

PREPAREDNESS FOCUS

Our emergency preparedness training focuses on earthquakes, because the preparation and response necessary to survive them, also prepares us, as much as possible, for surviving most types of disasters. Additionally, large earthquakes have occurred and will continue to occur throughout Western Washington.

Earthquakes include components of most other kinds of disasters, as they may cause:

- power outages and other utility failures
- structural collapse
- damage to roadways
- fires
- hazardous materials leaks
- injury
- limited mobility
- limited means of communication
- limited access to help
- need for self-sufficiency over a period of days



Like other disasters, major earthquakes are also likely to:

- occur without warning
- affect a broad geographical area
- require professional & emergency services interventions
- require time and multiple governmental and personal resources to recover

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Audience Questions & Answers

RISK VS. PERCEPTION

What is the disaster risk in Washington State?

- ▢ Washington State has the 3rd highest threat of earthquake in the U.S., coming after Alaska (number #1) and California
- ▢ The Pacific Northwest is at risk of serious earthquakes from 3 separate sources: deep faults, shallow crustal faults, and the Cascadia Subduction Zone
- ▢ The Puget Sound region already has nearly 1,000 earthquakes each year
- ▢ Washington is the State with the most official weather-related disasters in the U.S.

What is the risk to me?

Although frequent, earthquakes are the most survivable of all disasters. However, survivability depends on preparedness and effective response. Californians, who experience enough serious quakes to take mitigation seriously, serve as an example. Only 67 people died in the Northridge, CA, earthquake, out of a possible 3 million people.

Despite the dangers in not being prepared and the great odds of surviving an earthquake *when they are properly prepared*, relatively few people in our State take the necessary steps to protect themselves and their property from the imminent devastation of earthquake. Some of this can be attributed to denial:

1. "It won't happen"
2. "It won't happen to me"
3. "It will happen to me but it won't be bad"
4. "It will happen and we'll all die, so why prepare?"

More people prepared themselves to be self-sufficient for Y2K than earthquakes and more people have sought out disaster planning since the September 11th attacks, than since the February 2001 Nisqually earthquake. Yet we *know* the Puget Sound region will experience earthquakes and **the extent to which we are prepared determines the extent to which we will be able to protect life and property.**

Congratulations on recognizing the importance of emergency preparedness and for devoting this time to learning more about how you can protect yourself and your loved ones. Your attention to this information is a positive step that can lead you to greater preparedness and will serve you well!

WHAT TO DO BEFORE THE QUAKE

Preparation involves a variety of actions, from the quick and simple to the more complicated and time-consuming; from the inexpensive to the costly. *Every step we take* increases our chance of surviving an earthquake with little to no harm to ourselves or our property!

Anchor home. Most injuries sustained indoors during earthquakes are caused by structural collapse and flying debris, including glass from broken windows, furniture, and smaller objects. Thus, the more secure we make our structures and the contents within them, the safer we are.

Most structures built after 1975 are anchored to their foundations while most built before 1965 are not. Those built between, vary. Unanchored structures are at greater risk of shifting off their foundations than those bolted to them. When a home or building shifts on or off its' foundation, it may collapse. To decrease our risk of injury, we should make sure our home/building is anchored to its' foundation. The Federal Government established Project Impact to assist homeowners in retrofitting their homes (see handout.)

Assess flying hazards. Look over each room and hallway of your home, imagining it is the inside of an airplane, about to experience major turbulence. Picture the room being thrown up, down, and from side to side. Determine what would fall off walls and furniture, what would fly through the room, and what would be damaged from intense shaking. These are objects that should be anchored or securely stored in cabinets and closets.

Anchor objects. Objects not anchored at home, workplace, or in vehicles may become flying projectiles during earthquakes. An array of hardware, straps, and other anchoring devices are available through hardware stores to secure objects within structures and to protect us as drivers or passengers. These range from screws and bolts to metal screens and child-proof cabinet door attachments.

