



Welcome Home!



Photo courtesy of Urban NW Homes

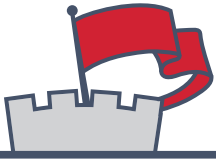


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This manual was developed through a public-private partnership between Clark County Community Development and the Building Industry Association to provide a useful resource for people:

- Who own or rent a house in Clark County.
- Who would like help in making their homes more durable, healthy, and safe.
- Who want a comprehensive list of community resources and services.
- Who need a “go to” book that they can keep their appliance manuals in.

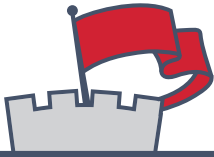


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HELPFUL TIP: Any time you see this “SEARCH” symbol throughout the Homeowner’s Manual, it is directing you to key words and phrases you can type into an Internet search browser to find more information on the topic.



IMPORTANT PHONE NUMBERS

These numbers will help you respond quickly in an emergency, get questions answered about utilities, and better ensure the safety of you and your family.

911 & 311 If you have a true emergency, always dial 911 before making any other calls. 311 should be used for things like abandoned vehicles, noise complaints, parking issues or other routine complaints where safety is not an issue. All medical, police, and fire emergencies should go to 911.



LOCAL POLICE DEPARTMENTS

Emergency? dial 911
Battle Ground 360-342-5200
Camas 360-834-4151
Clark County Sheriff 360-397-2211
La Center 360-263-2745
Ridgefield 360-887-3556
Vancouver 360-487-7400
Washington State Patrol 360-449-7999
Washougal 360-835-8701

LOCAL FIRE STATIONS

Camas Fire Department 360-834-2262
Clark County Fire and Rescue
360-887-4609
East County Fire and Rescue
360-834-4908
Fire District 3
(Brush Prairie/Battle Ground)
360-892-2331
Fire District 6
(North Vancouver/Ridgefield)
360-576-1195
Fire District 10
(Amboy/La Center/Woodland)
360-247-5233
Fire District 13 (Yacolt) 360-686-3271
Vancouver Fire Department
360-487-7212
Washougal Fire Department
360-835-2611

POISON CONTROL 1-800-222-2122
(a national line available 24/7)

ANIMAL CONTROL

Clark County Animal Control 360-397-2488
Humane Society for Southwest Washington
360-693-2338

CLARK PUBLIC UTILITIES

360-992-3000 (main customer service line)
360-992-8000 (to report power outages)

HOSPITALS

Legacy Salmon Creek Medical Center
360-487-1400
PeaceHealth SW Washington Medical Center
360-514-2000

CALL BEFORE YOU DIG HOTLINE



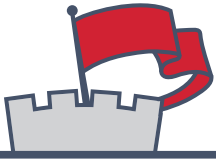
For more information go to www.call811.com

NORTHWEST NATURAL GAS



NW Natural®

If you ever smell natural gas (rotten eggs), leave the area immediately and call 800-882-3377. For customer service info, call 800-422-4012, and for local utility info, call 360-571-5465 x2070.



COMMUNITY RESOURCES

CLARK COUNTY

Serves the needs of all County citizens to ensure a safe, healthy, and prosperous place to live, work, and play. Below is a listing of County departments that may be of interest to you. Visit their website www.clark.wa.gov or call 360-397-2000 for contact information

Building	360-397-2375
Clark County Animal Control	360-397-2489
CRESA (Clark Regional Emergency Services Agency)	360-737-1911 www.cresa911.org
Commissioners	360-397-2232
Environmental Services	360-397-2121
Fire Marshal	360-397-2186
Parks	360-397-6118
Public Health	360-397-8000
Public Works/Roads	360-397-6118

Planet Clark Visit www.planetclark.com to see all the resources offered to help you be more energy and resource efficient, and keep an eye out for the Planet Clark Demonstration Trailer at a community event near you.

Clark County Green Neighbors Provides resources on topics related to sustainability. Find local events, trainings, volunteer opportunities, and news www.clarkgreenneighbors.org.

Evergreen Habitat for Humanity and Habitat for Humanity Store Donate to or volunteer for a program that “gives a hand up, not a hand out.” At the store you can find great deals or donate lightly used building materials. Habitat offices and store are at the same site.

10811 SE Mill Plain Blvd., Vancouver, WA 98664 360-213-1313 www.ehfh.org

Columbia Springs Environmental Education, Master Composter/Recycler program, Hatchery operations, field trips, and more www.columbiasprings.org.

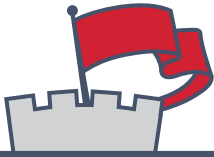
UTILITIES

Clark Public Utilities offers a range of conversation information and services, [🔗 Clark Public Utilities home conservation](#) online or call the Energy Advisor Phone Line at 360-992-3355.

Energy Trust Northwest Natural Gas offers resources and incentives to homeowners through the Energy Trust to help reduce energy consumption and save on utility bills. Learn more at www.energytrust.org/washington.

Waste Connections The local garbage, recycling, and yard debris hauler for Clark County. Contact 360-892-5370 or customerhelp@wasteconnections.com for customer service questions, and visit www.wcnorthwest.com for more information.

C-Tran Offers bus service to communities throughout the County and also gives rides to and from downtown Portland. To learn about routes and times, visit www.c-tran.com, or call 360-695-0123.



CITY-SPECIFIC RESOURCES

HOW DO I TELL IF I AM UNDER THE JURISDICTION OF CLARK COUNTY OR A CITY?

By looking up your address at gis.clark.wa.gov/applications/gishome/property/index.cfm. Look under the column titled “Administrative Data” and find the line “Jurisdiction.” This will tell you whether you reside within a city boundary or whether your property is part of unincorporated Clark County.

CITY OF BATTLE GROUND

www.cityofbg.org

Building	360-342-5046
City Council	360-342-5000
Parks	360-342-5380
Public Works	360-342-5070

CITY OF CAMAS

www.cityofcamas.us

Building	360-817-1561
City Council	360-834-6864
Parks	360-834-5307
Public Works	360-817-1563

CITY OF LA CENTER

www.ci.lacenter.wa.us

General	360-263-2782
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CITY OF RIDGEFIELD

www.ci.ridgefield.wa.us

Building	360-887-3908
City Council	360-887-3557
Parks	360-887-8251
Public Works	360-887-3897

CITY OF VANCOUVER

www.cityofvancouver.us

Building	360-487-7800
City Council	360-487-8629
Environment	360-487-7130
Fire Marshal	360-487-7212
Parks	360-487-8311
Public Works	360-487-7130

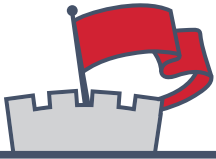
CITY OF WASHOUGAL

Building	360-835-8501 x605
City Council	360-835-8501
Parks	360-835-2662 x207
Public Works	360-835-2662 x202

TOWN OF YACOLT

www.townofyacolt.com

General	360-686-3922
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7 THINGS FOR EVERY HOME

1

PROTECT YOUR INVESTMENT. Permits and inspections equal value and safety. Get good do-it-yourself advice or hire only licensed professionals.

2

KNOW YOUR HOME. Maintain your home. Learn to live well.

3

CHECK smoke and carbon monoxide detectors when daylight savings time changes. Vent combustion appliances. Be fire safe.

4

SAVE energy and make a healthy home. Add insulation. Seal your ducts. Stop air leaks. Ventilate moisture using your exhaust fans.

5

CHANGE furnace filters each season. Use a programmable thermostat. Take care of your systems for increased efficiency.

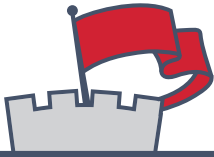
6

PREPARE for emergencies. Have a plan. Know what to do.

7

GO to [Planetclark.com](https://www.planetclark.com) for more ideas and resources.





FAMILY EMERGENCY PLAN

Make sure your family has a plan in case of an emergency. Before an emergency happens, sit down together and decide how you will get in contact with each other, where you will go and what you will do in an emergency. Keep a copy of this plan in your emergency supply kit, or another safe place where you can access it in the event of a disaster.

Out-of-Town Contact Name:

Telephone Number: Email:

Neighborhood Meeting Place: Telephone:

Regional Meeting Place: Telephone:

Evacuation Location: Telephone:

Fill out the following information for each family member and keep it up to date:

Name: Notes:

Important Medical Information:

Name: Notes:

Important Medical Information:

Name: Notes:

Important Medical Information:

Name: Notes:

Important Medical Information:

Name: Notes:

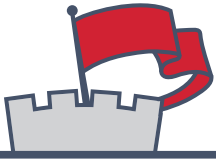
Important Medical Information:

Write down where your family spends the most time — work, school, and other places you frequent:

Address: Address:

Phone Number: Phone Number:

Evacuation Location: Evacuation Location:



BE READY ALREADY: EMERGENCY PREPAREDNESS

Each year thousands of people across our nation wish they would have taken steps to prepare for an emergency. If one does strike, basic goods and services will be inaccessible for days at a time, if not longer. To be ready and ensure the safety of your family, develop a plan:

- 1. DETERMINE YOUR EMERGENCY CONTACTS** Establishing emergency contacts, both locally and out-of-town, gives you a point of contact you can check with to determine where everyone in the family is and how they are doing.
- 2. CHOOSE POTENTIAL MEETING PLACES** During a disaster, you may not be able to access to your house right away. You can address this by selecting alternative meeting spots that are central to areas where family members work, go to school, or spend significant amounts of time.
- 3. BUILD A DISASTER KIT** Emergency kits should include essential supplies that will last you at least three days. It is a good idea to have kits available both at home and for on-the-go. Make sure you include anything family members require for specific special needs, such as medication. View a complete listing of basic emergency kit essentials online by searching: [🔗 Ready.gov Build a Kit](#)
- 4. BE INFORMED** Knowing when and where a disaster could strike, and what areas to avoid after a disaster has happened, are imperative to your safety. CRESA offers free severe weather warnings and reverse-911 service to help you be ready: [🔗 CRESA Be Informed](#)
- 5. GET INVOLVED** There are a number of options for more extensive disaster preparedness and response training that you can share with others. Learn more at: [🔗 Ready.gov Citizen Corps](#)

All the luxuries in your home won't do you any good if you aren't alive to use them. Although major disasters are rare, it is important to respect their power and unpredictability. By creating a thorough emergency plan, you will put your family and your home in a position to respond resiliently no matter when, where, or how disaster strikes.

*You can view a comprehensive sample Family Emergency Plan by online by searching: [🔗 Red Cross Family Disaster Plan](#)

WHAT ABOUT MY FURRY FRIENDS? Pets are an integral part of the family and it's important that you consider their needs in your emergency plans as well. To learn what essentials will keep your pets safe and calm during a disaster: [🔗 Ready.gov Animal Care](#)



FEMA





CASTLE UNIVERSITY | Homeowner's Manual



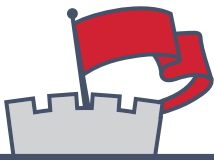
Chapter 1



It's What's on the Inside that Counts: Your Home's Interior

This chapter provides information on:

- Fire safety
- Indoor air quality
- Details on internal elements (like radon vents and insulation)
- Systems (like heating and air conditioning) and appliances
- Ways to improve the efficiency and environmental impact in the operation of your home



INTERIOR SAFETY

CARBON MONOXIDE (CO) AND FIRE ALARMS

Make sure you have carbon monoxide (CO) and fire alarms installed in your home according to manufacturer's listing. Check them at least twice a year to ensure they are working properly.

Things to know about life safety alarms:

- The lifespan for most fire alarms is 10 years and the lifespan for most CO alarms is 5-7 years.
- CO is a colorless, odorless gas that causes flu-like symptoms at low levels of exposure and can be fatal in high enough concentrations.
- Any symptoms or effects of CO will subside once you leave the impacted area.
- If your CO alarm goes off, go outside immediately and call 911. Do not re-enter your home until told to do so by emergency responders.
- For more info on CO: [🔗 EPA IAQ](#)

EMERGENCY EXITS

Make sure your stairs, hallways and exit doors have adequate lighting and remain uncluttered and unblocked; they are the main ways to exit your home in the event of a fire or other emergency.

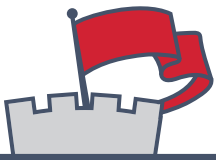
- Maintain access to operable bedroom windows. Make sure they open easily and lubricate the window hardware if needed.
- Windows are your plan B in case your main escape route is not an option

GENERAL HOME FIRE SAFETY

House fires can be prevented by following a number of simple steps. Visit the Clark County Fire Marshal "Home fire safety" web page: [🔗 Clark.wa.gov Home Safety](#) to learn all about smoke alarms, home fire sprinkler systems, escape plans, and fire safety tips.

