

# Avoiding Problems with Sump Pumps

## Introduction

If you have a sump pump installed in your home you tend to worry less about accidental water damage. While this is a great benefit, it will only hold true as long as the pump operates when you need it.

In many homes, a sump pump is an integral part of the foundation drainage system so a failure could be catastrophic. Five to seven years is the typical life span of a sump pump, but this will vary based on usage. The pump may fail unexpectedly or be unable to keep up during periods of heavy rain leaving your basement vulnerable to costly water damage.

### What CAU Recommends:

- > Have all sump pumps tested at least annually
- > Have a licensed and insured plumber install a backup system
- > Direct water discharge away from the home, driveway and sidewalks
- > Install an alarm or electronic level control switch for added assurance against failure
- > Plan to replace your sump pump every 5 to 7 years, even if it still operates
- > Review the pump owner's manual and understand how your pump operates
- > If you store items in the basement, store them up off the floor

**DANGER:** Unplug sump pump from power source before handling. Failure to do so could result in severe personal injury or death from touching the pump or discharge piping.

### Need More Information

The devices discussed in this guide are available at plumbing supply houses, home improvement centers and at several on-line outlets. The Sump and Sewage Pump Manufacturer's Association has an interactive troubleshooting guide available at [www.sspma.org/trouble/index.html](http://www.sspma.org/trouble/index.html) as well as other material available for purchase. Associations can also contact CAU's Loss Control Department for additional information.



## Types of Sump Pumps

There are two common types of electric sump pumps that are used for primary water drainage – pedestal and submersible.

Pedestal pumps stand upright in the sump pit with the motor, meant to stay dry, located a few feet above the sump pit. For basements that require frequent water drainage, these pumps are ideal. Pedestal sump pumps tend to be less expensive than submersible pumps, but are noisier.

Submersible pumps work under water and are installed right in the sump pit. These pumps tend to be more expensive than pedestal pumps but are also much quieter. They also have a longer life expectancy because the sealed motor keeps moisture and dirt out.

Both styles of sump pumps operate by a float switch that turns the pump on once the water reaches a certain level in the sump pit. Sump pumps come with a wide range of flow rates so it is important that the pump's rated flow capacity match the expected water drainage requirements. Regardless of which pump style you choose, equip the water discharge pipe with a check valve to prevent water from flowing back into the sump pit and causing the pump to turn on and off more than necessary.

## Backup Systems

If your home is subject to a high water table or is located in an area where frequent flooding or storms cause power outages, investing in a backup system is a wise choice. A back up system can include a back up pump or a secondary means of powering the primary pump during a power failure.

The most common back up system involves installing a second pump, at a higher level, in the sump pit. There are two types of systems available. The first is a rechargeable battery operated pump plugged into the GFCI electrical outlet. The second system uses the home's domestic water pressure to operate a backup pump if power is lost. Both of these pumps can also operate as a secondary pump if the primary pump is unable to keep up with the volume of water.

Another alternative for providing a back up to your sump pump is an emergency generator. If your home has a generator, contract with a licensed and insured electrician to determine if the generator has

a sufficient maximum and rated output to support the electrical load of the sump pump and to connect the sump pump to the emergency generator.

In addition to back up systems, there are a variety of electronic level control switches and pump alarms available for most pump installations. These devices will provide an added assurance against water damage caused by pump failure.

## Periodic Maintenance and Testing

Sump pumps do not usually require a lot of maintenance. However, conducting periodic maintenance and testing is the best way to ensure that the sump pump will operate when required.

Common inspection, maintenance and testing procedures recommended for sump pumps usually include removing debris from the sump pit, operating the pump and verifying that water is discharging outside the home. The owner's manual provided by the manufacturer will list the specific maintenance and testing procedures required for your pump. If you are not comfortable completing these tasks you should contract with a licensed and insured plumber to complete them. You should also contract with a plumber if you have a sealed sump pit that is part of a radon remediation system.

Once the maintenance and testing is complete, make sure to plug in all of the pumps that you have unplugged. If a pump does not operate or other problems arise, contact a licensed plumber to make the necessary repairs.

## Conclusion

A failed sump pump can lead to a catastrophic loss. Compounding this is the fact that water damage resulting from a failed sump pump is typically not a covered loss in many insurance policies. Regular maintenance and testing of your sump pump will help to ensure that the pump operates when it is needed most.

If you need to install or replace a sump pump, be sure to check with your local building code official for any specific installation requirements or permits. Local building codes will require a ground fault circuit interruption (GFCI) outlet on a dedicated circuit as the primary power source for a sump pump. These same codes will also prohibit directing the pump discharge into the municipal sewer system.