Assess survival materials. Imagine your home is a plane forced to make an emergency landing on an island and your only provisions are those stored for emergencies and that survived the turbulence. Due to the sudden and overwhelming demand on public services following disasters, emergency services may be inaccessible for several days, turning homes/neighborhoods into "islands", *regardless* of residents' condition or readiness for it.

Supply kit considerations. A supply kit of emergency provisions is critical to survival. When considering what to include, imagine weather shifts from 0-100 degrees, exposure to bugs and animals, and lack of sanitary water. Include what household members and pets need for 3 days.

Create supply kit. General supply categories include: food, drinking water, cleaning & debris clean-up materials, extra medicine, battery operated lighting and communications equipment, first aid supplies, supplies for sheltering and warmth, sanitation collection & storage materials, hygiene supplies, extra eye glasses, portable heating and cooking equipment, utensils, clothing, small cash, and a copy of important documents (see handout.)

Place tools where they'll be needed. If gas lines have been dislodged, causing leaks that need to be turned off, the best place to have a wrench is by the gas shut off valve, located at the gas meter. A non-metal wrench is safest for avoiding creating a spark. Either way, the tool can be kept dry and at the ready by placing it in a plastic bag hung from the pipe by the shut-off.

Establish safe sites in every room. Surviving an earthquake requires taking cover where we will be protected from serious injury. The best locations vary from room to room in each home and workplace depending where we find ourselves when tremors begin. Being prepared requires identifying, now, the safest location (preferably under sturdy furniture) in every area (room, hall, stairwell, etc.) Practice the drop-cover-hold technique in each area, with all household members. With children, make it a game, to avoid instilling fear in them. It is also a good habit to identify the safest place we can take shelter when we are in retail locations, on the street, etc.

Identify 2 ways in/out of every room. Following a major earthquake, our normal entry/exit routes within the home may become unusable. Identifying 2 ways in and out of every room is an important survival step. Practice leaving by both exits/entries to make sure they work. (We may have to reach children, elderly adults, or others by window, from *outside* the house.)

Identify a meeting place. We establish a location near to but not directly outside the home or place of business, so that following evacuation we can make sure quickly that everyone is out and accounted for. Practice going to the location with family members, co-workers, etc.

Establish an out-of-state contact. Following a major disaster, family members and friends worry about those who have been affected, and want to know how they're doing. Communication systems to local areas are likely to be disabled or overwhelmed and unusable to us. Long distance lines may remain open and accessible longer. Agree to use someone out-of-State who will serve as your point-of-contact. Those who experienced the disaster call in to let others know they survived and loved ones call to make sure everyone is accounted for and okay. Be sure to stay on the phone only long enough to leave this information! Others need to get through, too.

Get 1st Aid & CPR training. Because we may need to take care of medical emergencies on our own following a disaster, we should be as skilled as possible in administering 1st aid and CPR. Be sure to obtain training from certified instructors; practice; and take refresher courses each year.

Organize your neighbors. Our neighbors may be our #1 resource during a disaster. Create a list that includes names, children's ages, contact numbers, skills individuals may contribute to the recovery effort (carpentry, first aid, etc.); and list the resources available through each household (truck, tractor, generator, etc.) Meet twice a year for information updates and skill-building.

Make a list of emergency resources close to home. Identify the closest stores and resources for emergency needs. Include your closest member of Amateur Radio Emergency Services (ARES), as members can provide an additional means of emergency communication. You may decide to become a HAM Radio operator, yourself!

FREQUENTLY ASKED QUESTIONS REGARDING ACTION BEFORE QUAKES

Q1: *Can I consider supplies I use in other parts of the house a part of my emergency kit, so I don't have to duplicate them?*

A1: A supply kit should include all the items you may need in a disaster, regardless of what you have in other parts of your house. Supplies used for daily living, run out, run down, or need to be replaced on a regular basis. During disasters it's important to know our emergency supplies are ready, in full supply, and in good condition.

Q2: *Can I keep portions of the emergency kit in different parts of the house?*

A2: The full emergency kit should be kept in one location so that all items can be accessed without having to be found and gathered when you need them quickly. Likewise, they should be kept where you can easily access them without having to stand on something to reach them or move other things to get to them. Remember, you may be injured when you need them.

