FLOODS

Be Aware

Floods claim dozens of lives in the United States every year. Flood waters only half a foot deep can be strong enough to sweep you off your feet.



Prepare

- Check with your local emergency manager to find out if your home is on a flood plain. Even if it is not, you should be prepared for a flood.
- If you do live on a flood plain, assemble materials such as plywood, plastic sheeting and sandbags that you may need in a flood.
- Discuss flood insurance coverage with your agent. Normal homeowners insurance does not cover flooding and there is a 30-day waiting period.
- Plan your evacuation (see Evacuation on page 3).
- Make sure you have disaster supply kits at home, your workplace and your car.

For more information about the National Flood Insurance Program managed by FEMA, contact your local emergency management office.

Understand flood forecasts, warnings and watches broadcast on local TV and radio. Consider purchasing an NOAA weather radio

FLOOD FORECAST means rainfall is heavy enough that rivers will overflow their banks.

ACTION: Discuss a possible evacuation.

FLOOD WATCH means flooding is possible in your area.

ACTION: Fill your car's gas tank in case an evacuation notice is issued.

FLOOD WARNING means flooding is occurring or will occur very soon.

ACTION: If instructed by local authorities, turn off utilities if your home is likely to be flooded.

FLASH FLOOD WATCH means heavy rains are occurring or expected and are likely to cause flash flooding

in specific areas.

ACTION: Prepare for evacuation if you are in the watch area.

FLASH FLOOD WARNING means flash flooding is occurring or imminent in designated areas.

ACTION: If your area is affected, evacuate immediately to higher ground. If you are driving, stay away from storm drains and irrigation ditches. Never drive around a police barricade. If your car stalls in rapidly-rising water, abandon it immediately and climb to higher ground.

Respond

DURING HEAVY RAINS

- Listen carefully to the radio Emergency Alert System for specific instructions from emergency
 officials, such as filling your bathtub with water for flushing the toilet, washing the floor or clothing,
 securing your house, putting out sandbags or evacuating to higher ground.
- If told to evacuate, follow all evacuation instructions carefully (see page 3).
- Keep in mind that 6" of water will reach the bottom of most cars, causing loss of control and possible stalling.
 It's hard to tell how deep water is or how stable the ground is beneath.

EVACUATING TO HIGHER GROUND .

- If you see any possibility of a flash flood occurring, move immediately to higher ground. Do not wait for instructions to move.
- Walking or driving through flood waters is the most dangerous thing you can do.

AFTER THE FLOOD

- Contact your local emergency management office and insurance company for guidance on safely returning to a flood-damaged home.
- Avoid contact with flood waters and throw away food, cosmetics or medications that have touched flood waters.

EARTHQUAKES



Be Aware

The threat of earthquakes in the Pacific Northwest is real. Scientists predict a magnitude 8.0 or greater earthquake could occur at any time.

Prepare

- Pick "safe spots" in each room of your home. A safe spot could be under a sturdy table or desk or against
 an interior wall away from windows, bookcases or tall furniture that could fall on you.
- Practice DROP, COVER AND HOLD ON in each safe spot. Drop under a sturdy desk or table, hold on and protect your eyes by pressing your face against your arm.
- Discuss the possibility of an earthquake with your family, and go through the disaster supplies checklists (see pages 5 and 6) to make sure you have everything you need to be self-sufficient for three days.
- Does anyone need training, such as first aid or instruction in turning utilities off? Make a list of who needs to learn what and set aside a time for training. At least one household member should be certified in first aid and CPR.
- Review and update your family plan yearly or as needed. Are phone numbers current? Are safety spots still practical? Has the plan for reuniting the family changed?
- Conduct a home hazard hunt. Bolt bookcases and china cabinets to wall studs and place heavier objects
 on lower shelves. Install strong latches on cupboards. Secure wall hangings with special hooks (don't
 hang anything over the bed).

Respond

When the ground begins to shake, DROP, COVER AND HOLD ON!





