

# Home Winterization

Winterization is the process of preparing a home for the harsh conditions of winter. It is usually performed in the fall before snow and excessive cold have arrived. Winterization protects against damage due to bursting water pipes, and from heat loss due to openings in the building envelope. Inspectors should know how winterization works and be able to pass this information on to their clients

## Plumbing System

Water damage caused by bursting pipes during cold weather can be devastating. A ruptured pipe will release water and not stop until someone shuts off the water. If no one is home to do this, an enormous quantity of water can flood a house and cause thousands of dollars' worth of damage. Even during very small ruptures or ruptures that are stopped quickly, water leakage can result in mold and property damage. Broken water pipes can be costly to repair.



- All exposed water pipes in cold areas, such as attics, garages, and crawlspaces, should be insulated. Foam or fiberglass insulation can be purchased at most hardware stores. Insulation should cover the entirety of a pipe.
- Plastic is more tolerant of cold expansion than copper or steel. Houses in colder climates might benefit from the exclusive use of approved plastic plumbing.
- Water supply for exterior pipes should be shut off from inside the house and then drained.
- Sprinkler systems are particularly vulnerable to cracking due to cold-weather expansion. In addition to turning them, it helps to purge the system of any remaining water with compressed air.
- Homeowners should be aware that much of the plumbing system travels through areas that are significantly colder than the rest of the house. Because it is impossible to monitor the temperature of every portion of the plumbing system, indoor air temperature should be kept high enough throughout the winter to keep pipes in any unheated places from freezing.

## Leaks in the Building Envelope

Leaky window frames, door frames, and electrical outlets can allow warm air to escape into the outdoors.

- Windows that leak will allow cold air into the home. Feeling for drafts with a hand or watching for horizontal smoke from an incense stick are a few easy ways to inspect for leaks. They can be repaired with tape or caulk.
- On a breezy day, a homeowner can walk through the house and find far more leaks than they knew existed. Leaks are most likely in areas where a seam exists between two or more building materials.

## Insulation

- Because hot air rises into the attic, a disproportionately larger amount of heat is lost there than in other parts of the house. Like a winter hat that keeps a head warm, adequate attic insulation will prevent warm indoor air from escaping. Attic insulation should be 12 inches thick in cold climates.
- Storm doors and windows should be installed to insulate the house and protect against bad weather.

## Heating Systems

The heating system is used most during the winter so it's a good idea to make sure that it works before it's desperately needed. The following inspection and maintenance tips can be of some help to homeowners:



- Test the furnace by raising the temperature on the thermostat. If it does not respond to the adjustment quickly it might be broken.
- Replace the air filter if it's dirty.
- If the furnace is equipped with an oil or propane tank, the tank should be full.

## Cooling Systems

- Use a hose to remove leaves and other debris from the outdoor condensing unit, if the home is equipped with one. Protect the unit with a breathable waterproof cover to prevent rusting and freezing of its components.
- Remove and store window air conditioners when they are no longer needed. Cold air can damage their components and enter the house through openings between the air conditioner and the windowpane.
- Ceiling fans can be reversed in order to warm air trapped beneath the ceiling to recirculate. A fan has been reversed if it spins clockwise.

## Chimneys and Fireplaces

- The chimney should be inspected for nesting animals trying to escape the cold. Squirrels and raccoons have been known to enter chimneys for this reason.
- The damper should open and close with ease. Smoke should rise up the chimney when the damper is open. If it doesn't, this means that there is an obstruction in the chimney that must be cleared before the fireplace can be used.
- A chimney-cleaning service professional should clean the chimney if it has not been cleaned for several years.

- The damper should be closed when the fireplace is not in use. An open damper might not be as obvious to the homeowner as an open window, but it can allow a significant amount of warm air to escape.
- Glass doors can be installed in fireplaces and wood stoves to provide an extra layer of insulation.

## **Roofs**

- If debris is left in gutters, it can get wet and freeze, permitting the formation of ice dams that prevent water from draining. This added weight has the potential to cause damage to gutters. Also, trapped water in the gutter can enter the house and lead to the growth of mold. For these reasons, leaves, pine needles, and all other debris must be cleared from gutters. This can be done by hand or with a hose.
- Missing shingles should be replaced.

## **Landscape**

- Patio furniture should be covered.
- If there is a deck, it might need an extra coat of sealer.

Adequate winterization is especially crucial for homes that are left unoccupied during the winter. This sometimes happens when homeowners who own multiple properties leave one home vacant for months at a time while they occupy their summer homes. Foreclosed homes are sometimes left unoccupied, as well. The heat may be shut off in vacant homes in order to save money. Such homes must be winterized in order to prevent catastrophic building damage.

In addition to the information above, InterNACHI advises the following measures to prepare an unoccupied home for the winter:

- Winterize toilets by emptying them completely. Antifreeze can be poured into toilets and other plumbing fixtures.
- Winterize faucets by opening them and leaving them open.
- Water tanks and pumps need to be drained completely.
- Drain all water from indoor and outdoor plumbing.
- Unplug all non-essential electrical appliances, especially the refrigerator. If no electrical appliances are needed, electricity can be shut off at the main breaker.

In summary, home winterization is a collection of preventative measures designed to protect homes against damage caused by cold temperatures. These measures should be performed in the fall, before it gets cold enough for damage to occur. Indoor plumbing is probably the most critical area to consider when preparing a home for winter, although other systems should not be ignored.

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