Fire Protection & Preparedness — From the Fire Marshall's Home Safety Inspection

- | | |
|--|--|
| <input type="checkbox"/> Smoke alarms are installed on every level of your home and near each sleeping area. | <input type="checkbox"/> Practice your home escape plan. |
| <input type="checkbox"/> Batteries are working in all smoke alarms. | <input type="checkbox"/> If you use a wheelchair or walking aid, check each possible exit route carefully. |
| <input type="checkbox"/> Test your smoke alarm monthly. | <input type="checkbox"/> Windows and doors open easily from the inside. |
| <input type="checkbox"/> If you are hearing and/or vision impaired, install the appropriate smoke alarm. | <input type="checkbox"/> Keep all important papers together in a safe place. |
| <input type="checkbox"/> Create a home escape plan. | <input type="checkbox"/> Catalog and update your household inventory list for insurance claims. |



INTERIOR SAFETY

INDOOR AIR QUALITY (IAQ)

According to the EPA, indoor air is 2-5 times more polluted than outdoor air.

- Mold, toxic chemicals in cleaning products and furnishings, and cigarette smoke all contribute to poor IAQ.
- Use exhaust fans when cooking, cleaning, or taking a shower to remove harmful pollutants and also excess moisture that can contribute to mold growth.
- Storing toxic chemicals in a location separate from the living space or garage, and choosing less toxic bio-based cleaning products, can all drastically improve IAQ.
- For more IAQ tips: [🔗 PlanetClark.com IAQ](https://www.planetclark.com/iaq)

SEISMIC STRAPPING

While structural damage or collapse from an earthquake is a concern, there is actually another hazard that is far more likely and equally dangerous.

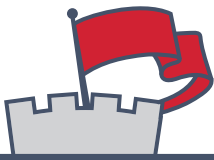


- Loose large items, such as TVs, bookcases, or lamps, are falling hazards that pose a serious risk to your health during an earthquake.
- To avoid this, make sure any large potential falling hazards in your home are secured with seismic strapping to ensure they remain as stable as possible during an earthquake.
- Water heater and other seismic strapping kits are available at hardware and big box stores for as little as \$15-25.

LONG-TERM LIVABILITY

Long-term livability means a healthy and safe home environment; it allows people of varying physical capabilities to move about and function safely in the home. The list of options is long, but here are a few examples. For more details and information visit the Clark County Home Design website [🔗 Clark.Wa.gov Aging Home Design](https://www.clark.wa.gov/home-design)

- Physical barriers
- Flat or sloped entries (instead of stairs) to make access easier.
- Portable solar lights on outdoor walkways, decks, and patios to improve visibility and reduce tripping hazards.
- Make sure all staircases have sufficient handrails and illumination to reduce the risk of falling and tripping hazards.
- If possible, provide plenty of open space at all home entries and include places to set items down to keep hands free to unlock doors, etc.



STRUCTURE

INSULATION

New homes are built to a level of energy efficiency that surpasses earlier energy codes; existing homes however may have high heating bills as a result of a combination of issues such as:

- Lack of air sealing, cracks, gaps, and poorly weather stripped windows and doors
- Low or no insulation in the floors, walls, and ceiling.
- See the Energy Efficiency section for information on improving the comfort and efficiency of your home.



FOUNDATION

Most all home foundations are constructed with concrete; which will develop some cracks over time.

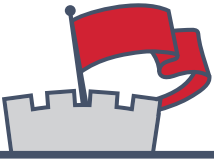
- This DOES NOT necessarily mean that your foundation is damaged, or that its structural integrity is compromised.
- If you do have cracks larger than ¼ inch and notice floors or walls out of level, contact a foundation specialist for a full assessment.
- Keep foundation vents clear of debris to allow for proper ventilation and protect your home from potential radon exposure.
- Make sure that all downspouts drain water away from the foundation.
- Excessive pooling of water near the foundation can erode supporting infill and compromise your home's structural integrity.



ATTIC

Attics may contain a furnace, heating ducts, wiring, insulation, and other components of your home.

- It is important to know where the access(es) to your attic is.
- If the attic has a furnace or water heater in it, make sure you have an elevated walkway or path to allow safe and easy access to it.
- Common attic access locations include: closets, garages, hallways, and utility rooms.
- Make sure attic access hatches are properly weather-stripped so they do not allow unwanted hot or cold air to enter the home.



STRUCTURE

CRAWLSPACE

Like attics, crawl spaces may contain important components of your home.

- Common crawlspace access points include closet floors and outside entries through the foundation wall.
- Check the crawl space vents to make sure the protective screens are intact; critters love to move into warm crawlspaces and can do a lot of damage.
- Most houses built since 1990 contain a low-point drain designed to reduce the buildup of water in the crawlspace. As such, it is important to make sure the drain is clear of obstructions so it can drain properly.
- Crawlspaces should also contain a black, plastic vapor barrier to prevent excessive moisture from entering the home through the ground. To ensure that this barrier is working effectively, it is a good idea to check it for holes or tears periodically.
- Maintenance is particularly important if your vapor barrier is part of a radon control system. Vapor barriers will wear out over time. Check them after workers leave the crawlspace, repair as needed, and they will last many years.

ATTACHED GARAGE

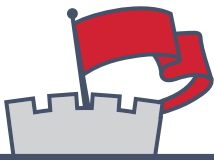
The wall that separates your garage from the living space is known as a fire separation wall.

- Do not cut holes in this wall and repair any damage to it with non-combustible patch material.
- Current code requires that a door to the garage from the home has a self-closing hinge.
- Do not store toxic chemicals in the garage as they are a fire hazard, and fumes in the garage can migrate into the house and contribute to unhealthy indoor air quality.
- Garage door springs store a lot of energy; to avoid potential injury, do not attempt to adjust or repair them – this is a job for professionals.

RADON VENT

Clark County has been designated a high radon potential county.

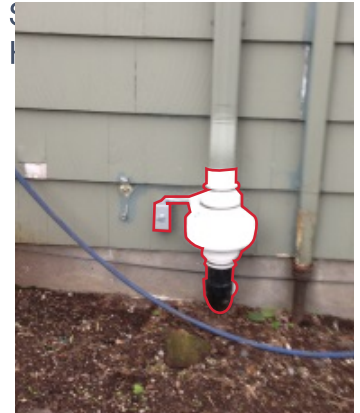
- Homes and additions permitted after July 1st 2007 have a passive radon vent.
- Radon is a colorless, odorless, radioactive gas that can leach from rock beneath a home's foundation.
- It is the leading cause of lung cancer for non-smokers and the second leading cause of lung cancer in the general population.



STRUCTURE

RADON VENT (CONT.)

- Radon-induced lung cancer claims the lives of about 21,000 Americans every year, more than drunk drivers and house fires combined¹.
- Clark County is designated as a “High Radon Potential Area,” but this **DOES NOT** necessarily mean that your home is being exposed to dangerous levels.
- Testing your home for radon is easy and the **ONLY** way to find out if you have dangerous levels.
- Inexpensive test kits are available at most hardware stores or on-line.
- The US EPA recommends taking action if test results indicate a radon level of 4 pCi/L-picocuries or greater of radon per liter of air.
- For information on radon: [🔗 EPA Radon Guide](#)
- If your home has a passive vent system and a high level of radon, it will be necessary to add a power vent fan to increase the effectiveness of the vent system.
- To learn more about radon vents: [🔗 SOS Radon Vent](#)
- If you already have a radon vent, it is still recommended that you test your home.
- There are radon mitigation companies that specialize in reducing radon to safe levels in homes, office buildings and schools. They are a great resource for families with high radon levels in their home.
- Make sure you maintain your crawlspace vapor barrier as it is a vital part of the radon control system as well.

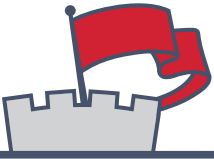


FIREPLACES/HEARTH/CHIMNEYS

A few helpful tips will ensure that your fireplace or wood stove functions safely and effectively:

- Install a CO detector in any room that contains a fireplace, wood stove, or gas appliance.
- Check the damper; it must be fully open to allow smoke to go up the flue and remove smoke and carbon monoxide. Keep it open when your system is in use and until fire has completely burnt out and no longer produces smoke.
- Close the damper to prevent cold air from getting inside and warm air from leaking out. Do this only once the burn is completely finished and the fire no longer produces smoke.





STRUCTURE

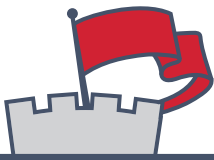
FIREPLACES/HEARTHS/CHIMNEYS (CONT.)

- Keep the chimney clean by burning only dry firewood. This reduces buildup of creosote on chimney walls, which can lead to fires that will damage the chimney and potentially other parts of your house.
- Removing soot from inside your wood stove can boost its ability to transfer heat by as much as 50 percent².
- If you have a gas fireplace, be sure you know how to shut off the gas supply to the unit in case of an emergency.
- Combustion air is critical to the safe and efficient burning and removal of combustion byproducts. Open fireplaces draw combustion air from your living space. If your house is too tight, and or if exhaust fans are in use, the fireplace will not perform as designed and may back-draft, bringing dangerous combustion byproducts into your home.
- Partially open a window if your house feels slightly stuffy during a burn to allow more fresh air into your home.
- If your CO alarm goes off, leave the house and open exterior doors from the outside to flush out the house with fresh air. Have your fireplace, chimney and any other combustion appliances checked out by a qualified contractor once the CO monitor indicates it is safe to return.
- A heating professional can improve the safety of your fireplace by adding a combustion air supply vent.
- There are days when Clark County will have a burn ban due to poor air quality. To find out if it is safe to burn and tips on burning clean, visit the Washington State Department of Ecology/Air Quality website.
- For more safety and clean burning tips: [🔗 EPA Burn Wise](#)

BASEMENT

Basements have limited, often only one, way out.

- Basement sleeping rooms require an emergency exit. In order to legally create a basement sleeping room, you must first obtain the proper plans and permits (see Chapter 3 for more information).
- Make sure your basement has smoke and CO detectors and exit ways that are free from clutter and obstructions.



STRUCTURE

IMPORTANT PARTS AND PIECES OF YOUR HOUSE

The structural components of your home are designed to carry heavy loads and resist storm and earthquake events.

- Do not cut into these components or remodel your home without proper plans and permits (See Chapter 3 for more information).
- Unwise alterations to a home's structure can cost thousands to repair. (See Ch. 3, building fail)

Missing shingles or flashing at chimneys, pipes and vents that penetrate the roof are a major cause of roof leaks that may take a while to discover. Inspect your roof from across the street if possible, using binoculars helps. Inspecting by walking on your roof only makes sense if you are experienced and equipped to do so safely, roof repair is most often a job best left for the professionals.

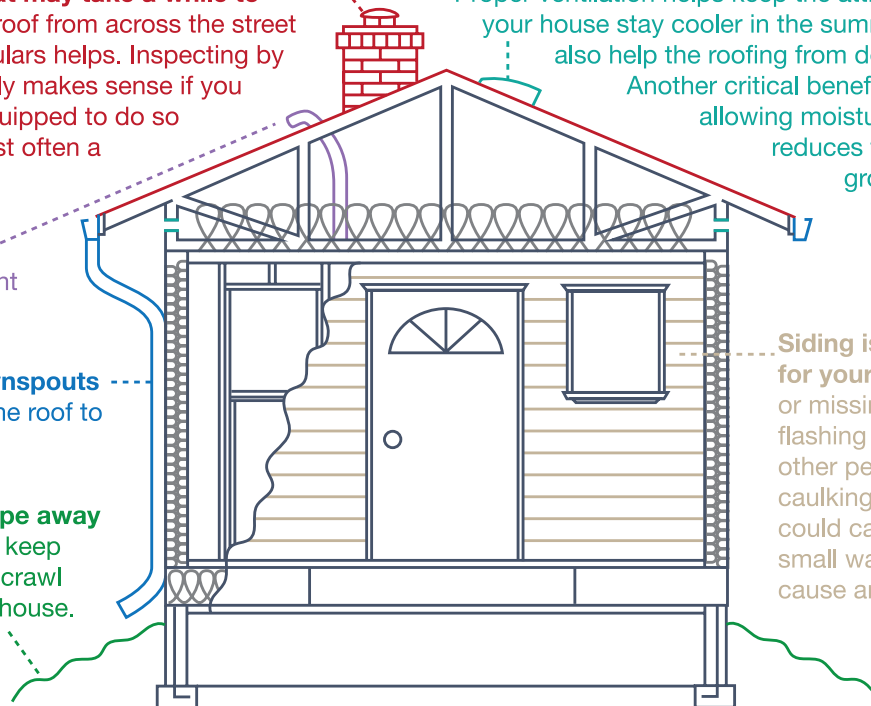
Attic ventilation is accomplished through roof vents. These can be critical to the health of your house. Proper ventilation helps keep the attic cooler which helps your house stay cooler in the summer. Attic ventilation will also help the roofing from deteriorating prematurely. Another critical benefit of attic ventilation is allowing moisture to escape; this greatly reduces the chances of mold growth and other related problems.