DROP

COVER

HOLD ON

- If inside during an earthquake, stay there. Move only a few steps to a nearby safe spot (10 feet or less).
 If you are in bed, hold on and stay there, protecting your head with a pillow.
- If outdoors during an earthquake, stay there. Find a clear spot away from buildings, trees, street
 lights and power lines. Drop to the ground until the shaking stops. If you are in a vehicle, pull over
 to a clear location, stop and stay there with your seatbelt fastened until the shaking has stopped.
 Once the shaking has stopped, proceed with caution.
- When the shaking has stopped, check for injuries and provide first aid.
- Protect yourself from further danger by putting on shoes and work gloves. This will protect you from further injury by broken objects.
- Look for and extinguish small fires. Eliminate fire hazards.
- Leave the gas on at the main valve unless you smell gas or think it is leaking. Turn off water if necessary (see pages 14 and 15). Assume any downed power lines are live and STAY AWAY (see page 15).
- Immediately clean up dangerous spills such as medicine, bleach, gasoline or other flammable liquids.
- Turn on a portable radio and listen for instructions from public safety agencies.
- Use phones ONLY for emergencies. Unnecessary calls can prevent others from getting emergency help.
- Watch animals closely. Leash dogs and place them in a fenced yard. The behavior of pets may change dramatically after an earthquake.
- Don't turn on any electricity after a major earthquake.

Strapping Your Water Heater

A water heater that is not strapped to the frame of your home can tip over in an earthquake, potentially causing a gas explosion hazard and wasting a possible source of water if city water supplies are interrupted. You can get advice and materials for strapping your water heater at most hardware/home improvement stores.

There are many methods for strapping water heaters. The method described below is recommended for fire safety so no flammable materials are in direct contact with the water heater.

Before You Start

First ensure that your water heater is fitted with a flexible gas supply line. If your water heater does not have a flexible gas supply line, contact a licensed plumber to install one.

MATERIALS NEEDED

- (2) Six-foot lengths of 1-1/2-inch, 16-gauge
 pre-drilled strap
- (1) 10-foot length of 1/2-inch EMT tube (conduit)
- (4) 5/16-inch lag screws with washers
- (4) 5/16-inch x 3/4-inch long hex head machine bolts with four nuts and eight washers each
- (2) 5/16-inch x 1-1/4-inch long hex head machine bolts with one nut and two washers each

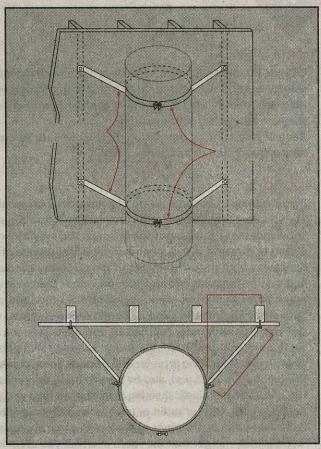
Strapping Instructions

The following instructions are for strapping a 30-40 gallon water heater located within 12 inches of a wall stud.

- Measure 6 inches down from top of the water heater and about 18 inches up from bottom.
 Do this on both sides of the water heater. Make marks on both sides of the water heater.
- Mark the location of the studs in the wall (you may want to use a stud locator) at the same height as the four marks you made on the water heater.
- 3. Drill four holes, using a 3/16-inch drill bit, three-inches deep into the center of the wood studs.
- 4. Measure the distance around the water heater and add two inches to the measurement. Using a hack saw, cut the two 1-1/2-inch x 16 gauge metal straps to the measurement.
- 5. Mark 1-1/2 inches from each end of the two metal straps. Insert each end in a vise (or under a heavy object) and bend the 1-1/2-inch ends outward into a right angle.
- **6.** Bend the two straps into a curve to surround the water heater.

TOOLS NEEDED

- Tape measure
- Power drill
- Hammer
- Hacksaw
- Crescent wrench
- Vise or clamp
- 3/8-inch drill bit
- 3/16-inch drill bit
- Center punch



- 7. Measure the distance from a point halfway on each side of the water heater to the two upper holes drilled in the wall (these may be different lengths.) Add 1-1/2 inches to each measurement. Use a hack saw to cut two pieces of conduit to each of these two lengths.
- Take the two pieces of tubing and flatten approximately 1-1/2 inches at each end. Simply lay the tube on a flat metal or concrete surface and flatten the ends with a hammer
- With a hammer and the center punch, make a mark 3/4" from each of the flattened tubing ends. Drill a 3/8" hole through the marks. Be sure the tube is clamped down while drilling. Use the vise or clamp to bend the EMT conduit to allow the flattened ends to fit flush against the wall and water heater (about 45°F).