Q3: *Is it okay to keep more than one kit?*

A3: You may decide to keep smaller versions of the emergency kit in other parts of the house, in the event you get trapped away from the full kit or to give yourself more time to access the larger supply. A garage is an ideal location for the full kit as it can provide greater access from the outside, as well as, the inside of the house. Bedroom closets, under-sink areas in bathrooms & kitchens, and pantries, are useful secondary areas for any supplementary kits.

Q4: *As long as supplies are together in one spot, do they need to be in containers?*

A4: It takes more time during an emergency to gather and move supplies that are stacked by each other but are not kept in tubs, bins, etc. Time may be of the essence to access and remove the supplies. Be sure to mark each bin to indicate its' contents. Water resistant containers are preferable to cardboard boxes.

Q5: *How do I know whether or not my home is anchored?*

A5: Many contractors will come out to inspect your home free of charge and give you an estimate of the cost of anchoring the home for you, if it isn't.

Q6: *How do I anchor small objects, like knickknacks, and yet be able to lift them to dust?*

A6: Museum wax and some putties or clay from hardware or home stores will stabilize small objects during quakes yet can be moved repeatedly.

Q7: *Does the City of Kirkland conduct Citizen Emergency Response Team training I can take?*

A7: Yes. The 26 hour/seven week course is taught approximately five times a year by Kirkland Fire Dept. Information about the program is available at: www.fema.gov, www.ci.kirkland.wa.us and 425-587-3659.

WHAT TO DO DURING THE QUAKE

We have 3 to 4 seconds from the onset of an earthquake to take cover. Our goal in that time is to make sure our heads are not the tallest thing around and to avoid the 2 greatest dangers: things that can break and things that can fall. That's why we need to:

- ▢ Get low
- ▢ Get under protective furniture, like a table
- ▢ Hang onto a furniture leg with both hands, so it stays with us/we stay with it
- ▢ Keep our bodies curled up, with our heads beneath our arms
- ▢ If we want, we can repeat "Stop! Stop!" till the shaking is over (for some people it provides a distraction and increases a sense of control when the shaking *does* stop!)

When there is nothing to get beneath we should:

- ▢ Get down against an inside wall, not a window
- ▢ Avoid getting beneath artwork that can fall
- ▢ Avoid doorways as they may not be load-bearing and may have swinging doors
- ▢ Stay curled up in a ball, with our heads protected beneath our arms

If we are inside we should:

- ▢ Stay inside – we are more likely to get hurt outside
- ▢ Find the safest location in the room we are in – not run to another room

If we are outside we should:

- ▢ Get down away from structures and other things that can fall on us
- ▢ Get inside a structure if we are just outside an entrance and can get in quickly

1/3 of all injuries in earthquakes occur to leg bones. People get hurt running to other areas. If everyone were to immediately stop, cover, and hold, we would reduce the injuries by a third.

If we are in charge of children, we should still immediately stop, cover, and hold... and call out instructions from under cover. If we get hurt trying to get to them, we will not be able to assist them when the shaking stops. Children are not automatically frightened by earthquakes. Young children may think it's funny. Studies demonstrate children's emotional response to quakes is determined by the interactions of the adults with them, especially their parents. If we speak to them calmly and with confidence they are likely to believe everything is under control, they will be less frightened, and they will be better able to follow our directions.

FREQUENTLY ASKED QUESTIONS REGARDING ACTION DURING QUAKES

Q1: *What if there is no table?*

A1: Sit against an inside wall, wherever you are – don't try to get to another area.

Q2: *What if I am on a bus?*

A2: Get down and help others afterward.

Q3: *What if I am in a car?*

A3: It may feel like a flat tire or gust of wind. Slow down, pull over, stop, and preferably stay in the car, as you are generally better protected inside. Outside other vehicles may bounce around and strike you. If you are on an overpass, continue over if you are able; then pull over to the shoulder and stop.