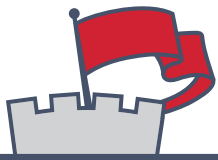
Exhaust vents must vent to the exterior.

Metal gutters and downspouts allow water to flow off the roof to the ground.

The ground should slope away from the house to help keep water from entering the crawl space or damaging the house.

Siding is part of the rain jacket for your house. Check for failed or missing caulking and/or flashing at all doors, windows and other penetrations. A failed caulking joint may not look like it could cause much damage, but a small water leak over time can cause an entire wall to rot away.





SYSTEMS

Your home has a number of systems that must work properly in order for you to stay warm and safe.

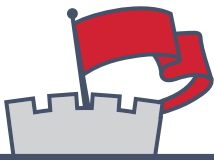
- Permits protect your home and family and buy the services of an independent third party to inspect all plans and work done on your home.
- Additions or alterations to your HVAC, plumbing, or electrical systems are sometimes complex and must be done correctly to ensure your safety
- You may need to hire a qualified professional before proceeding with any changes (see Chapter 3 for more information).

HEATING, VENTILATING, & AIR CONDITIONING (HVAC)

Find the operating manuals to your HVAC system for:

- Tips on proper operation, troubleshooting guide, and recommended maintenance, such as furnace filter replacement.
- Just like your car, regular air filter changes and tune-ups are important for the safe and efficient operation of your HVAC system.
- **Furnace filters should typically be replaced once every 3 months.** If you don't have an HVAC manual, most can now be found on-line; contact the manufacturer to get a copy.
- Leaky duct systems are a common problem. Large leaks in a supply duct can lead to lost heated air and wasted energy. Leaks in a return duct can drive moisture into the walls of your home, encouraging mold growth and rot (see chapter 3 building fail).
- Duct testing and repair is an easy fix for most HVAC contractors. Additionally, Clark Public Utilities offers cash incentives for duct sealing to customers that use electric heat. [🔗 Clark Public Utilities Weatherization Rebates](#)
- Use your spot ventilation (bath fans or kitchen exhaust fans) as needed to remove water vapor and other pollutants from your home.
- Run your bath fan for at least 10 minutes after a shower to help remove water vapor and prevent mold growth.
- Combustion air from the outside is provided by plastic pipe in newer high efficiency furnaces and is drawn from the surrounding area in open combustion, older style furnaces. Do not close off vents or grills that provide combustion air; make sure a working carbon monoxide detector is present and installed to manufacturer's instructions.
- If you notice any damage to your vent system, have it repaired immediately.
- Do not store any flammable materials near your gas-fired HVAC systems.

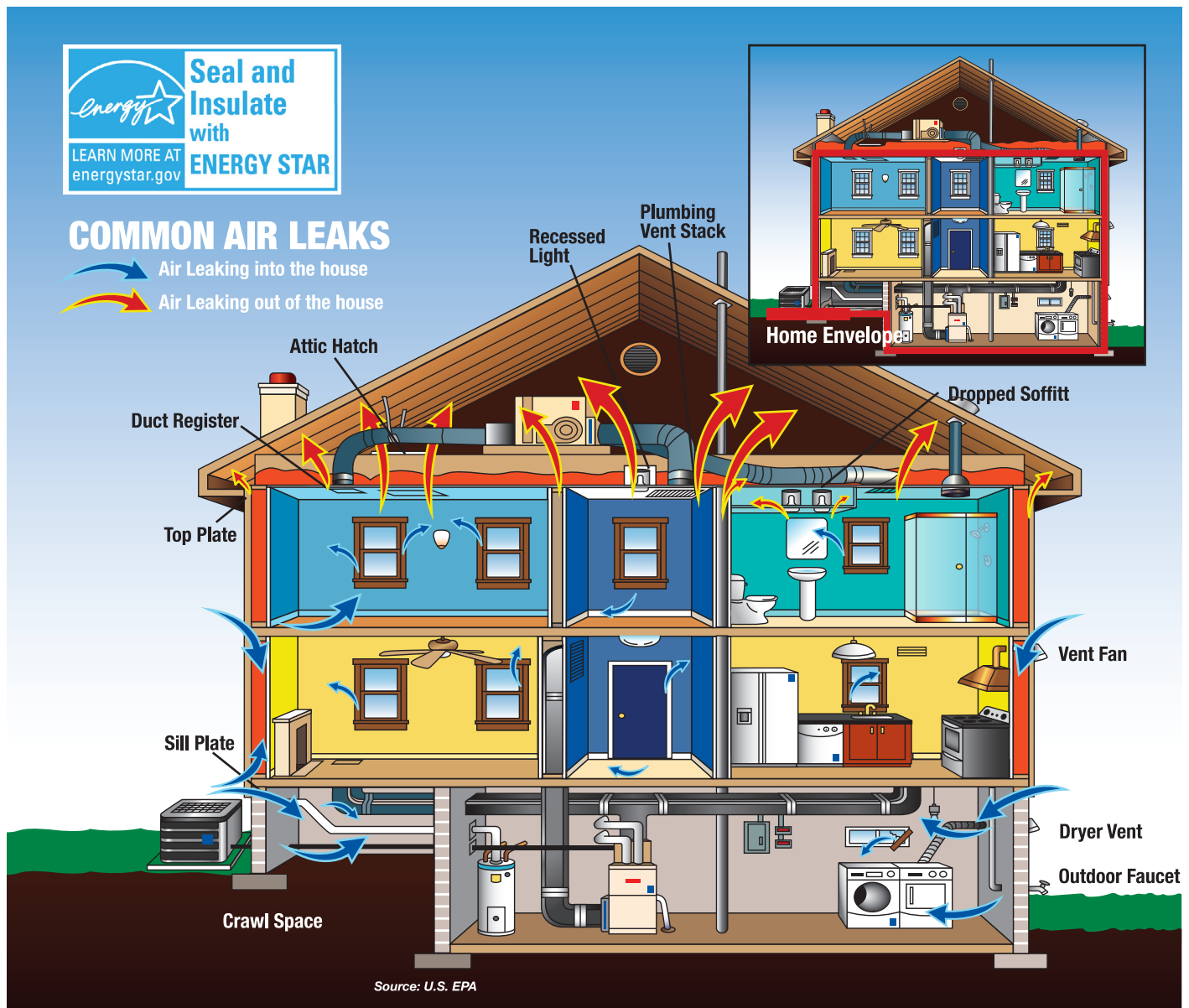


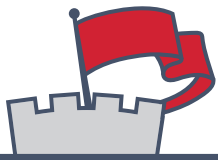


SYSTEMS

This illustration shows where heated air can escape and the many places cold outside air can enter the house. It also shows the heating and exhaust systems. An energy efficient house has been air sealed and insulated properly, the duct system is sealed and insulated, and the furnace is tuned up with a fresh filter.

Building supply and hardware stores offer a wide range of products to weatherize your home by sealing air leaks and insulating areas with little or no insulation. If you would prefer to hire a professional to do the work, contact a local Weatherization or Home Performance company. They do an energy audit of your house and provide you with a list of things you can do to improve the energy efficiency and comfort of your home.



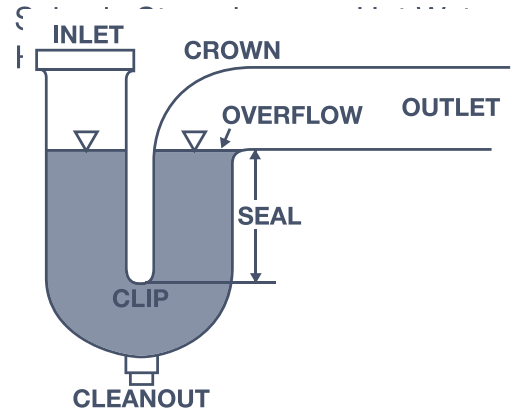


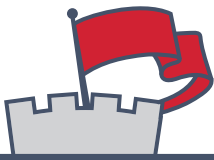
SYSTEMS

PLUMBING

Your home's plumbing is made up of a supply and a drainage system.

- If these systems don't work properly, they can cause damage and unsafe conditions, such as sewer gas entering the home (which will typically be obvious from its offensive smell).
- Water sitting in the bottom of the P-Trap (see illustration) is what prevents sewer gas from flowing back up drain pipes. In infrequently used drains, such as utility sinks and basement floor drains, this seal can dry out.
- Pour a pitcher of water into infrequently used drains to renew the trap seal and keep sewer gas out of your home.
- Repair leaky faucets — you can replace the washers in the faucet valve, consult the faucet's manual, or visit your local hardware store to find the proper washers and methods to replace them.
- If you don't have DIY skills, it's best to call a plumber. Don't ignore leaks! They can waste as much as 10 gallons of water per day³ and lead to water damage and mold growth in the home.
- Be sure to shut off your water before attempting any repairs to the supply system. Most homes have a main water shutoff in the garage or basement, and there is also one at the water meter near the street.
- Some clogs in your drainage system can be remedied by disconnecting the P trap of a sink and clearing out the clog.
- A plumber's snake can travel through the drain pipes to get at clogs further down the line and are available for rent or purchase at hardware and big box stores.
- Insulating your pipes will keep them from freezing and increase the efficiency of your hot water usage.
- Foam and fiberglass pipe insulation are available at most hardware stores. Make sure insulation fits snugly around pipes; otherwise, it will not work effectively and pipes will still be at risk of freezing.





SYSTEMS

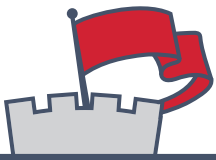
ELECTRICAL

- CAUTION: Problems with the electrical system in your house can occur by plugging in too many or faulty devices and overloading the circuit.
- For baseboard, wall, or portable heaters, keep the area in the front of the heater clear (see the appliances manual for recommended distance)
- Two of the most likely causes of a dead electrical circuit are either a breaker or a Ground Fault Circuit Interrupter (GFCI) has been tripped.
- If a breaker trips after you have re-set it, this is an indication that there is a problem in that circuit, and the breaker is protecting you and your home by tripping.
- If there is a plug in device on that circuit, unplug it if you can safely. A malfunctioning appliance may be the cause of the circuit breaker tripping.
- If the problem isn't easily found, such as a faulty appliance or a sensitive GFI plug, and you do not have experience working with electrical circuits, it is best to call an electrician to trouble-shoot the issue.
- Replacing switches, outlets, fixtures, etc. are all possible DIY projects, but you should be comfortable with your skills.
- IMPORTANT: Shut off the breaker to any electrical circuit you wish to work on and use an electrical circuit tester to verify that the current has been shut off. If you are not experienced and/or do not have the proper tools for working on electrical circuits, call a professional electrician.



WATER HEATER

- Water heaters come in electric or gas-fired storage tanks or tank-less (instant/on-demand) varieties.
- Plumbing code requires that water heater thermostats be set to limit the temperature of hot water at no more than 120 degrees to prevent potentially very serious scalding. DO NOT adjust the water temperature higher than 120 degrees!

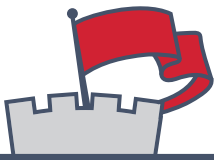


SYSTEMS

WATER HEATER (CONT.)

- Water heater tanks are equipped with a pressure relief valve to keep tank pressure from building to a potentially dangerous level (see picture).
- All water heater pressure relief valves must have a pipe attached to it (see picture) to direct hot water and or steam to the floor or other safe location; do not plug or cap that pipe.
- Gas-fired water heaters need proper combustion air and proper venting of combustion in order to safely remove carbon monoxide.
- If you notice any damage to your vent system, have it repaired immediately.
- Do not store any flammable materials on or near your water heater, as it could serve as a possible source for ignition.
- Make sure water heaters have two seismic straps holding the tank that are attached securely to the wall. One strap should wrap around the upper third, the second strap should wrap around the lower third and not interfere with the controls of the water heater tank.
- Flushing your water heater tank every 1-3 years (see manufacturer's recommendations). This will remove any sediment buildup and help it function more effectively and extend its life.
- Replacing a water heater can be a DIY project. All water heater replacements require a permit whether done by a homeowner or contractor. Permits and the inspection services that come with the permit help insure your water heater is installed safely.
- Companies that specialize in replacement can often be competitive with DIY costs.
- Storage tank water heaters should be equipped with an expansion tank (see picture), which protects the home's water piping system from pressure changes and associated damage.