- 10. Wrap the straps around the heater and insert a 5/16-inch x 1 1/4-inch bolt with washers into the bent ends. Tighten nuts with fingers.
- 11. Insert 5/16-inch x 3/4-inch bolts through strap from the inside at the mid-point on each side of water heater. Attach one end of each flattened tube to a protruding bolt. Add a washer and nut and tighten with fingers.
- 12. Insert a 5/16-inch lag screw in the opposite end of each tube strut and screw it into the wall stud. You may need to tap the lag screw gently into the hole with a hammer to start it, then tighten the screws with a crescent wrench.
- 13. Adjust straps to proper height and tighten nuts snugly, but not too tight.

HAZARDOUS MATERIALS



Be Aware

Hazardous materials come in the form of explosives, flammable and combustible substances, poisons and radioactive materials. These substances are most often released as a result of transportation accidents or because of chemical accidents in manufacturing plants.

Prepare

- Discuss the potential for a hazardous material accident in your community. The risk is split between trucks and trains passing through your area and material stored in the area. Your local emergency management office can help you identify sites in your area where hazardous materials are stored or processed, what kind of materials they are and what risk they carry.
- Review your family's evacuation plan. Make sure you understand the specialized procedures for responding to a hazardous materials accident.

Respond

- If you witness or become aware of a hazardous materials accident, immediately call 9-1-1.
- Turn on your television or radio and exactly follow directions. Hazardous materials incidents often involve substances that you cannot see or smell. You may be exposed to a toxic chemical through breathing, touching, eating or drinking without being immediately aware of the exposure.
- Stay away from the incident site to avoid getting contaminated. If you are asked to evacuate, do so immediately.
- You may be instructed to stay indoors rather than evacuate. This is called sheltering-in-place. If told to shelter-inplace, immediately get inside your home or office and close and lock all windows and exterior doors.
- Turn off all fans, heating and air conditioning systems. Close the fireplace damper.
- Get your family disaster supplies kit and make sure the radio is working.
- Go to an interior room with the fewest windows that's above ground level. In the case of a chemical threat, an above-ground location is preferable because some chemicals are heavier than air, and may seep into basements.
- Bring your pets with you, and be sure to bring additional food and water supplies for them.
- Use duct tape and plastic sheeting (heavier than food wrap) to seal all cracks around the door and any vents into the room.
- Keep listening to your radio or television until you are told all is safe or you are told to evacuate.
- Remember that instructions to shelter-in-place are usually provided for durations of a few hours, not days or weeks. There is little danger that the room in which you are taking shelter will run out of oxygen.

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WILDFIRES

Be Aware

If your home is near a forest, prairie, valley or hillside, you need to be prepared for wildfire.



Prepare

You should safeguard your home by taking the following precautions:

- Roofing should be made of noncombustible material, such as composition shingles, tile, slate, cement shingle, sheet metal or aluminum.
- Trees need to be trimmed away from your roof. Limbs should reach no closer than 10 feet from the house.
- Plant low, less flammable plants near the house; higher, more flammable plants at a distance (contact your local Forestry Department for specific plant recommendations and distance guidelines).
- Flammables should be stored away from the home. Stack firewood at least 100 feet away and uphill from your home.
- Yard should be well-trimmed and free of debris – keep trees and bushes well-trimmed and free of dead branches. Remove woody debris on a regular basis.
- You should have a 30-foot noncombustible fire break around the home. If you live in a forested area within a city, you may need a permit to cut vegetation because of environmental zones.



- If your home is on a slope, you should leave a 100-foot buffer zone (see illustration above),
 since wildfire travels fastest uphill.
- Make sure you have an adequate water supply to fight a fire (i.e., cistern, hydrant, or swimming pool with a high-volume pump). Keep a hose with a nozzle connected to an exterior water source at all times.
- Make sure to provide good access for emergency vehicles. Your driveway should be 12 feet wide with a vertical clearance of 15 feet.
- Make sure exterior walls are made of fire-resistant material, such as brick, stone, aluminum or treated wood.
 Your local Forestry Department can recommend materials.

Respond

Fight or flight? In remote areas it may be up to you to put out a small fire before it spreads. Read through these steps to make sure you are ready to respond:

- Know how to contact your local fire fighting agency.
- Decide where you would go and what you would take if you have to evacuate (see page 3).
- Plan at least two escape routes by car and another by foot.
- Have a ladder available that is long enough to reach your roof.
- Have fire tools handy: long-handled round-point shovel, rake, axe, gas chainsaw and a 2 1/2 gallon water bucket.