Q4: *What if I am in bed?*

A4: If waking from a sound sleep, stay put or drop down to the side of your bed and pull pillows/covers over your head – you won't know how much time has passed and whether it's too late to move. Kids may think they're dreaming. If awake, you can use your designated bedroom safe area. Under the bed may be dangerous as it can bounce around or collapse. It's a good idea to use the same places for shelter throughout our lives and, as adults, you may no longer be able to fit under your bed.

Q5: *What if I am outside?*

A5: Get back inside if possible quickly; otherwise move away from structures. High-rise buildings perform well. Wood frame homes perform best. The most dangerous place is right outside a building.

Q6: *What if I am in a bathroom?*

A6: Stay there – it's small and relatively safe. Shower door glass is tempered to crumble, not break into shards. You may get scraped but won't likely die or get seriously injured. If in the tub or on the commode, you can stay put; just protect your head.

Q7: *What if we have small children?*

A7: Kids don't necessarily know what's going on – They may wonder about the noise and things hopping around, but our interaction with them determines whether or not they get scared. Kids usually get low. [Anecdote: Following an earthquake, an elementary student, used to earthquake drills, saw the school principal and exclaimed, "Wow! That was cool! How did you do that?"]

Q8: *What if I am in an elevator that's stuck?*

A8: Lie flat and still on the floor until emergency responders get to you and open the door. Avoid elevators following quakes until they have been professionally checked and approved.

WHAT TO DO AFTER THE QUAKE

Earthquakes may dislodge the framework, contents, and utility connections of structures we're in or near, creating precarious, dangerous environments. The primary quake is often followed by aftershocks that cause weakened structural attachments to break loose or collapse, causing as much or more damage than the initial tremor.

Assess safety. Before leaving the safety of cover, take stock of the surrounding area. If we can safely wait a few minutes before leaving, to avoid being exposed to the renewed danger of aftershocks, we should do so.... then take the safest exit route available. The same precautions should be repeated in attending to children, having them stay put, if necessary, until we can secure a safe way to get to them and then get them out.

Evacuate if gas leaks. If a house smells of gas, evacuate everyone, turn off the valve by the outside meter, call 911 from elsewhere, then contact the gas company to make any necessary repairs, give approval to reenter the home, and restart service. We don't turn the gas back on ourselves! In an apartment or other building, evacuate immediately and call 911 from elsewhere. Upon reentry avoid using heating or open flames another few hours, keeping the windows open.

Get structural assessment. If the structure we're in has sustained any obvious or probable damage or we are not sure we're completely safe, we should immediately evacuate, contact our insurance company, and wait for a professional structural assessment to be made, along with any needed repairs, *before* reentering.

Stay put if safe. If we do not *need* to go somewhere, WE SHOULD NOT DO SO! Roads may be blocked and additional vehicles only obstruct emergency vehicles, including Building and Public Works vehicles en route to assess damage and make repairs. Remember, everything being done by the City following a quake is for our safety.

Stay off phone lines. After one BRIEF call to notify our out-of-state contact that we are okay, unless we have an emergency call to make, we should STAY OFF PHONES AND COMPUTERS! Communication systems may be overwhelmed, making it difficult for emergency dispatchers and responders to receive and dispatch critical information. Using phone lines for non-emergency communications may put other people's lives at risk!

Find shelter. The Red Cross has contracted with agencies to serve as shelters throughout our community. The locations are not disclosed prior to disasters, as they may be damaged and unsafe. Directly following a disaster, professionals will assess the safety of the shelters. As soon as they are deemed safe, their locations will be announced over the radio. Stay tuned!

Get \$ help. Homes/businesses within a declared National Disaster Area may be eligible for financial assistance from the Federal Emergency Management Administration (see resource page.)