APPLIANCES

Following the maintenance recommendation in your appliances' owner's manual will help them operate efficiently and give them a longer life span. Sometimes periodic maintenance may be a requirement and affects the manufacturer's warranty.

Feel free to use the folder pockets in the back of the Homeowner's Manual to store any user guides, warranty info, or repair contacts for your appliances.

WASHER/DRYER

It is recommended that washing machine hoses be replaced every 3-5 years. Hoses wear out over time (rubber hoses wear out the fastest), and water damage resulting from blown hoses is one of the top five causes of home insurance claims and can cost the homeowner over \$6000 to fix⁴. Stainless steel hoses are the most durable and are available for as little as \$15/each.

It is also a good idea to turn off the water supply to your washer when you go on vacation. Additionally, it is important to make sure your washer is properly balanced. This will lessen the strain on its mechanical components, thus improving its longevity.

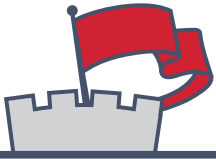
The most effective thing you can do for the safety and efficiency of your dryer is also the easiest: **clean the lint screen after every load!** This will prevent fire hazards and improve the machine's drying effectiveness. In 2010, there were 16,800 reported dryer fires in the US, accounting for \$236 million in damage to homes⁵. Ignoring something as simple as cleaning a lint screen is certainly not worth these potential consequences.

Dryer exhaust hoses and vents should also be cleaned regularly. Exhaust hoses can plug up with lint, creating an additional fire hazard, and obstructed vents can prevent moist exhaust air from exiting the home, creating the potential for mold buildup. Exhaust hoses can also become disconnected from the vent, leading to moist exhaust air pouring into the attic or crawlspace and promoting further mold problems.

REFRIGERATOR

Clean your refrigerator coils (either behind or underneath the unit) at least twice a year with a coil brush or with delicate vacuuming. If you find that your fridge is having trouble staying as cool as you would like, it's probably time for a cleaning. This will reduce fire hazards and improve cooling efficiency. Make sure refrigerator coils have room to "breathe" so they can function properly; do not jam a fridge all the way up against a wall; allow it at least some space on all sides.

Make sure door seals are clean and latch properly. This will ensure that your fridge does not waste energy and your food stays fresh and cool.



APPLIANCES

DISHWASHER

Check and clean filters regularly to ensure that the washer can clean effectively and that accumulation of food and debris is not leading to any unpleasant odors. If you notice your washer leaking, check seals around the door to make sure they have not become dislodged. You may be able to re-seat them, or easily replace them on your own if necessary. It is also a good idea to turn off the water supply to your dishwasher when on vacation.

OVEN

Ovens should be cleaned regularly using either the self-cleaning function or a non-toxic cleaning solution. Significant buildup of grease or grime in the oven should not be ignored, as it can lead to oven fires. If you notice large amounts of smoke coming from the oven while it is in use (and it doesn't appear to be the result of burning dinner), turn it off immediately and clean it out once it cools down.

STOVE

Make sure your stove (and oven if it is part of the same unit) has an anti-tip bracket. This will especially keep children safe from injury. These easy-to-install brackets are available at hardware stores for as little as \$7.

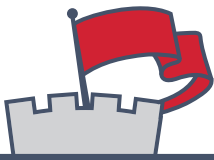
ALWAYS use your range hood vent when cooking. This will remove pollutants, water vapor and reduce the risk of mold buildup. It is also necessary for preventing accumulation of CO if you have a gas stove. If your range hood is a recycling, non-exhaust hood, be sure to clean the hoods filter regularly.

Make sure igniters, burners, range hood, and range hood vents are cleaned regularly. This will ensure the safe and efficient function of your stove.

FREEZER

Clean your freezer coils (either behind or underneath the unit) at least twice a year with a coil brush or delicate vacuuming. If you find that your freezer is having trouble staying as cool as you would like, it's probably time for a cleaning. This will reduce fire hazards and improve the efficiency of your freezer. Make sure freezer coils have room to "breathe" so they can function properly; do not jam a freezer all the way up against a wall; allow it at least some space on all sides.

If frost begins to accumulate on the inner walls of your freezer, it is likely that the freezer thermostat is turned down too low. If raising the temperature doesn't solve the problem, call a professional to have the unit repaired.



APPLIANCES

MICROWAVE

Make sure the door to your microwave closes properly so you are not exposed to any radiation while the unit is in use. **DO NOT** put metal in the microwave as it is a possible explosive hazard. Additionally, reheat food or drink items in ceramic or glassware. Microwaving things in plastic containers can cause those containers to leach chemicals into your food or drink, posing a threat to your health.

GARBAGE DISPOSAL

All food waste can be composted (See “Composting” on page 47), but if you have to use your garbage disposal, here are a few helpful tips to keep in mind:

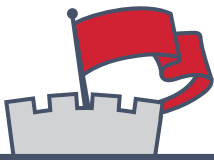
- Always run cold water while using the disposal. Hot water will cause accumulation of grease and create clogs. If you do not use water, the drain pipes will clog and the disposal will wear out.
- **DO NOT** grind meat, bones, oils, fats, or overly fibrous material (such as corn husks or onion skins). All of these items can clog or break the disposal.
- Clean your disposal by grinding ice cubes and pieces of lemon or orange. The ice chunks will remove food accumulations in hard-to-reach places and the citrus will act as a freshener.
- **NEVER** stick your hand down the disposal. If you must reach in, make sure the unit is first unplugged or the breaker connected to it is turned off.

GREEN CLEANING PRODUCTS

Most common household cleaning products contain a number of compounds that are harmful to both personal health and the environment:

- **Phosphates** – A cleaning agent in dish and laundry soap; acts as a fertilizer for aquatic plants; promote algae growth once they enter waterways, which can destroy habitat and kill aquatic species.
- **Volatile Organic Compounds (VOCs)** – Chemical gases emitted from solid and liquid products and materials. Exposure to VOCs can cause effects as mild as nausea or headaches and as extreme as liver or kidney damage or cancer.
- **Fragrance** – Mixture of synthetic chemicals to produce a specific scent. Exposure to fragrance can aggravate allergies and negatively impact the respiratory and reproductive systems.





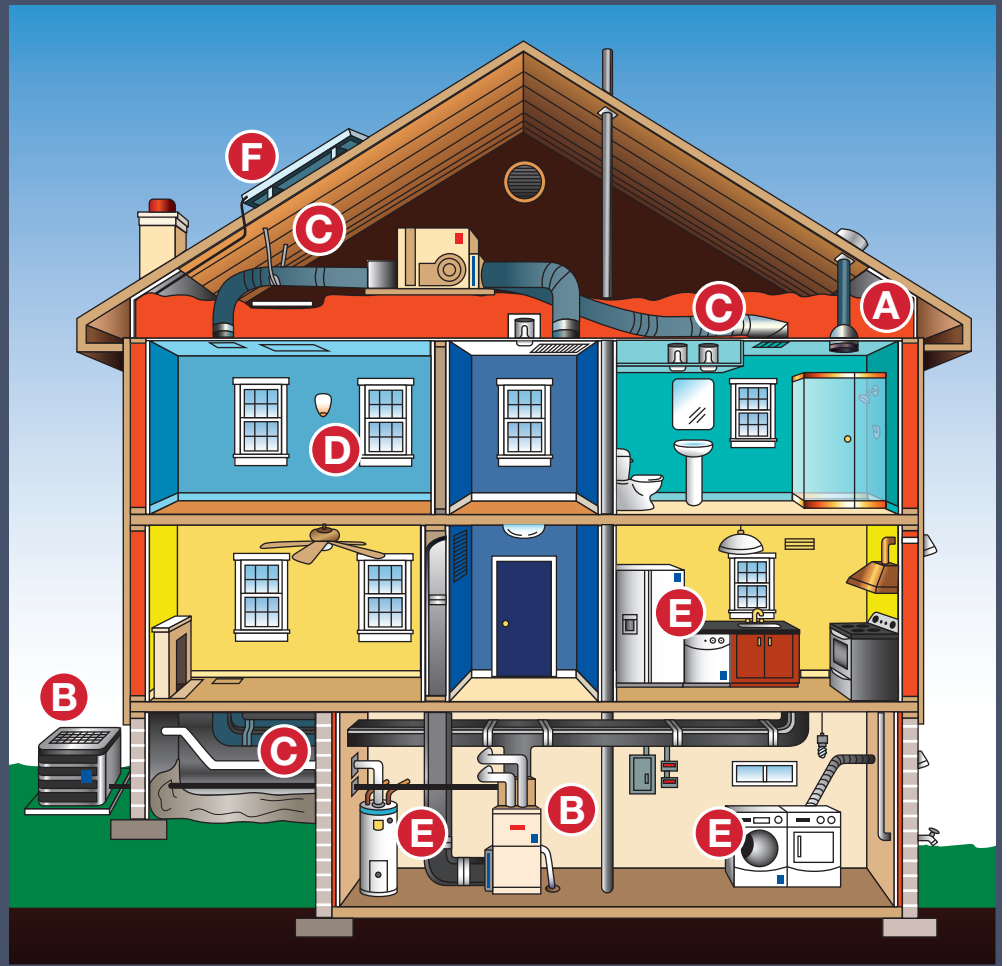
APPLIANCES

ENERGY EFFICIENCY

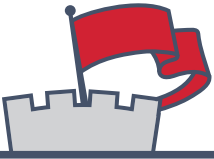
Energy efficient technologies have never been more advanced or easily accessible. The list of simple steps a homeowner can take to save money and conserve resources is too extensive to detail fully in this manual alone, but here are a few tips:

Typical Home Improvements

- A** Sealing air leaks and adding insulation
- B** Improving heating and cooling systems
- C** Sealing ductwork
- D** Replacing windows
- E** Upgrading lighting, appliances and water heating equipment
- F** Installing renewable energy systems



- Do-it-yourselfers can perform work that will reduce drafts and save energy.
 - If your home feels drafty and loses heat easily, you might benefit from air sealing your home.
 - Extensive air sealing can negatively change the performance of open combustion appliances such as fireplaces, gas water heaters, and furnaces; this can potentially cause back drafting of those appliances and can bring dangerous carbon monoxide into your home.
 - Install a CO monitor if you don't have one, following manufacturer's installation directions.
 - Home energy professionals can inspect your home for energy efficiency and other important issues such as indoor air quality, and combustion appliance safety. You can find them on-line and on the [PlanetClark.com](https://www.planetclark.com) partners page.



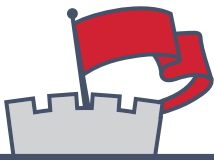
APPLIANCES

ENERGY EFFICIENCY (CONT.)

- Insulation can be added most easily to attics and floors; walls can have insulation “blown in” to their cavities, but is a job for an insulation contractor.
- It’s important to first air seal any area you intend to insulate; insulation will not stop drafts. Plugging the leak with caulking or expanding foam is an important first step.
- Visit the US Department of Energy’s website for information on air sealing, insulation and many more energy saving ideas [DOE Energy Savers](#)
- Programmable thermostats provide energy savings when programmed to turn the heat down when you are not home. Through proper use of pre-programmed settings, these thermostats can save you as much as 10% per year⁶ in energy costs and reduce the strain on your HVAC system.
- Sealing a leaky heating duct systems and adding attic insulation are two energy efficiency strategies that pay the biggest dividends both in terms of money savings and comfort.
- For more information on duct sealing, see the HVAC section above. If your home was built more than five years ago, it could probably benefit from added attic insulation. Bringing attic insulation up to R-49 is a great way to start saving. You can take savings to the next level by getting a total home energy audit.
- Clark Public Utilities offers free energy consultations to customers (see community resources section on page 4). Private Weatherization contractors offer a comprehensive energy audit for a fee and will give you a list of recommended improvements.
- Let the light in — or keep it out. Opening your blinds in the winter allows the sun to naturally warm your home, reducing the amount of energy your heating system uses. During summer, you can close the blinds to keep out those harsh rays and cool things down without relying so much on air conditioning.
- Curtains can act as a further source of insulation. Once your home is warmed or cooled to your liking, closing curtains will help maintain a comfortable temperature.

