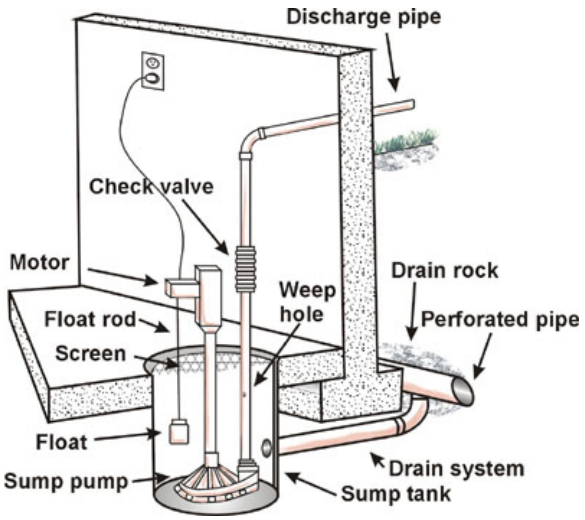
# Loss Prevention Safety Tips

Red River Mutual
LOSS PREVENTION PROGRAM

## SUMP PUMP INSTALLATION

According to recent surveys, over 85% of all homes with basements will experience some form of wet basement problems in their lifetime. In its worst form, flooding of the basement can occur. The good news is that basement flooding is easily remedied with the installation of a sump pit and pump. A sump pump will suction away water that collects in a sump pit via a motorized pump. Sump pumps are easy to install and any do-it-yourselfer with a little motivation can install a sump pump on their own.




**WHAT TO BUY**

Sump pumps are generally sold according to the horsepower rating of the pump motor. You will see 1/4 horsepower, 1/3 horsepower and 1/2 horsepower pumps available. Although the horsepower of the pump is a good "yardstick" to use in judging which size pump to buy, a more accurate way is to look at the gallons per hour (GPH) that the unit is capable of pumping. Generally, choose to buy a larger capacity pump than necessary because it will usually last a lot longer as it doesn't have to work so hard.

Choose a pump with a reliable switch activated by a float. The switch is very important because it tells the pump when to turn on and when to turn off. There are several types of switches available on pumps. Some of the different types of switches you will find are called a 2 pole switch, mercury switch and diaphragm switch. 2 pole switches are recommended as they have proven to be the most reliable over time.

A sump tank is the container below floor level in which the pump is installed, and is sometimes included with your sump pump. If not, buy a 20 gallon to 30 gallon sump tank at your local home improvement store and drill holes in all sides for water to enter.

**INSTALLATION INSTRUCTIONS**

**Step 1 - Prepare the Sump Pit**

First choose a location in the basement where water tends to collect (especially if the floor has a slope). It is also important the location is close to a GFVI (ground fault interrupter outlet). Once content with a location, dig a hole 6” deeper and 10” wider than the sump tank. If the basement floor is cement, a jackhammer will be needed to dig the hole. Ask for a shovel bit when you rent the jackhammer as it will make quick work of digging out the hole in which you will install your sump well. Put 6” of gravel into the bottom of the hole and place the tank into the hole, on top of the gravel. Pour more gravel around the edges of the hole between the wall of the sump tank and the wall of the hole so that the tank is level. Make sure the lip of the tank is about 2” between the level of the floor. This will allow your sump well and pump to act as a very good floor drain in case of a broken water pipe, leaky hot water tank, etc.

**Step 2 - Attach the Pump**

The next step involves attaching the pipes from the pump to the drainage system. Most pumps come with a 1 1/4" threaded connection for PVC pipe. Get an adapter that converts it to 1 1/2" schedule 40 pipe which is more universal and a lot easier to find fittings for. Next, you'll want to attach a vertical check valve to your piping. The check valve

prevents water already pumped up through the plumbing from draining back down into the sump well when the pump shuts off. These are easily attached with a rubber boots and a screw driver.

Make sure to use pipe cleaner before gluing your pipe fittings together. The pipe cleaner actually softens the plastic and allows the pipe glue to bond better. Check with the instructions on the glue can about how long to wait before pumping water through the newly glued connections.

**Step 3 - Finishing Off**

Once all the pipes are connected, finish off the sump pit with cement where the jackhammer tore into the cement. Then place a sump cover over the tank and plug the sump pump directly into the GFVI outlet. Do not use an extension cord because it will shorten the life of your pump. The electrical outlet should be on a breaker which is the proper size for your pump. Your electrical outlet should also be on its own dedicated circuit breaker to prevent other electrical connections from overloading your breaker. Test the sump system by dumping a bucket of water into the pit to verify everything is working properly.

**BE PREPARED, CHECK YOUR SYSTEM**

Check your sump pump system before it rains at least once in Fall and once in Spring. Use your garden hose or a bucket of water to fill up the sump and make sure the pump starts, runs properly and drains the water like it should, and then switches off.

Also check to ensure that:

- Supply pipes to the sump are clear of clogs and correct if necessary.
- Pump outflow lines flow freely.
- There is no debris in the pit.
- Pump is working and turns on and off properly.

## See more loss prevention tips at www.preventingloss.com