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TERRORISM



Be Aware

There are many things you can do to prepare for the unexpected and reduce the stress that you may feel when there is a change in the Department of Homeland Security Alert System.

Prepare

- Build a disaster supplies kit
- Create an emergency communications plan
- Establish family reunion sites
- Understand evacuation and shelteringin-place procedures

Respond

- Follow the advice of local emergency officials. Listen to your radio or television for news and instructions.
- If the disaster occurs near you, check for injuries. Give first aid and get help for seriously injured people.
- If the disaster occurs near your home while you are there, check for damage using a flashlight.

 Do not light matches or candles or turn on electrical switches. Check for fires, fire hazards and other household hazards. Sniff for gas leaks, starting at the water heater. If you smell gas or suspect a leak, turn off the main gas valve, open windows, and quickly get everyone outside.
- Call your family contact -- do not use the telephone again unless it is a life-threatening emergency.
- Limit the amount of news coverage children watch. Raw, unedited footage of terrorism events and reactions can be very upsetting to children. If the news show images over and over again, young children may not realize it is repeated video footage. Adults may also need to give themselves a break from the news. Take turns with other adult household members (see **Your Mental Health** on page 4).

VOLCANOES



Be Aware

Explosive volcanoes blast hot solid and molten rock fragments and gases into the air. As a result, ashflows can occur and ash can fall hundreds of miles downwind.

Prepare

- Learn about your community warning systems and emergency plans.
- Be prepared for the hazards that can accompany volcanoes, such as mudflows, flash floods, landslides, rockfalls, earthquakes, ashfall and acid rain.
- If you live in a known volcanic hazard area, plan a route out and have a backup route.
- Get disposable breathing masks for each member of the household in case of ashfall.

Respond

Although it may seem safe to stay at home and wait out an eruption, if you are in a hazardous zone, doing so could be very dangerous. Follow authorities' instructions and put your disaster plan into action.

Ashfall

Volcanic ash is not poisonous, but it can irritate your respiratory system. Take precautions to protect your lungs if volcanic ash is present by wearing single-use (disposable) paper dust masks. If you have a respiratory ailment, avoid contact with any amount of ash. Stay indoors until local health officials advise it is safe to go outside.

- Close all windows, doors and dampers.
- Put all machinery inside a garage or barn.
- Bring animals and livestock into closed shelters.
- Clear roofs of ashfall. Ashfall is very heavy and can cause buildings to collapse. Exercise great caution when working on a roof.
- Avoid driving in heavy ashfall. Driving will stir up more ash that can clog engines and stall vehicles.
- Avoid areas downwind and river valleys downstream of the volcano.
- Stay indoors when possible.

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Remember to help your neighbors who may require special assistance - infants, elderly people and people with disabilities.

TSUNAMIS

Be Aware

A tsunami is a series of ocean waves usually caused by earthquakes or underwater landslides. Tsunami waves may travel up to 600 miles per hour in open water. As they enter shallow water near land, they get higher and can cause great loss of life and property damage. Experts believe a tsunami could hit the Northwest coast with as little as five minutes warning. In low-lying areas without a tsunami warning system, an earthquake may be the only sign a tsunami is approaching. Contact your local emergency management office to find out if there is a tsunami warning system in your area.

UNDERSTANDING TSUNAMI WARNINGS ON RADIO AND TV

Tsunami Advisory: An earthquake has occurred in the Pacific Basin, which might generate a tsunami. Hourly

bulletins will be issued to advise you of the situation.

Tsunami Watch: A tsunami was or may have been generated, but is at least two hours travel time to the area in

watch status. Local officials should prepare for possible evacuation if their area is upgraded to a warning.

Tsunami Warning: A tsunami was or may have been generated, which could cause damage; therefore, people in

the warned area are strongly advised to evacuate.

Prepare

Become familiar with the tsunami warning signs. A strong earthquake may generate a tsunami.
 A noticeable rapid rise or fall in coastal waters is a sign that a tsunami is approaching, in addition to a loud rumbling sound such as rocks being overturned as the water returns.

Plan an evacuation route from your home, school, workplace or any other place you'll be where

tsunamis present a risk.

• If you are visiting an area at risk from tsunamis, become familiar with tsunami evacuation information and how you would be warned.

Assemble a disaster supplies kit (see page 5) and keep it handy in your home or vehicle.

Train all family members over the age of 10 in first aid.