To find out more about what you can do to be energy efficient, check out any of the following resources:

- **Energy Star** www.energystar.gov
- **Planet Clark** planetclark.com/energy-efficiency



CONSERVATION

WATER CONSERVATION

Reducing your water consumption will both save you money and protect water resources. Here are just a few ways to conserve:

- For your health, pocket book, and the environment's sake, say goodbye to bottled water. One option is installing a home water filter and buy reusable bottles.
- Bottled water costs \$2.38 per gallon compared to \$2 per 1000 gallons for tap water⁷.
- One 16 oz. bottle of water takes 108 oz of water to produce (from manufacturing, packaging, shipping, etc).
- Low-flow faucet and shower fixtures are available at most hardware stores for \$10-30 each. This small investment can result in a 25-60% savings on water consumption and costs⁹.
- Clean out regularly any sediment buildup in your fixtures in order to maintain consistent and comfortable water flow.
- Don't over water your landscape; reducing the size of your lawn can not only cut back on water costs, but also on your labor for upkeep.

WATER TIPS



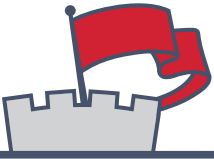
FIX LEAKS FAST:

Check the areas under sinks and other plumbing fixtures, if you find a leaky pipe or fitting get it fixed. Not only does leaky plumbing waste water, it can damage your house and even encourage the growth of toxic mold that could potentially harm your health.



DRIP IRRIGATION SAVES WATER AND YOUR TIME:

Installing a drip irrigation system to your landscaping and garden saves water, improves growth, discourages weeds and saves you time by not have to drag a hose around every time your plants need a drink. You can also install a timer on your drip irrigation system so watering will happen automatically.



CONSERVATION

RECYCLING

Waste Connections serves as Clark County's recycling provider. Learn what can and cannot be recycled curbside and visit their website for more general recycling information:

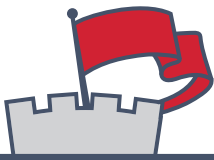
🔗 [Waste Connections NW Recycling](#)

Recycling, garbage, and some household hazardous waste can also be disposed of at County transfer stations. Call ahead to make sure what you plan to bring will be accepted:

- **Central Transfer and Recycling Center** (360) 256-8482
11034 NE 117th Ave
Vancouver, WA 98662
- **West Van Materials Recovery Center** (360) 737-1727
6601 NW Old Lower River Rd
Vancouver, WA 98660
- **Washougal Transfer Station** (360) 835-2500
4020 S Grant St
Washougal, WA 98671

Some additional reuse and recycling resources include:

- **Clark County's guide for all the reuse, recycling, and safe disposal options** for hundreds of products and household items. 🔗 [Clark.wa Reuse](#)
- **Habitat for Humanity store** that accepts used household items and furnishings for reuse and also sells used household goods to the general public. [pdxrestore.org](#)
- **The Rebuilding Center** boasts the region's largest selection of used building and remodeling materials both for donation and purchase. [rebuildingcenter.org](#)
- **Empower Up** is a non-profit that accepts used electronics for reuse and recycling and also sells refurbished electronics. [www.empowerup.org](#)
- **2 Good 2 Toss** is a resource for Clark County residents to reuse good, but unwanted or unneeded, household materials. [www.2good2toss.com](#)
- **Catalog Choice** is an organization that allows you to remove your name from catalog and telephone book delivery lists. [www.catalogchoice.org](#)



CONSERVATION

HOUSEHOLD HAZARDOUS WASTE (HHW)

Proper disposal of household hazardous waste is very important to the health of our citizens, the environment and our pets and wildlife in Clark County. Most household hazardous wastes are generated from one of the following categories:

- Automotive products
- Household cleaners
- Paints and solvents
- Poisons and pesticides

There are facilities available for safe disposal of these materials throughout the county. There is no fee to dispose of HHW. For specific information about drop-off sites:

[🔗 Clark.wa Self Haul Options](#)

Leftover paint can also be returned to several paint stores in the county. For a list of participating stores, visit the Environmental Services: Recycling A to Z website and search for paint at the center of the page. [🔗 Clark.wa A to Z](#)

UNWANTED MEDICATIONS

Unwanted medications that are flushed or tossed in the garbage can eventually make it into the environment. They can be dropped off at several locations in Clark County in addition to two annual collection events. For dates and locations of the take-back events, **call 360-397-2121 ext 4352**. To drop off your unused and unwanted medications throughout the year,

[🔗 Clark Environmental Unwanted Medications](#) for information about sites and times.

PLEASE NOTE: Sharps and inhalers are not accepted at the police or sheriff departments. They must be taken to the transfer stations. For specific information about drop-off sites:

[🔗 Clark.wa Self Haul Options](#) You can check with your doctor or your pharmacist to see if they have other options for you. **NEVER PLACE SHARPS IN YOUR GARBAGE OR RECYCLING CONTAINERS.**



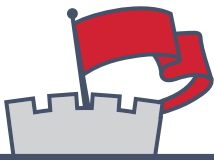
Chapter 2



Your Home's Exterior

This chapter provides information on:

- Preventing damage to your home from the elements
- Details on external components (like siding and windows)
- Effective yard care
- Local utilities services and incentives



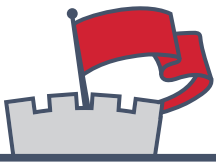
DAMAGE PREVENTION

DETERIORATION DUE TO MOISTURE

- Moisture in its many forms can cause rust, rot, moss and mold growth in the important exterior elements of your house (such as roofs, railings, decks, siding, fences, and walkways). It can also enter exterior walls and cause significant damage before being discovered.
- Mold can pose additional health concerns. Presence of mold or moss indicates an area is susceptible to moisture.
- It is important to reduce moisture and standing water sources around your home.
- Moss can damage your roof and create slippery surfaces and potential falling hazards.
- Rotted or rusted building materials jeopardize the stability of structures and pose the threat of collapse.
- Mold can ruin exterior and interior components and have a negative impact on your health. Do not ignore mold accumulation as it can lead to respiratory problems and cause persistent flu- and cold-like symptoms.
- Avoid water buildup; follow the drainage patterns of your drainage systems (such as gutters, downspouts, swales, and storm water controls) around your house and yard.
- Address moss growth as soon as you notice it. There are a wide range of treatments available including non-chemical zinc coated flashing and tin shingles. Check with your hardware store for recommendations.
- Window and door openings that do not have good protection from an overhang or awning have a very high rate of water intrusion that can damage the structure and cause mold growth in the wall cavity. Inspect at least once a year, caulk or repair areas that water can enter.
- Check flashing (most often a thin layer of waterproof material that keeps water from getting into places it doesn't belong) around openings to the home (particularly at exterior joints) to ensure that water is being shed properly.
- If you are not comfortable with heights or don't have the proper safety equipment to do the job, hire a contractor to preform a roof and flashing inspection.
- If you encounter issues from moisture-related deterioration, minor damage is easy to repair; contact a professional to evaluate the damage if it looks extensive and beyond your comfort level.

Here are a few resources to help you deal with moisture deterioration concerns:

- How to safely and effectively manage moss on your property
[🔗 Oregon Metro Moss](#)



DAMAGE PREVENTION

Here are a few resources to help you deal with moisture deterioration concerns (Cont.):

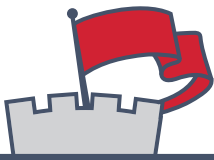
- US EPA's guide to preventing and cleaning mold in the home: [🔗 EPA Mold Guide](#)
- USDA guide to preventing wood decay in houses: [🔗 USDA Wood Decay](#)

PEST PREVENTION

Taking a few simple steps will help you keep common household pests (such as ants, termites, and rodents) from damaging your home and threatening your health:

- Do not store firewood inside or alongside the home. Pests often hide out in wood and you may be offering them a first-class trip to do interior damage by keeping firewood in or next to the house. Additionally, do not burn or transport firewood from over 50 miles away from where you live, as it may carry insects and other organisms not native to your home area.
- Use treated wood for decks and garden boxes. Untreated wood has little resistance to pests and serves as a breeding ground for termites and carpenter ants, which could potentially migrate from objects in your yard to the inner structure of your home.
- Drain standing water from loose outdoor items (like tarps, buckets, tires, etc). Standing water serves as a breeding ground for mosquitoes. This is easily preventable by periodically draining any areas of standing water you find outside your house. For places where draining might not be an option (such as ponds or fountains), you can use "mosquito dunks," small disks containing beneficial bacteria that eat mosquito larva. These are available at hardware stores for about \$2-3/each.
- Ensure foundation and attic vents are properly screened and repair or replace damaged or broken screens. Rodents and other critters are attracted to the warmth given off by home interiors and will do whatever they can to make their way inside. You can keep these furry intruders at bay by properly screening any potential exterior access points. Rodents are common carriers of disease and can harm indoor air quality if they take up residence inside your home. They can also gnaw wires, insulation, and other important interior components.
- Encourage helpful animals and insects. Creatures like bats, birds, and ladybugs can all reduce pests in your yard and limit their populations so they don't begin to migrate into your home. To learn some techniques for attracting these types of critters:
[🔗 Clark Green Neighbors Natural Gardening](#)

Many pest problems can be managed or avoided altogether by following the simple steps above. However, if you do have a serious pest issue, call a professional for help.



ENVELOPE

A building envelope is the physical separators between the conditioned and unconditioned environment of a building including the resistance to air, water, heat, light, and noise transfer. The three basic elements of a building envelope are a weather barrier, air barrier, and thermal barrier.

ADDRESS SIGN

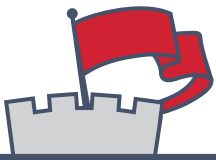
For everyone's convenience and your family's safety make sure your home's address is visible from the street and is illuminated at night.

- Emergency help could be delayed because responders cannot find your address.
- Address signs should have numbers at least 4" high with a contrasting background.
- If you live out in the rural areas, ask yourself: would you be able to find your house if you hadn't been there before?
- The Clark County Fire Department offers free address signs to residents of rural Clark County. For more information, contact their office at **360-887-4609**.

ATTIC VENTS/FOUNDATION VENTS/ROOF FANS

Proper ventilation is critical in reducing the risk of moisture accumulation and toxic mold growth in your home. Your house has many ventilation points where air must flow freely, and if safely accessible they are easy to maintain.

- Keep leaves clear of exterior vents, such as eave and roof vents, and attic exhaust fans.
- You should not cover foundation vents in winter as it can increase the amount of radon entering your home; this can potentially cause serious negative health effects to all occupants (see Radon section).
- People usually cover foundation vents to try and prevent cold floors or the freezing of their water pipes. It is far more effective to insulate water pipes properly and air seal and insulate floors (see page 17).
- Repair damaged foundation vent screens, warm crawl spaces attract animals that will damage insulation and leave their waste under your house.
- Check dryer vent pipes and hoods regularly to make sure they haven't developed any blockages. Thirty-four percent of clothes dryer fires are caused by failure to clean out the vent system and lint filter regularly, causing over \$11 million in property damage each year.
- To prevent lint build up, exterior dryer exhaust hood should not have a screen in it.
- If exhaust duct systems above or below the home are accessible, check to see if they are properly connected.
- Attics that get too hot can shorten the life of your roofing. You can add more roof vents' and/or you can add an attic fan, to help reduce attic temps. More information about attic ventilation and roof fans: [**🔗 Energy Star Roof Ventilation**](#)



ENVELOPE

DOORS

Doors can go out of adjustment due to a high amount of use and settling of the house. They not only keep the heat in but are a critical part of your home's security; they are worth taking care of.

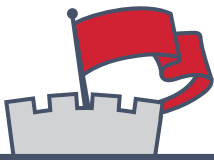
- Check for gaps in your door threshold and the sides of the door. Gaps (which allow moisture and cold air inside) can be filled with weather stripping, available at hardware stores.
- If your door already has weather stripping, make sure it is not loose or damaged; if it is, it should be repaired or replaced.
- If you have trouble with the lock engaging, check the gap between the door and frame; it should be around $\frac{1}{4}$ " wide and even all the way around. If it's not, make sure screws are tight and the door is not hanging loose.
- Consider adding an awning to any door that does not have roof overhang protection (see diagram on page 17).
- **IMPORTANT:** Doors are entry points into your house for you and water. Repair any damaged flashing, trim, or caulking on a door assembly's exterior.
- Extra care with caulking around door sills will also help stop moisture penetration.



