

Know your Space, Make it Safe

Learning about your home before a disaster will make you and your family safer when one happens.

Utilities

Everyone in your household should know where utilities are located and how to shut them off safely. Being proactive before disaster strikes will help to protect you and your property.

Aging infrastructure, technical failures and natural disasters can lead to complete utility service disruptions or cause unpredictable, intermittent service. In a disaster, you may need to shut off one or more of your utilities if they are obviously damaged, if you are evacuating, or if emergency officials or the utility companies instruct you to do so.

Shutting off Electricity

- ▶ If power is disrupted during a disaster, turn off the main circuit breaker, as well as individual circuits or fuses, to lessen the risk of fire damage if no one is home when the power system is restored.
- ▶ When power is restored, turn on the main breaker first, then turn on individual circuits one by one.

NOTE: If you are ordered to evacuate, **do not** turn off power unless advised to do so.
- ▶ When turning off your circuits or master switch, if possible, use the back of your non-dominant hand, stand to one side and look away in case of an electric discharge.

For more information on Utilities, see page 50.

Recommendations: SECURE YOUR SPACE

- 1** Secure your hot water tank to wall studs with steel strapping.
- 2** Secure tall or heavy furniture and shelving to walls (preferably to studs).
- 3** Install cabinet latches to secure contents. Use Velcro strips or putty to secure art and mirrors.
- 4** Remove anything heavy over beds.
- 5** Store chemicals outside the home and on low shelves so the containers do not fall and break during a disaster. Make sure children cannot access the containers.

Electrical Panel



Turn fuses to the left to unscrew.

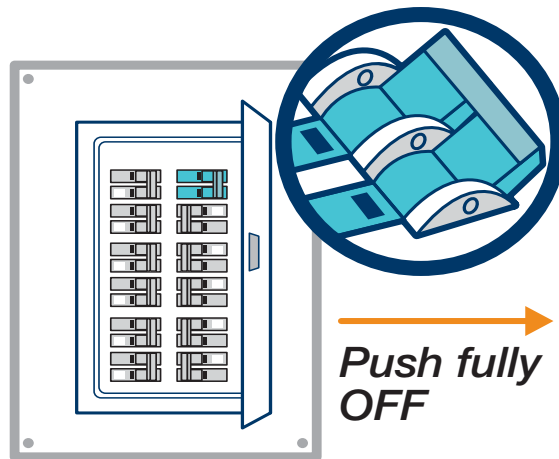


Image courtesy of PreparedBC
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Water Line Shut-Off

Locate the shut-off valve for the water line that enters your home. Make sure this valve can be completely shut off. Your valve may be rusted open or it may only partially close. Check it periodically and replace if necessary.

Make sure all household members know where the shut-off valve is located (often hidden in a crawl space or in a closet). Your main water shut-off valve may look like the drawing below.

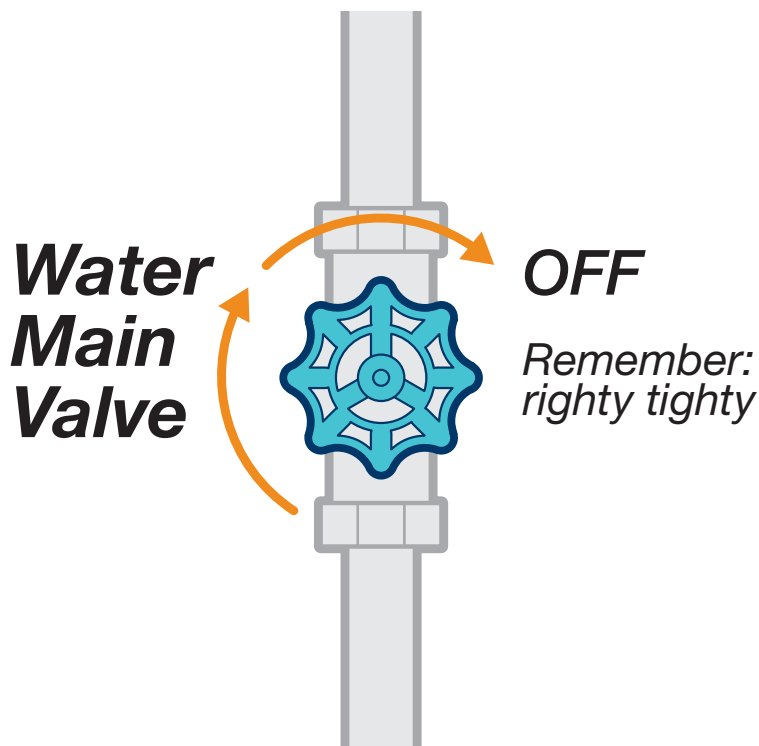


Image courtesy of PreparedBC
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Recommendations: UTILITIES

