Port Angeles
- clallam.net/emergencymanagement
- ccem@co.clallam.wa.us
- Ron Cameron, 360-417-2544 rcameron@co.clallam.wa.us

COMMUNITY EMERGENCY RESPONSE TEAM (CERT)
For Western Clallam County and Port Angeles, west of Deer Park
Contact: CCEM, 360-417-2544, ccem@co.clallam.wa.us

MAP YOUR NEIGHBORHOOD (MYN)
Contact: Ann Chastain, 360-417-2483 achastain@co.clallam.wa.us

JEFFERSON COUNTY

JEFFERSON COUNTY DEPARTMENT OF EMERGENCY MANAGEMENT
CERT and MYN for Jefferson (except Gardiner and West Discovery Bay)
- Office: 81 Elkins Road, Port Hadlock
- Phone: 360-385-9368
- Email: jcdem@co.jefferson.wa.us
- Contact: Willie Bence, 360-344-9729 wbence@co.jefferson.wa.us, jcdem@co.jefferson.wa.us
- co.jefferson.wa.us/950/Dept-of-Emergency-Management

SEQUIM OPERATIONAL AREA FIRE & RESCUE

CLALLAM COUNTY FIRE DISTRICT 3
For questions regarding insert materials or for group presentations, contact us.
- Office: 323 N. Fifth St., Sequim
- Dan Orr, 360-683-4242, ext. 114, dorr@ccfd3.org
- Blaine Zechenelly, bzechenelly@ccfd3.org

COMMUNITY EMERGENCY RESPONSE TEAM (CERT)
For Eastern Clallam County, Gardiner and West Discovery Bay
Contact: Cindy Zechenelly, czechenelly@ccfd3.org

MAP YOUR NEIGHBORHOOD (MYN)
Contact: Lynne Schlosser, Lynne5977@live.com

JOYCE

JOYCE EMERGENCY PLANNING AND PREPAREDNESS (JEPP)
- Website: jeppgroup.org
- Social Media Page: facebook.com/JEPPgroup
- Contact: Jim Buck, 360-808-2105, buckdj@olypen.org

In conclusion

Contributors to this guide (Blaine Zechenelly and Keith Koehler from Clallam County Fire District 3 and Jim Buck from Clallam County EMD/JEPP) hope you found this year's guide informative and something that builds on the previous guides we have provided you. You can see those guides at *issuu.com/pnwmarketplace/docs/i20180214114005109* for 2018, *issuu.com/pnwmarketplace/docs/i20190327102005995* for 2019, *issuu.com/pnwmarketplace/docs/i20200323114404184* for 2020 and *issuu.com/pnwmarketplace/docs/i20210331221315129* for 2021). Look above for further contact information to answer your questions.

Keep your property lean and green to help protect your family and home this Wildfire Season.

Creating defensible space is essential to improve your home's chance of surviving a wildfire. It's the buffer you create between a building on your property and the grass, trees, shrubs, or any wildland areas that surround your residence.

Vertical Spacing
Remove all tree branches at least 6 feet from the ground and allow extra vertical space between shrubs and trees. Lack of vertical space can allow a fire to move from the ground to the brush to the tree tops like a ladder. To determine the proper vertical spacing between shrubs and the lowest branches of trees, use the following example: A five foot shrub is growing near a tree. 3×5 = 15 feet of clearance needed between the top of the shrub and the lowest tree branch.

Plant and Tree Spacing
Distance between grass, shrubs, and trees is crucial to reduce the spread of wildfires. The spacing needed is determined by the type and size of brush and trees, as well as the slope of the land. For example, a property on a steep slope with larger vegetation requires greater spacing between trees and shrubs than a level property that has small, sparse vegetation.

http://bit.ly/EJFRWildfire

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