WINDOWS

- Check for gaps around the perimeter of your windows. Gaps between window and siding or window trim will allow water to seep into the wall cavities and very often go unnoticed until substantial damage has occurred.
- If your windows already have weather stripping, make sure it is not loose or damaged; if it is, it should be repaired or replaced.
- Make sure operable bedroom windows open and close easily; they may be your way out of a burning home.
- Use a lubricant on hinges, operators, and latches to ensure their smooth operation and longevity.





ENVELOPE

WOOD PORCHES/DECKS/PATIO COVERS

Regularly check the condition of any standing structures attached to the exterior of your house, such as porches and decks. Specifically, you'll want to look at:

- All wood planks and beams: check for rot by probing with a screw driver.
- Metal connectors: check for rust.
- Are the connection points of the exterior structure to the house holding water? If so install flashing to keep water out before damage occurs.
- If you notice any serious structural problems, contact a professional for assessment ASAP.
- Promptly remove buildups of organic debris (moss, leaves, branches, etc.) to improve the longevity of your exterior structures. Keeping them clean will reduce their risk of water damage and, in the case of patio covers especially, reduce any unnecessary strain on their support components.
- Any exterior structures on your property need to be properly permitted, whether you are building new or adding on. This not only ensures their structural stability and the safety of anyone who uses them, but will keep you from building in a setback or right of way. (see Chapter 3 for more information).

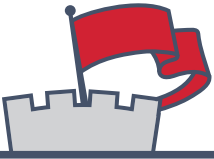
ROOFS

Periodically inspect your roof from the ground with a pair of binoculars. Don't go onto your roof unless you are experienced and have the proper safety equipment.

- Any missing or damaged shingles should be replaced or repaired promptly.
- Check in the attic, around skylights, and around roof flashing for water stains or drips.
- Leaks near flashing or skylights can be fixed by adding or replacing flashing or adding caulk.



IMPORTANT: Most of these moss solutions are DIY projects as long as you can safely walk on your roof. If your roof is unsafe to walk on, commercial roof maintenance services can take care of this well as minor roof repair.



ENVELOPE

ROOFS (CONT.)

- Treating moss on your roof will greatly extend the roof's life. If you have a moss problem, address it as soon as possible. You can do this in a number of ways:
 - If it is safe to do, sweep moss away in the summer once it dries out.
 - Prevent moss by keeping your roof clean of other organic debris and removing sources of excess moisture and shade, such as overgrown tree branches.

DRIVEWAYS/WALKWAYS

- Address slipping and tripping hazards (such as moss or cracks) as soon as you notice them, patch small cracks before they grow into big ones if left unattended.
- Moss can be removed by pressure washing or using a wire brush.
- Cracks can be filled with a variety of sealant options available at hardware stores.
- If you have large chunks of driveway or walkway jutting out above the surface, they should be replaced.
- If your driveway is sloped, be aware that any chemicals (oil, soap, pesticide, etc.) you use on it will eventually be washed down a storm drain when it rains (find more information on storm drains and storm water on page 40).

GUTTERS/DOWNSPOUTS

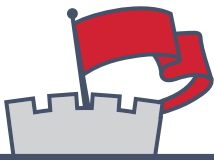
Gutters and downspouts serve as the primary method for draining water off your roof and away from your home.

They must work properly to prevent damage to your house and keep water out of your basement or crawl space.

Water entering the home creates a higher risk for mold, mildew, rot, and pests and can have a negative impact on your family's health and the overall longevity of the house.

- Make sure drainage exit-points that do not go underground and into an infiltration system direct water away from your foundation.
- Additionally, check that you are not draining water from your land directly onto your neighbor's property.
- Overflow during rainstorms may cause gutters to become loose or break away from the side of the house entirely, allowing water to seep into siding or pool near the foundation, damaging its structural integrity.





ENVELOPE

GUTTERS/DOWNSPOUTS (CONT.)

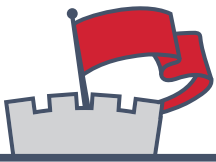
- Cleaning out gutters twice a year (in the fall and spring) will better ensure that water runs off properly during rain events. You can do this by hand or install gutter guards to make the process a little easier and less messy.
- If your downspouts are connected to an underground infiltration system, find its filter fixture, check regularly, and remove debris as needed.
- Small rain gardens can help disperse outflow from downspouts and also add a nice touch to your landscaping.



SIDING/FLASHING/CAULK/PAINT

These components all play a role in protecting the exterior of your home.

- Check siding twice a year to see how it is holding up against the weather. Gaps and cracks in siding can be repaired by caulking.
- When checking siding, also pay attention to the condition of your flashing (a thin layer of waterproof material that keeps water from getting into places it doesn't belong).
- If you notice issues from moisture-related deterioration, the damage may go deep into the walls if the leak is old.
- You may need to contact a professional to evaluate the damage.
- Check the condition of the paint on your house every year, walls that are exposed to the sun and weather will need more maintenance and re-painting than walls that stay in the shade.
- Scrape, sand, re-caulk and prime raw or deteriorated areas of your siding and where it joins doors, windows, etc.



YARD

STORM WATER SYSTEMS

Storm water is rain that runs off hard surfaces like rooftops, paved streets, and driveways. As it flows, it picks up lingering pollutants such as bacteria and chemicals. **Untreated storm water can filter into wells, and pour directly into streams, rivers, or lakes, negatively impacting habitat and wildlife.** There are a number of features on your property that effect storm water. These include: grade, drainage systems, and storm water catchment systems.

HELPFUL TIP: Splash blocks can provide an extra assist in draining storm water away from the foundation of your home and preventing erosion to soils near your downspouts.

GRADE

The slope of different parts of your property impacts the direction and rate that storm water will flow on your land. If your house sits on top of a slope, be aware that storm water from your property will affect anything below you, such as streams, habitat, or your neighbor's land. If your home is at the bottom of a slope be sure that measures have been taken so water is diverted from flowing directly toward your foundation.

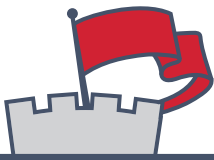
A number of components make up your exterior drainage system. These include:

- roofs
- gutters
- downspouts
- foundation drains

Keep these clear of debris to ensure that they drain water effectively. **To reduce the impact that these features have on storm water, you can install storm water capture and treatment systems at drain exit-points** (see Index "Rain Barrels" and "Rain Gardens" under Exterior Efficiencies).

There are a variety of storm water catchment systems that can handle storm water once it leaves your property. These include: dispersement areas, infiltration systems, swales, public/private facilities, and storm drains. Dispersement, infiltration, and swales are all ways of treating and filtering storm water before it enters waterways. Some areas also have their own storm water treatment ponds, or have systems to pipe storm water directly to public treatment facilities. Check with your local sewer district to find out the storm water catchment technique employed in your neighborhood.

Despite the local availability of storm water filtration and treatment systems, **storm drains are the most common form of storm water catchment and drainage.** Storm drains prevent excessive amounts of water from pooling around your property during rain events. Keep them clear of obstructions and clean them out if you notice they are starting to get clogged. This will inhibit water from ponding and damaging your property or neighborhood roadways.



YARD

GRADE (CONT.)

ONLY RAIN GOES DOWN THE DRAIN. Never dump paint, soap, chemicals, oil, or any liquid other than water down a storm drain. They lead directly to the nearest stream, lake, or river, meaning that water or anything else that goes in a drain is not treated or filtered in any way before it enters the environment. Likewise, limiting the number of chemicals you use on exterior surfaces around your home (such as yards or driveways) will also prevent hazardous substances from being carried down drains.

HELPFUL TIP: Dog poop and fertilizers are two major contributors to storm water pollution from residential properties. Do not fertilize your lawn if rain is in the forecast; the majority of it will wash away into a storm drain, where it will negatively impact aquatic life and habitat. Dog poop contains millions of bacteria that can pollute drinking water, harm fish, and make people sick. Keep your yard clear of landmines and scoop the poop, bag it, and put it in the trash!

You can learn more about storm water and ways to limit its impacts by visiting www.clark.wa.gov/stormwater

SPRINKLERS/BACK-FLOW PREVENTION

Make sure sprinkler heads are pointed properly and away from sidewalks, foundation vents, and the side of your house. Know where your sprinkler heads are located and, if possible, site them in places that will minimize their risk of damage (sprinkler heads near the street or driveway can easily be run over and broken).

It may not take as much water as you think to keep your lawn looking lush. **Watering 1-1.5 inches each week during the dry season** should be enough to keep your water cost and use to a minimum.

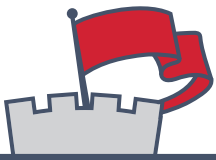
HELPFUL TIP: You can track how much water you are using by placing an empty tuna can under the arch of the sprinkler. When the can fills up, you've reached one inch of water on the lawn.

EXTERIOR LIGHTING

Avoid using compact fluorescent (CFL) light bulbs in motion sensor fixtures. When CFLs are turned on and off frequently, it greatly reduces their lifespan, so it is more beneficial to use LED, halogen, or incandescent bulbs as motion sensor lights.

VACUUM FAUCETS

Disconnect all hoses from your exterior faucets in winter, this will help prevent freezing. For added protection, you can install insulated hose bib covers. These are available at hardware stores for around \$2 and are simple to install on your own.



YARD

TREES

Any new tree you plan to plant should be placed in a location that can properly accommodate the size of the tree once it reaches full maturity. Trees placed too close to the home or sidewalk can outgrow their plot and cause irreparable damage, resulting in either the tree having to be cut down, or the sidewalk or structure needing to be replaced. Learn more about properly siting trees to maximize both safety and benefits: [🔗 Friends of Trees Placement](#)



When selecting trees to plant on your property, you should choose native species. Native trees have adapted to our climate and will thrive easily without extra inputs of water, fertilizer, or pesticides. They are also more resistant to disease, drought, and insects. For a listing of native trees and plants in Western Washington: [🔗 King County Go Native](#)

When it comes to removing, pruning, or evaluating potential rot or disease in trees, it is best consult an expert arborist. They will know local regulations for removal or addition of trees to your property, and will be able to properly evaluate the condition of trees you believe are sick or dying. If you do have a sick or dead tree on your property, have it removed. These trees pose a greater risk of falling, threatening the wellbeing of your home and your family.

FENCING

HELPFUL TIP: Store fall leaves to use as mulch around plants or add to your compost during the summer (see “Composting” under Exterior Efficiencies for more details).

Fences over 7 ft high require a building permit; before building a new fence, check to see if your neighborhood has Codes, Covenants and Restrictions that might be more restrictive than code. For safety, make sure that clear line of sight is not blocked at driveways.

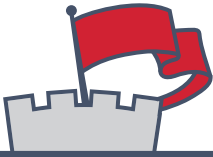
If you are moving into a new home, check your fence for exposed nails, and address any you find to prevent the risk of injury.

OUT-BUILDINGS/STORAGE

Out-buildings are a great place to store household hazardous waste (HHW). Keeping HHW as far away from the living space as possible will improve indoor air quality, and in a locked cabinet will ensure the safety of pets and children.

Inspect wooden storage units for rot once a year and be sure that topsoil does not come within 7 inches of siding. Check roofs for moss and remove if it is a problem.

If you are putting in a new out-building, make sure it is not at the bottom of a slope, where water can easily flow in and damage the unit. Out-buildings over 200 square feet require a permit (See Chapter 3 for more information).



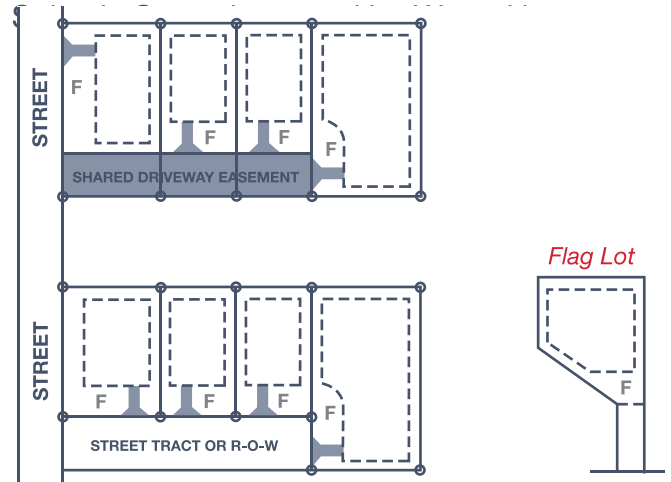
YARD

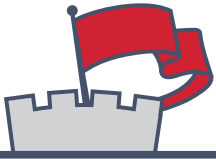
SET-BACKS/EASEMENTS

Setbacks serve as fire separation buffers; they are intended to prevent the spread of fire from one property to another. This is accomplished by leaving sections of open space between adjoining properties.