- 1 Think about how to survive without utilities. Do you have a BBQ, camp stove, generator and fuel for each? DO NOT use generators and BBQs inside.
- 2 Prepare for service disruptions by purchasing basic, affordable emergency equipment and supplies to substitute for lost services.
- 3 Learn how to stay safe while using emergency equipment and how to minimize the impact of service disruptions.
- 4 Learn how and when to shut off utilities. Don't wait until disaster strikes to figure it out. Make sure you and your family know where utilities are located, when to turn them off and how to safely turn them off.
- 5 If you live in a multi-residential complex, find out who has 24/7 emergency access to, and responsibility for, centrally controlled utilities.
- 6 Follow instructions and advice from utility companies and consult them beforehand if you have questions.

UTILITY TIPS

- ▶ For water main or water line breaks on your property, contact a plumber who offers 24/7 emergency services. For water main breaks on the roadway or public property, contact your community's Public Works 24-hour emergency line.
- ▶ If you have an electric hot water tank: when you turn off your main water supply, turn off the electric circuit to the hot water tank so that the unit will not burn out if emergency water is drawn from the tank.

Fuel Oil Tanks

Homeowners should check their tanks regularly for rust. Tanks rust from the inside out and a pinhole size on the exterior may indicate a large thinning area on the inside. If you see signs of rust or other deterioration, you may want to consider replacement with double-hulled tanks strapped to concrete pads.

Propane Tank Shut-Off

Learn how to shut off your propane tank at the outdoor valve. Check the manufacturer's instructions. You may turn the propane valve off and on again at any time without help from a technician. This is because your gas supply comes from a stand-alone tank, rather than from a pressurized community pipeline.

NOTE: Disconnecting the propane tank from household appliances is a major procedure. There are additional instructions under 'Floods and Storm Surge', outlining how to disconnect your tank from home appliances if flooding is imminent. You'll need a technician to safely reconnect the tank to home appliances after the emergency is over.

Natural Gas

Gas meters and gas appliances have a pressure regulator to maintain a safe flow of gas and a shut-off valve in case of leaks. A leak can be recognized by the smell of rotten eggs. This odour is from ethyl mercaptan, which is added for detection. Some natural gas hot water heaters have an automatic shut off.

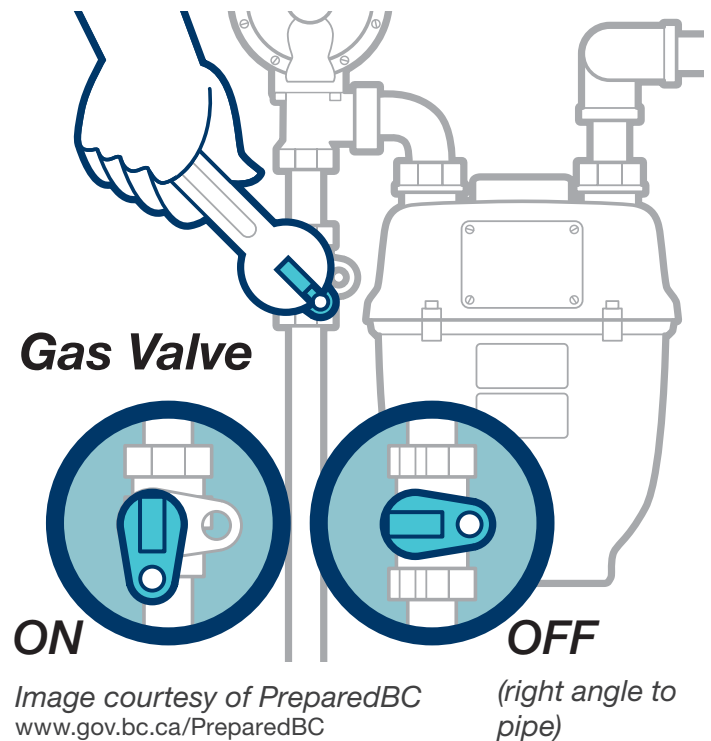
Natural Gas Shut-Off at the Meter

With a wrench, give the valve a $\frac{1}{4}$ turn left or right so it is at a right angle to the pipe.