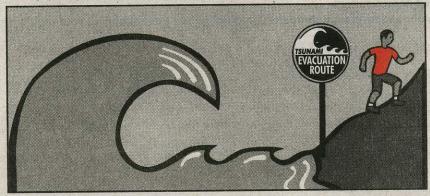
While deadly, tsunamis are also very infrequent. Be aware of the risk, but don't let it compromise your plans.

 Tsunami evacuation maps are available for many coastal communities. Check with your local emergency management office for a map of your area.

 If you live in an area that may be impacted by a tsunami, consider discussing flood insurance with your insurance agent. Homeowners insurance may not cover flooding from a tsunami.

Respond

- If you feel an earthquake while you are on the coast, DROP, COVER and HOLD ON if inside, and avoid falling objects if outside (see Earthquakes, page 20).
- When the shaking has stopped, move quickly inland and to higher ground. Go on foot if possible.
 Take your disaster supplies kit, but don't delay leaving.
- If a tsunami watch is issued, listen to a NOAA weather radio, Coast Guard emergency frequency station or other reliable sources for updated emergency information and be ready to evacuate.
- Remain inland and on higher ground until an official "all clear" announcement is made by local officials.
 Typically there are multiple, large waves and tsunamis may last for hours.



Get to higher ground as far inland as possible. Watching a tsunami from the beach or cliffs could put you in grave danger. Return home only after local officials tell you it is safe.

PANDEMIC FLU

Pandemic Flu

Pandemic flu is more serious than a "typical" flu. It is caused by a new flu strain that humans have not been exposed to, so they have no natural resistance or immunity to it. Pandemic flu is different from seasonal flu because it infects large numbers of people of different ages all over the world and causes serious illness and possible death.

THE SYMPTOMS OF PANDEMIC FLU ARE LIKELY TO BE SIMILAR TO THE SEASONAL FLU VIRUS:

- Fever
- Cough
- Runny nose
- Muscle pain
- Sore throat

Call your healthcare professional at the first sign of the flu.



YOU CAN MAKE GOOD HYGIENE A HABIT AND TAKE ACTIONS TO PREVENT THE SPREAD OF GERMS, INCLUDING:

- Washing your hands with soap and water or cleaning them with a hand sanitizer.
- Covering your mouth and nose with a tissue when you cough or sneeze and cleaning your hands afterwards.
- Coughing or sneezing into your upper sleeve if you don't have a tissue.
- Staying home if you are sick. Get plenty of rest and drink a lot of fluids.
- Avoiding close contact with people who are sick.
- Keeping your living and work area clean.

During a flu pandemic, public officials may impose community-level restrictions to prevent the flu virus from spreading. You may be asked to stay home for an extended period of time even though you are not sick. Schools, workplaces and places of worship may be closed temporarily and mass transportation such as bus, trains and air travel may be limited.

MAKE PLANS NOW FOR A FLU PANDEMIC. THESE ACTIONS MAY LESSEN THE IMPACT ON YOU AND YOUR FAMILY:

- Figure out what you will do if members of your household have to stay home from work or school or stay
 separated from others for a period of time. Talk with family members and loved ones about how they
 would be cared for if they got sick.
- Store extra supplies of water and food.
- Store a supply of non-prescription drugs such as pain relievers, cough and cold medicines, stomach remedies and fluids with electrolytes and vitamins.
- Store health supplies such as bleach, tissue, a thermometer, disposal gloves, soap and alcohol-based hand cleaners.
- Ask your doctor and insurance company if you can get an extra supply of your regular prescription drugs.

WHEN PREPARING FOR A PANDEMIC FLU, MAKE SURE THAT YOU PUT SUPPLIES ASIDE FOR A PERIOD OF 14 DAYS OR LONGER.

OREGON SAFETY AND EMERGENCY RESOURCES

Oregon Department of Environmental Quality: (800) 452-4011

www.deq.state.or.us/lq/cu/emergency/index.htm Information regarding the protection and enhancement of Oregon's water and air quality, clean up and release of hazardous materials and management of proper disposal of hazardous and solid wastes.

The Oregon Department of Geology and Mineral Industries:

(971) 673-1555

www.oregongeology.com/sub/earthquakes/earthquakehome.htm Information on earthquakes and other natural disasters in the Pacific Northwest.

Oregon Disaster Center:

www.disastercenter.com/oregon/oregon.htm Information on disasters in Oregon.