FREQUENTLY ASKED QUESTIONS REGARDING ACTION AFTER QUAKES

Q1: *Should we put out color-coded flags at the end of our streets, indicating resident condition?*

A1: No. The Department will respond first to areas/facilities that affect the greatest number of people, such as highways, schools, shopping centers, senior housing, etc., and to large scale incidents such as commercial fires, chemical leaks, etc. Using flags will create a pretense of communication and a false sense of security. The best way to reach emergency services personnel to report injury, will be via phones, as soon as they are usable. Neighbors are welcome to use a color-coded flag system with each other, so that residents can keep track of each other and tend to each others' needs, until professional assistance is available.

Q2: *Will we be able to access the internet if we can't get through by phone?*

A2: The lines serving your phone may be busy while others are available to provide internet service. During the 2001 Nisqually earthquake some emergency services personnel used the internet to communicate with headquarters, when phones were tied up and radios were down.

Q3: *How long does it take for the aftershocks to hit?*

A3: There is no set time for the occurrence of aftershocks. They may occur within minutes or hours, over a period of days, or not at all. They may cause additional shaking or not be felt at all. Being prepared for them and letting that guide our actions, is our best hedge against being harmed by them. This includes scanning surroundings for loosened objects that may fall or broken flooring that might cave in, and identifying the best places to take cover every few feet between where we are and want to go.

Q4: *Do schools wait for aftershocks before moving students?*

A4: Different schools have different student evacuation policies. Most, if not all, plan to evacuate children as soon as possible following quakes. Some plan visual assessments of the area, as described above, prior to moving students; others plan to send someone around to assess the entire school prior to evacuation. Check with your students' schools to find out about their procedures.

Q5: *If I'm on an upper floor of a building, can I use the elevator to exit?*

A5: Without knowing what damage elevators may have sustained, it is dangerous to use them. Wait until they have been professionally inspected and approved for use. If you use them to accommodate a wheelchair, walker, etc., you will need to rely on other means of evacuation, depending on your physical ability, the presence of others to assist, etc. It is always advisable to plan alternative methods of evacuation when entering an unfamiliar structure.

TERRORISM AND BIOTERRORISM

There is currently little else that we recommend to prepare for a terrorist or bioterrorist attack, beyond preparations for an earthquake. By minimizing the potential for personal injury and property damage and maximizing our ability to survive and recover as already described, we take the most important steps we can to protect ourselves from intentional incidents such as man-made explosions and releases of dangerous chemicals.

Personal safety training provides a useful model for reducing our opportunities for exposure to injury from others. This involves, as example, the following actions:

- Avoid environments known to be dangerous (parks and unlit streets at night...)
- Go places accompanied by other people and/or a large dog
- Pay attention to surroundings, including physical environment and behavior of others
- Pay attention to intuitive or “gut” feelings
- Act upon observations or feelings (if a setting doesn’t feel safe, leave; if an object or substance looks suspicious, don’t touch it..)
- Carry emergency communications devices (cell phone, loud alarm...)
- Carry something that can be used as a weapon (nail file, keys...)
- Learn physical protection and escape techniques (personal safety training)

Our ability to stay calm when faced with unexpected chaos, trauma, and the unknown, determines to large extent, our success in surviving dangerous situations. When we panic, we restrict blood flow to our brains, limiting our ability to think clearly and pay attention to nonverbal information. This doesn’t mean we can’t feel distraught, but rather, we don’t let those feelings determine our actions. By remaining calm we can also get others to do the same and group response becomes more rational and effective.

When calling 911, be prepared with as much of the following information as possible:

- Your name
- Your phone number (if cell)
- Your location and location of the incident
- The nature of the incident you are calling about
- The presence of any weapons, dangerous materials, etc.
- The identification of any attackers (numbers, ages, gender, etc.)
- The identification and status of any victims (numbers, ages, gender, etc.)
- The identification of any others in the vicinity (same information for witnesses)
- Other relevant information that may assist dispatchers and emergency responders

Stay on the phone until the dispatcher says you may hang up. During the call the dispatcher may send out emergency responders, while communicating to them the information you’ve provided.

FREQUENTLY ASKED QUESTIONS REGARDING TERRORISM AND BIOTERRORISM

Q1: What do I do with suspicious mail?

