

# Winterizing Your Home

## Indoor

Although, the danger of pipes bursting inside during a freeze is less likely than outside, there are a number of ways to reduce energy loss, saving money on your electricity bill.

### Water Pipes

Wrapping your hot water pipes will allow you to lower the temperature on the water heater by 10 degrees without feeling the difference. It will also save up to 5% on your electricity bill. Keep it up year around to see your savings last.

Materials:

- Utility knife or scissors
  - Marker
  - Tape measurer
  - Formed Pipe Insulation
  - Silver Tape
1. Measure the diameter of the water pipes. If you are only wrapping the hot water pipes, locate them and measure from there. Be careful as the pipes may be hot.
  2. Match up the size of the pipe with the size of the inside hole of the insulation at the hardware store.
  3. When you get home, turn off the water to the pipe. You may be able to do this at the water heater or at the backflow located outside.
  4. Measure the length of the pipe. Cut the insulation to the correct size and wrap around the pipe. Leave at least 3 feet of unwrapped pipe about the hot water heater to avoid fire hazards.
  5. Secure with the silver tape if needed and turn the water back on.

What if you run out of time? If a cold snap is upon you and you can't get to the store, open the cabinets below the sinks to let warmer air from the house circulate around pipes. You can also wrap the pipes in newspaper until it is ¼" thick or a towel.

## Thawing

If you have reduced or no water coming from the pipes, they could be frozen.

- If your pipes have burst, find the main shut off valve in the house.
- Open a faucet near the leak slightly to allow the pipe to drain as it thaws.
- Apply hot air from a hair dryer, heating pad or other heat source (DO NOT use electrical appliances in standing water and never use hot water or an open flame on frozen metal)

## Doors

An un-weatherized door is an energy vampire. Exterior doors can suck as much as 45% of your electricity use. It's also important to change the weather stripping out when it gets old. Remember, if you can see light, you're losing heat and air conditioning.

### Weather stripping around the door:

Materials:

- Weather Stripping – Tin for outside, plastic for inside
  - Gloves
  - Tape measurer
  - Screwdriver (electric if you have it)
  - Scissors, utility knife, or Tin clippers
  - Hammer and small crowbar in case there is old weather stripping.
  - Screws (normally come in the weather stripping kits)
1. Remove any old weather stripping around the door.
  2. Measure the door and cut new weather stripping if needed.
  3. Place the weather stripping on the outside of the house along the door frame where the door opens.
  4. Press it firmly against the door frame and screw it into place, leaving the screws loose. Test the door to make sure it closes tightly against the weather stripping. If there is a gap, unscrew and move the stripping closer to the door.
  5. Repeat on the side with the door jamb.
  6. After both sides are up, measure the top of the door and install the top portion in the same way.
  7. Test the door. If everything lines up properly, finish securing the screws.

## Putting in the door sweep:

Materials:

- Tape measurer
  - Screwdriver (electric if you have it)
  - Hacksaw
  - Screws (normally come in the weather stripping kits)
1. Remove the old door sweep.
  2. Measure the door and cut the new door sweep to the correct size.
  3. Fit the door sweep in place. If you are working alone, duct taping the door sweep to the door can help hold it in place as you screw it in.
  4. Screw both of the end screws first. Check the door to make sure it closes. If it does, screw the rest in and you are done.

## Windows

Windows are another energy vampire. Air leaks around windows can easily leach that warm house air you paid to heat. Leaks can also leach out the air conditioning in the summer months, making your electric bill sky rocket.

Materials:

- Scissors
- V-seal tape
- Tape measurer
- Foam weather stripping
- Finishing nails
- Hammer



1. Clean the jamb and sashes with warm soapy water.
2. Install the foam weather seal:
  - a. Measure the bottom sash and cut the weather foam seal. The uncovered side is the sticky side so make sure to keep it clean.
  - b. Stick it firmly to the underside of the bottom sash. When in place, remove the paper back.
3. Install the V-seal weather stripping:
  - a. Measure the height of the lower sash and cut two pieces of the V-seal to 1" more than the length of the window. The extra inch will ensure a tight seal.