Easements typically serve as access for utility, city, or county projects (such as work on a water pipeline). Blocking this space with vegetation, structures, or stuff, will result in you potentially having to remove them yourself, costing you time and money.

Before proceeding with any exterior construction, check with County or City Building Departments for plot plans of your home or subdivision's set-backs and easements. Your homeowners association may also have information on set-backs and easements. You are not allowed to plant, build, or store anything in these areas.





UTILITIES

SHUTOFFS

It is extremely important that you know where your utility shut-offs are located in the event of an emergency. You should also shut off utilities whenever you are doing maintenance on any systems that use them (water pipes, electrical wiring, gas connections, etc.).

My utility shut-offs are located (FILL IN BELOW):

Gas _____

Electric _____

Water Shut-off in house _____

DIGGING



There can be all kinds of utility lines running underneath the ground of your property. As such, it is vital that you make sure any digging you have planned for your land will not damage or impact these lines. You can do this easily by simply calling 811 before digging. Damaging a utility line can lead to fires, explosions, electrocution, sickness, and other negative effects. Call before you dig – it's the law! Your life will thank you for it. More information is available at www.call811.com.

WATER

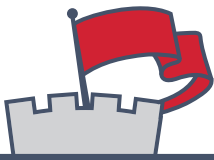
Water in Clark County is provided by the City of Vancouver, Clark Public Utilities, or private wells. You can find out who provides your water by reviewing your monthly water bill. Learn all about Clark County's water source: [🔗 Clark Public Utilities About Our Water Supply](#)

Clark County's tap water ranks among the best in the nation in terms of overall water quality. We received an 825 rating (out of 1000) on the Purdex municipal water quality scale for 2013. This puts Clark County in the "very good" category and well above the state average score of 711. You can learn more about Purdex water quality scoring at www.purdex.com.

When it comes to maintenance associated with your home's water supply, the most important thing to know is where your shut-offs are located. You can view a rundown of common shutoff locations and how to find them at [🔗 TVWD Shut Off Water](#)

Additional water resources

- **City of Vancouver** [🔗 Vancouver.us Drinking Water](http://Vancouver.us)
- **Clark Public Utilities** [🔗 Clark Public Utilities Your Drinking Water](#)
- **Clark County Public Health information on wells and drinking water**
www.clark.wa.gov/public-health/water/index.html
- **Tips for saving water at home** www.epa.gov/greenhomes/ConserveWater.htm



UTILITIES

SEWER

Sewer service in Clark County is provided by the City of Vancouver, Clark Regional Wastewater District, or private septic tanks. You can find out who provides your sewer service by reviewing your monthly sewer bill. Find out where your waste water goes by visiting water.usgs.gov/edu/qa-home-wastewater.html.

If you are experiencing leaks or clogs in your system, it is best to first contact a plumber before getting in touch with your sewer provider. If you have a septic system, there are companies that specialize in septic repair and maintenance that can assist you if you are having issues.

Clogs can be prevented by only putting the proper materials down drains and toilets. Grease, oil, and fats all contribute greatly to clogs. Additionally, household hazardous waste (including prescription drugs) should never be flushed down the toilet or poured down the drain (see “Household Hazardous Waste” on page 31 to find out how to properly dispose of these items).

There is a chance that sewer gas can enter your home if your pipes do not have a proper trap seal, though this is rare. See “Plumbing” on page 20 for more information on how to prevent this. If you have trouble with your toilet overflowing, you can shut off its water supply by turning the handles at its base on the wall.

Additional Sewer Resources:

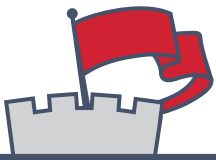
- **Clark Regional Wastewater District** www.crwwd.com
- **City of Vancouver** www.cityofvancouver.us/publicworks/page/sewer-system-wastewater-treatment-facilities
- **Information from Clark County Public Health on home septic systems** www.clark.wa.gov/public-health/septic/owners.html
- **US Environmental Protection Agency website on septic system maintenance, care, and operation** water.epa.gov/infrastructure/septic/septicmart.cfm

GAS

Northwest Natural Gas provides gas service to Clark County homes. There are many energy saving incentives offered to gas customers in Clark County through the Energy Trust (energytrust.org/washington).

There are a number of safety issues to be aware of with gas appliances. Most importantly, you should know how to shut off your gas. The main shutoff is located at the meter outside your house. Gas appliances should each have their own individual shutoff valve as well.

It is also essential to have proper ventilation of gas appliances to avoid carbon monoxide (CO) exposure and the risk of explosion. All areas in the home with gas appliances should have a CO detector. (More information on CO is available on page 15.)



UTILITIES

GAS (CONT.)

If you smell gas (rotten eggs), leave your home immediately and call NW Natural at **800-882-3377**. This could be a sign of a leak, which poses the risk of fire or explosion.

Additional gas resources

- **Northwest Natural** www.nwnatural.com
- **Gas Safety Information** www.nwnatural.com/Residential/Safety

ELECTRICAL

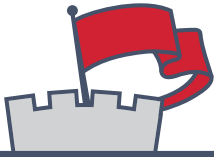
Clark Public Utilities (CPU) provides electricity for Clark County homes. Our primary source of power generation is hydroelectric, accounting for 76% of the County's total power supply in 2012.

IMPORTANT: Know where the electrical shutoff is. You should ALWAYS shut off the power before attempting to perform any work on your electrical systems. The main electrical panel controls your house's electric circuits. A clue to finding them is to go outside and see where the electrical meter is, the panel will most likely be inside near the meter.

- Make sure breakers on this panel are labeled so you know what switches are connected to what areas/appliances in the house. Circuits can be turned off individually or all at once.
- Keep your home safe. Hire a licensed electrician to perform repair work if you don't have the skill to do electrical work.
- Adding or altering circuits require a permit and inspection from a certified inspector. See page 52 for information on permits.

Additional Power Resources:

- **CPU Energy Saver Hotline** [360-992-3355](tel:360-992-3355) or www.clarkpublicutilities.com/index.cfm/your-home/conservation/energy-counselors
- **CPU incentives and rebates for energy saving measures** www.clarkpublicutilities.com/index.cfm/your-home/conservation/rebates
- **CPU free home energy assessment visits** www.clarkpublicutilities.com/index.cfm/your-home/conservation/on-site-visit



UTILITIES

GARBAGE/RECYCLING/YARD DEBRIS

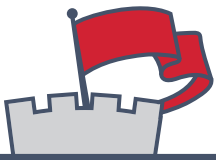
Waste Connections is the local garbage, recycling, and yard debris hauler for Clark County. Visit their website www.wcnorthwest.com for complete information about their services, pickup dates, important announcements, and FAQs.

- The Waste Connections recycling guide, www.wcnorthwest.com/Resources_Local/files/recycleSM.pdf, will give you a better understanding of what can be recycled curbside, what should be recycled at local transfer stations, and what is garbage.
- For information on Household Hazardous Waste (HHW), see the HHW section on page 31.

IMPORTANT: DO NOT put plastic bags (or other plastic film) in your curbside recycling cart! Plastic bags clog recycling sorting equipment and cause the recycling process to shut down every few hours so bags can be removed from the sorting machines. Plastic bags (and other plastic film) can commonly be recycled at local grocery stores.

Learn about where to recycle all the different kinds of film plastic and where you can take it locally. www.plasticfilmrecycling.org.





EFFICIENCIES

Below you will find some of the best ways to conserve money and resources and improve your home's economic and environmental performance.

ECO-FRIENDLY YARD MAINTENANCE

The pamphlet "Steps to a Healthy Lawn," clarkgreenneighbors.org/images/NBBLawnCareBookletFORWEB.pdf, has a number of useful tips to help you maintain a lush and productive yard that will benefit both you and the environment. In it, you will find information on:

- Efficient watering and fertilizer use and how to deal with yard pests.
- Be aware that any debris you produce while working on outdoor projects can be disposed of in your compost or your yard debris container.
- More information on yard debris disposal is available here:
www.co.clark.wa.us/recycle/yard/curbside.html

COMPOSTING

Composting enriches your yard and garden and reduces impact on our landfill. It reduces waste and air pollution, and improves water quality.

- Any organic material can be composted, and all organic matter will eventually breakdown on its own over time.
- One of the great things about composting is that no matter how much time, space, or resources you have to devote, you can be a successful composter!

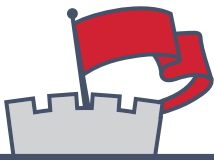
Below are a few great resources to get started learning about basic backyard composting:

- **The Master Composter/Recycler (MCR) Program:** The MCR Program is a local Clark County resource for all things composting, recycling, and sustainability related. The program hosts workshops on composting and worm composting and can provide you with all the tools you need to start your perfect compost pile. For more information, call **360-397-2121 x4884** or visit www.clark.wa.gov/environmental-services.
- **Clark County Green Neighbors** also offers a basic rundown on composting. Visit clarkgreenneighbors.org/composting.html to find out more.

GARDENING

Most foods travel 1,500 miles before they reach our plates¹². Fortunately for us, the Pacific Northwest provides a great climate for growing all kinds of goodies right at home.

- Using native plants, encouraging wildlife, composting, and avoiding the overuse of chemicals in the form of fertilizers, pesticides, and herbicides is the perfect way to garden naturally.



EFFICIENCIES

GARDENING (CONT.)

Below are resources to learn more about gardening locally in Clark County:

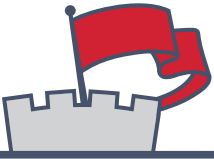
- Clark County Green Neighbors provides natural gardening tips such as incorporating native plants, building healthy soils, attracting beneficial animals and insects, and much more: clarkgreenneighbors.org
- The Master Gardener Program (a project of Washington State University Extension) offers workshops, tours, volunteer opportunities, and comprehensive training, all of which are designed to help community members become successful, ecologically-responsible gardeners: clark.wsu.edu/volunteer/mg/

HELPFUL TIP: When placing top soil or mulch directly along the side of your house, make sure it slopes away from the house and maintains at least a 7 inch buffer between the ground and your siding. Putting soil or mulch too close to siding can allow unwanted moisture to enter the home and cause damage.

WATER CONSERVATION

The mantra in the rainy Northwest could be “water, water everywhere,” but even here conserving drinkable or potable water can save money and reduce the impact on pumping, and processing of water. To conserve water and reduce your water bills, try these ideas.

- Rain barrels allow you to capture rainwater from your downspouts and store it for later use. Rain barrels can be constructed from recycled materials and assembled and installed with limited DIY labor.
- The water they collect can be used to water your garden. They are also a great method for managing storm water and protecting your home’s foundation from potential water damage.
- Rain gardens are an excellent resource for filtering storm water and providing you with a beautiful, low-maintenance landscape around your home. They are designed to thrive without any additional watering.
- Rain gardens require a number of important considerations before construction, such as siting and plant selection. If you are thinking of starting a rain garden, this comprehensive how-to presentation will be a big help: clark.wsu.edu/volunteer/ws/WhatisaRG/index.htm



EFFICIENCIES

DRIP IRRIGATION

- Drip irrigation can save significant cash during a long hot summer.
- Allows you to easily get water to hard-to-reach places and gives plants a drink right at their roots.
- By releasing water slowly and over an extended period of time, plants and soil are able to retain moisture longer, meaning less water use in the long run.
- Drip irrigation can save you from dragging around a hose and significant cash during a long hot summer. You can check out a comprehensive rundown of drip irrigation systems at www.ext.colostate.edu/PUBS/Garden/04702.html.

You can find more information on outdoor water conservation by checking out the following:

- **Clark County Watershed Stewards** offers resources for maintaining clean rivers, streams, and drinking water as well as saving water at home and in the garden: clark.wsu.edu/volunteer/ws/index.html
- **The EPA** provides tips for water conservation both in the home and around the yard: www.epa.gov/region1/eco/drinkwater/water_conservation_residents.html
- **The Washington State Department of Ecology** offers a number of ways to save water that are of specific interest to Washington residents: <http://www.ecy.wa.gov/programs/wr/ws/wtrcnsv.html>

CONCLUSION

Properly maintaining your exterior greatly increases the durability and value of your of home. In fact, a well-maintained exterior can also improve the longevity of your interior by keeping pests, drafts, and moisture out. By using the tips and information provided above, you can give your home a safe, efficient, and beautiful exterior for years to come.