A1: Do not touch it. If it is in hand, set it down gently. At the Post Office/mail center, notify the business' authorities. At home, leave your residence and phone 9-1-1. The appropriate emergency services team will respond.

Q2: What do I do with a suspicious white substance?

A2: Do not touch it. At a business, notify management. At home, leave the area and phone 911. The appropriate emergency services team will respond.

Q3: Are there hoods or gas masks I can wear to protect myself from bio-chemicals?

A3: A different protective device is necessary for different bio-chemicals. You would have to know which one you encountered, you would have to have the right device with you at that moment, and you would require special training to use it. You cannot keep all possible protective devices with you at all times, nor expect sufficient notice of contamination to get the right one on in time. People have hurt themselves trying to use the equipment without training.

Q4: What do I do if dangerous chemicals are in the air and traveling my direction?

A4: Try to put distance between yourself and the source of the chemicals or the direction the chemicals are moving. This may mean leaving a house or building or it may mean "holing up" in one. Limiting air flow may assist in keeping chemicals out. This may be accomplished by shutting doors and windows, covering the spaces around doors and windows, covering vents, and turning off air systems such as furnaces, fans and air conditioners.

Q5: How do I find out what is going on and what I should be doing?

A5: Listen to public media, especially radio. Pay attention to information that has been confirmed.

Q6: What are some other things I can do to protect myself?

A6: Follow fire, personal safety, and emergency preparedness advice, such as:

- Make sure your house numbers are easily visible, for emergency responders
- Make sure children know their addresses and family/emergency phone numbers
- Keep working fire extinguishers in set locations and train family members to use them
- Use cyber security programs on computers and don't open email from unknown sources
- Report suspicious behavior
- Look out for each other
- Work out differences with others in non-violent, non-threatening ways
- Demonstrate respect for others and their differences, especially in front of children

RESOURCES

American Red Cross, Seattle-King County Chapter

206-323-2345
1900 25th S., Seattle, WA, 98144
www.seattlredcross.org

Federal Emergency Management Agency

202-566-1600
FEMA, 500 C St. SW, Washington D.C., 20472
www.fema.gov

Kirkland Emergency Preparedness Education

Robin Paster, 425-587-3659
123 5th Ave., Kirkland, WA, 98033
www.rpaster@ci.kirkland.wa.us

National Oceanic and Atmospheric Administration

Washington State Office, 206-526-6087
National Office, 202-482-6090
14th Street & Constitution Ave. NW, Washington D.C., 20230
www.noaa.gov

National Safety Council

Phillip Baxter, 425-821-0300
13501 100th Ave. NE, PMB 5037, Kirkland, WA, 98034
www.nsc.org

Project Impact, King County

Self-help workshops/contractor referrals, 206-382-2159

Project Impact, Kirkland

Permit & technical information
Tom Jensen, 425-587-3611
www.tjensen@ci.kirkland.wa.us

State of Washington Emergency Management Division

253-512-7000
Building 20, M/S: TA-20
Camp Murray, WA, 98430-5122
www.wa.gov/wsen

USA Freedom Corps Citizen's Preparedness Guide

Free individual guidebooks, 1-800-937-7383
Free bulk guidebooks, 1-800-627-2911
(Shipping and handling charges must be paid)
www.citizencorpsgov/cpg.pdf

**KIRKLAND FIRE AND BUILDING DEPARTMENT
LET'S GET PREPARED!
PARTICIPANT EVALUATION**

Please help us plan for future presentations by completing this form in the following manner:

- ▯ circle the rating that best describes your experience: P=poor, F=fair, G=good, E= excellent
- ▯ explain your responses on the comment line below the ratings
- ▯ provide answers to the open-ended questions

[How did you learn about the program? _____]

1. Overall presentation P F G E

2. Value of information P F G E

3. Value of materials provided P F G E

4. Presenter #1 (Name _____) P F G E

5. Presenter #2 (Name _____) P F G E

6. Audio-visual materials P F G E

7. What are the 3 most important things you got out of the program?

a. _____

b. _____

c. _____

8. What do you think might improve the program?