- b. Take one of the pieces and fold it along the scored section with the paper backing facing outward. Peel the paper off of one side of the V to reveal the adhesive.
  - c. With the window completely open, and the point of the V facing the outside, work the V-seal between the lower sash and the jamb, inserting the extra inch into the pocket between the raised window and jamb. Make sure the sticky side is against the jamb.
  - d. Fold the free side against the side attached to the jamb like a closed book. Take your finishing nails and nail the V-seal through the two sides and into the inside of the jamb. Make sure to nail them in all the way so the window will not catch. Do the other side.
4. Install the V-seal Weather Stripping on the top sash:
- a. Measure and cut another piece to the length of the top shelf.
  - b. Fold it into a V and remove the backing.
  - c. Place the point of the V down into the sash so the seal is compressed when the window is down and you are done!

## Other Areas

**Ceiling Fans** – Reversing fans keeps the heat circulating and helps you lower your electricity use. Normally you can find a switch at the base of the fan which will reverse the direction of the fan.

**Outlets** – Feel around your outlets. If you feel cold or moving air you may want to insulate.

Materials:

- Foam outlet insulators
  - Flathead screwdriver
1. Go to the electricity breaker and turn off the electricity (Safety First!)
  2. Remove the face plate with the flathead screwdriver
  3. Remove the outlet cut outs from the insulating foam and insert into the uncovered outlet.
  4. Replace the face plate and turn on the electricity.

# Outdoor

## Irrigation

### Hose Bibs

First thing to do is check for leaks. If your hose bib is leaking, go to the hardware store and purchase a new washer. Use a wrench to open up the top part. Inside you will find a small washer. Replace it with the new one. If water is leaking from the handle, purchase a small package of TEF Valve Packing at the hardware store. Open the bib as before and look inside the top piece. Here you will find the old valve packing. Replace that. Now you are ready to winterize your hose bib.

#### Materials:

- Utility knife or scissors
- Wrench (if there is a leak)
- Washers and/or Stem Repair TEF Valve Packing (if there is a leak)
- Formed Pipe Insulation, towel, newspaper
- Silver Tape

1. Shut off water to the hose bib inside the house
2. Unscrew your hose and store it away
3. Open outdoor hose bib to drain any water left in the pipe
4. Keep hose bib open
5. Wrap the hose bib with either a towel or newspaper to ¼ "thickness. If the bib is free-standing consider wrapping it with the same formed foam insulation as the other pipes.
6. Wrap the insulation with silver tape.
7. Keep the water to the outside bib off.

If you feel the need to insulate further, look into getting a Styrofoam hose bib cover from the hardware store.

### System

If there is a big freeze coming, below 15°F, you may want to winterize your irrigation system. Luckily, even during our deep freezes, we in Southern Arizona rarely need to do a full "blowout" of our irrigation systems to properly winterize them. However, during nights with below freezing temperatures, it is advisable to relieve some of the water pressure in the system.

## Materials:

- Screwdriver
- Keys to your irrigation timer box if it is locked
- Formed Pipe Insulation, towel, newspaper
- Silver Tape
- Utility knife or scissors

1. Find the backflow preventer, usually located on the side of the house.
2. Turn the gate valve below the main valve into the off position (See picture below). It is very important that you close this valve to prevent water from moving back into the public system.
3. To relieve the pressure in the valve, turn the top screw on the side 45°. This will cause it to release a little bit of water.
4. To winterize your irrigation lines, open your irrigation timer box.
5. Manually run each zone for about a minute to release the pressure. The pipes don't have to be clear of water.
6. Turn off the timer.
7. Go back to your backflow and turn the last gate valve into the off position. Wrap the exposed pipes using the same method as wrapping indoor pipes.

## Thawing

Frozen underground pipes will require a licensed plumber who can run an electric current or other thawing device along it. If your freezing problem is a continual one, you may want to consider lowering your pipes in the spring below the frost line.