Oregon Emergency Management:

(503) 378-2911

www.oregon.gov/OMD/OEM/index.shtm

Information about the prevention, mitigation and management of emergencies or disasters that present a threat to the lives and property of citizens and visitors to the State of Oregon.

Oregon State Police Counter-Terrorism Section:

Local Area 911

www.oregon.gov/OSP/CTS/index.shtml

Oregon Office of the State Fire Marshal:

(503) 378-3473

www.oregon.gov/OSP/SFM

Information regarding the protection of Oregonians' lives and property from fire and hazardous materials.

Oregon Poison Center:

(800) 222-1222

www.ohsu.edu/poison/

Oregon Safe Kids:

(971) 673-1001

www.oregon.gov/DHS/ph/safekids/index.shtml

Partnership for Disaster Resilience:

(541) 346-5833

showcase@uoregon.edu

www.oregonshowcase.org

Provides a comprehensive framework for government and the private sector to prepare for and minimize the risk and impact of natural hazards.

OTHER USEFUL WEB SITES

American National Red Cross

www.redcross.org

Extensive information on disaster preparedness, response and relief, educator information and much more.

Safe and Well

http://disastersafe.redcross.org

Online registration that enables family and friends to search for loved ones following a disaster.

Federal Emergency Management Agency – FEMA

www.fema.gov

A great clearinghouse for information on all types of disasters.

Institute for Business and Home Safety

www.disastersafety.org

Extensive "how-to" information to protect your home and business from natural disasters.

U.S. Department of Homeland Security

www.ready.gov

Up-to-date information on homeland security activities and national threat levels.

Center for Disease Control and Prevention

www.cdc.gov

Information on emergency preparedness and flu pandemic.

National Fire Protection Association

www.nfpa.org or www.sparky.org

Extensive fire prevention and safety information. "Sparky the Fire Dog" site contains several multimedia educational activities for kids.

The Weather Channel

www.weather.com/ready

Preparedness information about many kinds of disasters, but with a focus on severe weather.

U.S. Geological Survey

www.usgs.gov

Easily accessible information about geological hazards for each state.

National Weather Service

www.nws.noaa.gov

Latest forecasts, preparedness information, explanations of the different types of weather warnings and more.

EMERGENCY CONTACTS

In case of police, fire or medical emergency, call 9-1-1. For non-emergency concerns, refer to your phone book. Unnecessary calls to 9-1-1 can prevent others from getting the help they need. Fill in the names and numbers below and make copies for each family member:

Out-of-State Contact Person:	DOLL
School(s):	The state of the extending over the description of the Control of
Work Site(s):	ONE TRANSPORT ENGINEERS OF THE STATE OF THE
Doctor(s):	1969
Neighbor(s):	and the second of the second o
Day Care:	
E-mail(s):	
Other:	The state of the s
Insurance Agent(s):	
Family Meeting Places:	A CONTRACTOR OF THE CONTRACTOR
Outside your home in case of fire:	Process of more actions.
Outside your neighborhood in case you can't return ho	ome:
Caretaker for Pets:	mark to be a self-death.
Veterinarian:	REMEMBER TO:
Utilities:	TVICKE CODICS OF LITTS IDE
Water District (broken water pipes in street):	Note: The second of the second
Local Fire Bureau:	Post on refrigerator
Other Utility:	Mark English Mark Control of the Con
Other Emergency Contacts:	Update all copies when numbers change

Red Cross Chapters Serving Oregon

Oregon Trail Chapter

Serving Baker, Clackamas, Clatsop, Columbia, Hood River, Gilliam, Morrow, Multnomah, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Yamhill (503) 284-1234 or 1-800-991-9515 www.oregonredcross.org/oregontrail

Oregon Mountain River Chapter

Serving Crook, Deschutes, Grant, Harney, Jefferson, Wheeler, Warm Springs (541) 382-2142 www.oregonredcross.org/oregonmountainriver

Oregon Pacific Chapter

Serving Benton, Coos, Curry, Douglas, Lane, Lincoln, Linn (541) 344-5244 www.oregonredcross.org/oregonpacific

Southern Oregon Chapter

Serving Jackson, Josephine, Klamath, Lake (541) 779-3773 or 1-800-433-9285 www.oregonredcross.org/southernoregon

Willamette Chapter

Serving Marion, and Polk (503) 585-5414 www.oregonredcross.org/willamette