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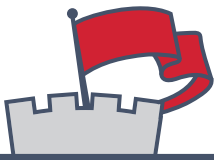
Chapter 3



The 5 W's of Building Permits and Plans

This chapter provides information on:

- When do I need a permit?
- What are the benefits?
- Why is there a permit fee?
- What happens if I don't get one?
- How do I get one?



BUILDING PERMITS & PLANS

Having your plans reviewed, approved and securing a permit for your home renovation projects ensures that the work is completed correctly and the finished product is safe and durable.

WHEN DO I NEED A PERMIT?

Most construction requires a permit. Some exceptions that do not need permits include:

- Fences under 7 feet tall
- Decks and ramps less than 30 inches above grade
- Swimming pools less than 24 inches deep
- Garden sheds under 200 square feet
- Painting
- Cabinets
- Insulation
- Minor repairs

Remember that un-permitted work may be subject to your neighborhoods CCR's-Codes, Covenants and Restrictions, utility easements or required property setbacks. Check with your local building department to find out if your project requires a permit, and keep your planned project out of setbacks and easements.

WHAT ARE THE BENEFITS?

Permits protect the value and safety of a project by ensuring that work is done to code and that contractors are living up to their responsibility and building to the code. Building codes are **MINIMUM** standards of acceptable construction. **A permit now can save you a big headache later!**

POP QUIZ: A homeowner who wanted to save the expense and hassle of getting a permit to install his wood stove, to save even more money, he installed the wood stove himself. The installation was not done correctly and, as a result, his house burned down.

After learning that the wood stove installation was un-permitted, guess how much his insurance company paid on the homeowner's loss:

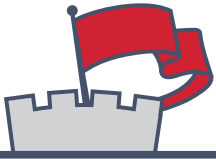
- A** 100% of value **B** 50% of value **C** 0%

Unfortunately C is the correct answer. Bottom line is permits and inspections protect your family and your biggest investment, your house.

WHY IS THERE A PERMIT FEE?

Permit fees are service fees, not taxes. They pay for the professional review and inspection of your project. The fees go to your local building department.

To get an idea of the fees for your project, contact your local building department. Cost varies depending on the type of project and its scope. **Think of it this way: is it better to get a permit now to have a job done right, or spend a few thousand dollars later to fix poor, unsafe work?**



BUILDING PERMITS & PLANS

WHAT HAPPENS IF I DON'T GET ONE?

- **Permits are required by state law.**
- The owner of a property is responsible for making sure all work on that property is permitted.
- Lack of a permit could negatively impact a sale, insurance claim, or future projects until the requirements are satisfied.
- Not to mention, you might end up with something like this:



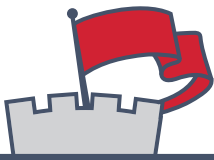
HOW DO I GET ONE?

- Permits require an application form, plans, and possibly design (engineering or architectural work). Contact your local building department for application information.
- There are a wide variety of professional services that can help you with plans for your project. These include drafting services, home designers, architects, and engineers. The level of planning your project requires depends on your construction expertise and the complexity of the work.
- When considering a contractor, ask for and check references.
- Smaller projects are often within the capabilities of the do-it-yourselfer.

You can verify the license and credentials of any contractor you plan to have work on your project by visiting <https://secure.lni.wa.gov/verify>.

Clark County building permit information can be found at
www.clark.wa.gov/development/permits/building.html

The Building Industry Association of Clark County is a contractor resource at
biaofclarkcounty.org/



BUILDING PERMITS & PLANS

HOW DOES THE PROCESS WORK?

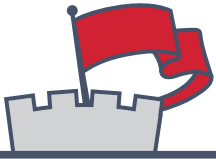
- An applicant submits two copies of their plans along with the permit application and pays a review fee at that time.
- Once the application and plans have been reviewed and approved, the applicant will pick up the job copy of the plans and permit and pay the remaining permit fee.
- At this point, the applicant receives the direct contact info for phone or web to schedule their required inspections.
- Once the project is completed, it is inspected by a certified building inspector and given final approval.

WHAT ABOUT UN-PERMITTED STRUCTURES ALREADY ON MY PROPERTY?

As the homeowner, obtaining a permit is your responsibility even if you had nothing to do with the originally un-permitted work.

- Before attempting to permit existing work, a plot plan must be submitted and a determination made that there are not any underlying site conditions such as setbacks or easements that affect the permitting process.
- To obtain a permit for existing work, you will need to submit plans (and any supporting documents) that details the construction. A qualified design professional, such as an engineer, or a contractor may be needed to investigate and prepare the plans.
- A plan submittal and permit application is the next step. The plans reviewer will determine if there is enough information for a permit to be issued and determine which inspection(s) can be accomplished.
- To the degree the designer, reviewer, and inspector are reasonably comfortable in making determinations and judgements they will do so. The objective is to limit exposing covered elements, i.e. tearing sheet rock off walls.

If you do not live in unincorporated Clark County, contact your local building department to see if as-built inspections are available in your area. (See page 5)



BUILDING PERMITS & PLANS

HOW DO I TELL IF I AM UNDER THE JURISDICTION OF CLARK COUNTY OR A CITY?

By looking up your address at gis.clark.wa.gov/applications/gishome/property/index.cfm. Look under the column titled “Administrative Data” and find the line called “Jurisdiction.” This will tell you whether you reside within a city boundary or whether your property is part of unincorporated Clark County.

BUILDING DEPARTMENT CONTACT INFO

Clark County

360-397-2375 x4078

www.clark.wa.gov/development/building/index.html

City of Battle Ground

360-342-5046

www.cityofbg.org/index.aspx?nid=129

City of Camas

360-817-1561

www.cityofcamas.us/index.php/building

City of La Center

360-263-7665

www.ci.lacenter.wa.us

City of Ridgefield

360-887-3908

www.ci.ridgefield.wa.us/cd/page/building-division-0

City of Vancouver

360-487-7800

www.cityofvancouver.us/ced/page/building-and-permitting-services

City of Washougal

360-835-8501 x605

www.cityofwashougal.us/city-services/community-development2/building-division.html

Town of Yacolt

360-686-3922

www.townofyacolt.com

Have a permit or permit records? Store them here!



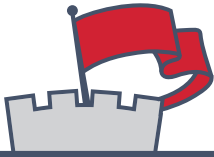
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Conclusion



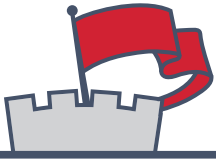
Your Home is One of Your Most Valuable Assets

Your home is one of the most valuable assets in your life. It takes some work, but by following the tips and guidance in this homeowner's manual and performing proper care and maintenance, you can keep your home running and looking like new for a long time. We hope you found this manual to be a useful resource, and we wish you the best in creating a safe, comfortable, and durable home for your family.



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GLOSSARY

Anti-tip Bracket

A bracket that provides protection when excess force or weight is applied to an open oven door.

Arborist

A specialist in the cultivation and care of trees and shrubs.

Carbon Monoxide

A colorless, odorless, poisonous gas that is produced by the incomplete burning of various fuels including wood, oil, kerosene, propane, natural gas, charcoal, and coal.

Combustion Appliances

Appliances such as boilers, furnaces, and water heaters that can potentially produce carbon monoxide.

Crawl Space

An area of limited height under a floor, giving access to plumbing, wiring, storage, etc.

Downspout

A pipe that guides rain water from a roof or gutter to the ground or to a drain.

Duct

Any tube, canal, pipe, or conduit in which a fluid, air, or other substance is conducted or conveyed.

Drip Irrigation

The controlled delivery of water directly to individual plants through a network of tubes or pipes.

Easement

An easement is a non-possessory right to use and/or enter onto the real property of another without possessing it.

Efficiency

The ability to accomplish something with the least waste of time, effort, resources, etc.

Expansion Tank

A tank used to protect closed (not open to atmospheric pressure) water heating systems and domestic hot water systems from excessive pressure.

Fire Separation Wall

A construction assembly that acts as a barrier against the spread of fire.

Flashing

A thin layer of waterproof material used to prevent water penetration or direct the flow of water.

Foundation

The prepared ground or base on which structures rest.

Green Cleaning

Cleaning methods and products with environmentally-friendly ingredients and procedures which are designed to preserve human health and environmental quality.

Header

A framing member that crosses and supports the ends of joists, studs, or rafters to transfer the weight to parallel joists, studs, or rafters.

Hearth

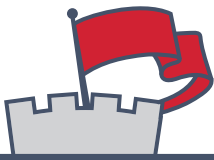
The floor of a fireplace that often extends a short distance into the room.

Household Hazardous Waste

Products, such as paints, cleaners, oils, batteries, and pesticides, which contain potentially hazardous ingredients and require special disposal methods.

Incentives

A reward offered for increased productivity.



GLOSSARY

Indoor Air Quality

The air quality in and around buildings and structures as it relates to the health and comfort of building occupants.

Insulation

Material used to prevent or reduce the leakage of heat.

Long-term Livability

A home's ability to be lived in for a long period of time.

Mosquito Dunks

Small disks containing beneficial bacteria that eat mosquito larva.

Out-Building

A small shed kept on the property to store household hazardous waste or any other items.

Phosphate

A salt of phosphoric acid which is frequently used in fertilizers and is harmful for the environment.

Pressure Relief Valve

A valve used to control or limit the pressure in a system or vessel.

Radon

A cancer-causing radioactive gas that can be present in soil, rock and ground water.

Rain Barrels

A system that collects and stores rain water from your roof, which would otherwise be lost to runoff, and diverts it to storm drains and streams.

Rain Gardens

A garden which takes advantage of rainfall and storm water runoff in its design and plant selection.

Range Hood Vents

A hooded vent that hangs above the stove or cook-top and removes airborne grease, combustion products, fumes, smoke, odors, heat, and steam from the air by evacuating and filtering the air.

Seismic Strapping

A strap to secure appliances in case of an earthquake.

Set-back

The distance which a building or structure is set back from a street, road, river, stream, shore, flood plain, or other place that is deemed to need protection.

Sharps

Medical waste such as hypodermic needles and syringes.

Siding

A variety of weatherproof materials used to cover the exposed side of a framed building.

Splash Blocks

A splash block takes the roof water from a downspout and forces it away from a home's foundation.

Spot Ventilation

Fans that reduce concentration of moisture or pollutants in a living space.

Storm Water Disbursement

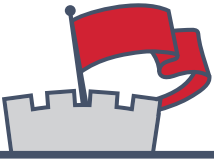
Storm Water being guided into various directions when accumulated.

Storm Water Infiltration

Capturing storm water and temporarily storing it to allow the water to filter into the soil.

Swale

A low place in a tract of land, usually moist and often having vegetation.



GLOSSARY

Trusses

A framework consisting of rafters, posts and struts, which support a roof or other structure.

Vacuum Faucet

A device intended to prevent water being fed into the faucet from getting back into the portable water supply.

Vapor Barrier

A layer of plastic film that protects insulation by preventing the transmission of moisture from the interior environment.

Volatile Organic Compounds

Chemical-filled gases emitted from certain solids or liquids that give long-term adverse health effects.

Water Conservation

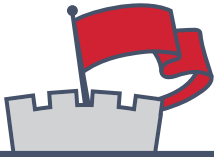
The careful utilization of water in order to prevent depletion.

Water Quality

The chemical, biological and radiological characteristics of water that result in the overall quality of a body of water.

Weather Stripping

A narrow strip of metal, wood, or rubber placed between a door, or window, and the opening that prevents the elements from entering a room.



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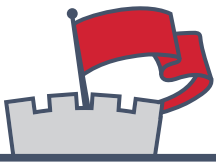
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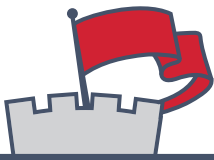
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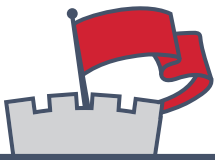
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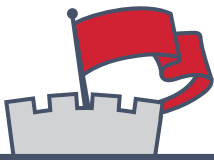
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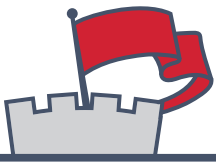
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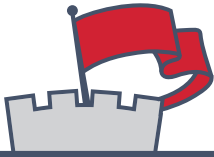
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