When the bar on the valve is horizontal, the gas supply is **OFF**.

Do **NOT** practise shutting off your natural gas meter. **ONLY** turn off if you smell gas. If you do, only a licensed gas contractor is permitted to turn it back on.

If there is a leak in the line for a specific appliance, turn off gas at the meter.



Recommendations: INSURANCE

- 1** Understand your homeowner or tenant insurance policy in detail: what disasters and damages are covered, your responsibility after a disaster occurs, etc. Home insurance can mean the difference between eventual disaster recovery and financial loss.
- 2** Install smoke alarms and carbon monoxide alarms throughout your home to save lives.
- 3** Buy an ABC-type fire extinguisher for each floor of your home, plus kitchen and workshop. Learn to use them correctly.

Home Insurance

Purchasing homeowner or tenant insurance is an important step toward emergency preparedness and disaster recovery. Insurance provides peace of mind and covers out-of-pocket expenses in the stressful days immediately following an event. Longer term, it helps fund the cost of repairing or replacing your home and contents to reduce the impact on your family's financial security.

- ▶ Keep your insurance coverage up-to-date.
- ▶ Inform your insurance company of any changes that might alter your coverage or the value of your dwelling and possessions.
- ▶ Ensure your insurance policy includes replacement value and find out what out-of-pocket expenses are covered if you must evacuate your home.
- ▶ Find out what benefits and services your insurer will provide after an insured loss.
- ▶ Find out what emergencies are **not** covered.
- ▶ Understand the deductibles in your policy. For example, the deductible for fire damage may be much smaller than the deductible for earthquake damage.
- ▶ Find out how to reduce the cost of your insurance. For example, many insurers offer discounts if you have hazard mitigation measures in place, such as a monitored security system with fire detection and built-in alarms. Insurers may also offer a cost reduction if you replace cedar shakes with less flammable asphalt shingles or tiles.
- ▶ Document your belongings with receipts and digital images or photos and store these in a bank safe deposit box or digitally on a secure Internet site or a password-protected USB drive.

Fire Extinguishers

Combustible materials are divided into four classes:

- CLASS A** Ordinary combustibles (wood, paper, cloth, etc.)
- CLASS B** Flammable liquids (fuel oil, gasoline, cooking grease, solvents, etc.)
- CLASS C** Electrical equipment (wiring, fuse box, motors, electronics, etc.)
- CLASS D** Combustible metals (magnesium, sodium, zirconium, etc.)

An ABC extinguisher will handle most types of home fires. Type D is usually appropriate if you work with combustible metals at home, such as magnesium and sodium. **Always buy extinguishers which have been UL or CSA approved.**

Place extinguishers where they are readily accessible. When used correctly, they can keep small fires from becoming large fires. It is better to have several small extinguishers located throughout the house and on each level, than to have one large one that may be difficult to find or move quickly and easily.

Regularly review operating instructions so you'll know what to do when a fire occurs.

National fire regulations require extinguishers to be serviced annually by a trained and certified person. Some manufacturers recommend shaking your dry chemical extinguishers **once a month** to prevent the powder from settling or caking.

Check the extinguisher's pressure gauge to ensure it is at the recommended level (in the green zone). Your fire extinguisher may need pressure testing, so consult the owner's manual, extinguisher label or the manufacturer directly, to see if this applies to yours.

Only fight a fire if:

- ▶ You are safe from toxic smoke.
- ▶ You have a way to escape if the fire spreads.

Recommendations: FIRE EXTINGUISHERS

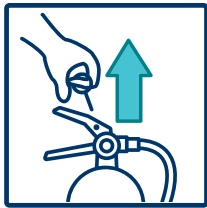
- 1** Know where to find it.
- 2** Make sure it is up to date.
- 3** Know how to use it.
- 4** Know when to use it (after help has been called and everyone is safe).

Rules for Using Fire Extinguishers:

- 1 Make sure you know how to use the extinguisher before you need it.
- 2 If the fire is confined, small and not spreading quickly, it is okay to attempt to extinguish the fire.
- 3 Make sure everyone has left the building, is safe, and someone is calling 911 to report the fire. In a multi-unit residential building, activate the fire alarm, call 911 and evacuate the building. Notification and evacuation of people in the building should be done **before** attempting to extinguish the fire.

Place yourself between the exit and the fire so you can escape if the fire does not go out.

Fight the fire using the **PASS** method:



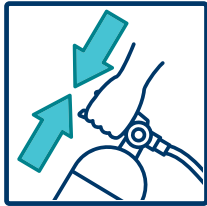
Pull

Pull the pin at the top of the extinguisher. The pin releases a locking mechanism and will allow you to discharge the extinguisher.



Aim

Aim at the base of the fire, not the flames. This is important – in order to put out the fire, you must extinguish the fuel.



Squeeze

Squeeze the lever slowly. This will release the extinguishing agent. If the handle is released, the discharge will stop.



Sweep

Sweep from side to side. Using a left to right motion, move the fire extinguisher back and forth until the fire is completely out. Operate the extinguisher from a safe distance, several feet away, and then move toward the fire once it starts to diminish.

Be sure to know your fire extinguisher – different fire extinguishers recommend operating them from different distances.

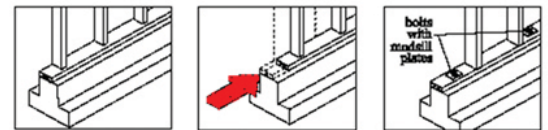
Remember: Aim at the base of the fire, not at the flames!

Watch the fire area. If the fire re-ignites, repeat the process.

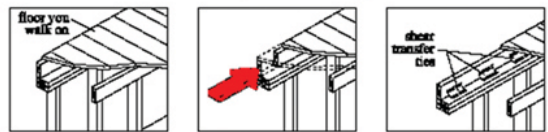
Extinguishers will work for approximately 30 seconds. If you have not put out the fire in that time, or if the smoke becomes hazardous, leave the area immediately. Once you leave a burning room, do not re-enter. Close the door to a room with a fire. Evacuate your home.

Secure your Space

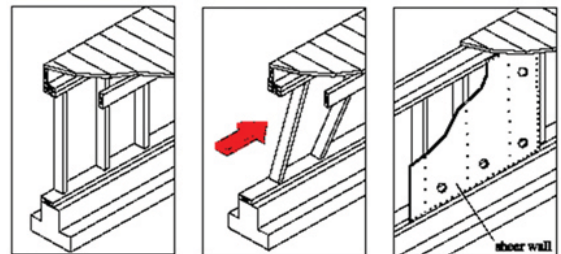
- ▶ Know the safe and dangerous places in your home in an earthquake:
 - ▶ **SAFE:** Under heavy tables or desks, interior hallways, corners of rooms, archways.
 - ▶ **DANGEROUS:** Near windows or mirrors; under any objects that can fall; the kitchen where the stove, refrigerator or contents of cupboards may move violently; doorways, because the shaking may slam the door on you; garages and workshops where tools and debris may fall.
- ▶ Ensure the home is properly bolted to its foundation.
- ▶ Inspect and, if necessary, reinforce cripple walls (pony walls). Strengthen the cripple walls by nailing 3/4" plywood sheeting to the studs on the inner side of the cripple walls.
- ▶ Consult an engineer on how to secure brick, stone and masonry.
- ▶ Reinforce windows. Consider adding a safety film to the inside of all windows greater than 60 centimetres (2 square feet) in size. This does not prevent cracking, but it does keep the glass from falling and causing injury.
- ▶ Protect interiors from falling chimney bricks. Check the chimney for loose tiles and bricks. Reinforce the ceiling surrounding the chimney with 3/4" plywood nailed to the beams in the attic floor. This will provide protection from falling bricks that might break through the roof.
- ▶ Secure and arrange objects in your home to prevent injuries:
 - ▶ Strap the hot water tank to wall studs.
 - ▶ Secure tall, free-standing furniture to wall studs.
 - ▶ Secure microwave ovens, TVs, computers and other electronics so they do not fly off the shelf.
 - ▶ Use “earthquake hooks” for heavy, framed, glass-covered pictures.
 - ▶ Ensure hanging lamps are securely affixed to the ceiling.
- ▶ Keep sturdy shoes and a flashlight under your bed.
- ▶ Install earthquake-proof, child-proof or safety latches on cupboards to stop contents from spilling out.
- ▶ Store flammable items and household chemicals properly and securely.
- ▶ Store heavy items down low.



Movement prevented by bolts



Movement prevented by shear transfer ties



Movement prevented by plywood shear panels

See the Home Safety Hunt worksheet on page 78 to help you check your space.