

Sump Pumps

and expansive Colorado soils

Expansive or swelling soils are a common problem in Colorado. Swelling soils contain clay that attract and absorb water. As a result, these soils swell in volume when they get wet and shrink when they dry. This can cause damage that includes cracked and heaved driveways, sidewalks, basement walls, and floors; broken pipes and water lines; and, in some cases, severe damage to house foundations.

The relative increase or decrease in free moving subsurface moisture has a major effect on swelling soil behavior. Subsurface drainage systems, which include sump pumps as an important component, are used to remove excess water away from the foundation and can be effective in reducing swelling soils damage.



Sump System

A sump is typically an enclosed pit that collects water. This water comes from a perimeter drain system and flows to the sump pit by gravity drainage. When water collects in the pit and its monitored levels consistently exceed six-inches, it is recommended that a submersible automatic pump be installed. When in place, the pump removes the collected water through discharge piping to the exterior. A good-quality pump is required that removes even shallow water, because any appreciable build-up of water may infiltrate the surrounding soils and cause localized swelling and heaving.

The pump is equipped with an automatic switch that senses when the water reaches a certain level and turns itself on, clearing most of the water from the pit, and then shutting off once the water drops below a certain level.

Sump Pump Maintenance

Because the sump pump plays a pivotal role in your home's drainage system, the effectiveness of your drainage system is wholly dependent on its smooth operation. At times, sump pump failure does happen, leaving your foundation and basement area vulnerable to costly damage. The best way to avoid this potential malfunction is to closely follow the guidelines laid out in the owner's manual which provides the necessary instructions for proper pump maintenance and operation.

(Continued on page 2)

(Continued from page 1)

Some manufacturers recommend the sump pump be run and tested every two to three months and others recommend that a yearly cleaning program be completed before the rainy season hits.

Below are some tips regarding sump pump maintenance:

- Make sure the pump is plugged directly into a proper ground-fault protected three-prong receptacle. Ideally the receptacle should be installed at least 18-inches above the floor and not more than 6-feet from the pump.
- Remove the pump if possible and check for any corrosion damage or blockage of the pump components.
- Inspect the sump pit and remove any silt or debris.
- Check that the operation of the float, if present, is not restricted.
- Fill the sump pit with water to make sure the pump is working properly.
- Check the drain line from the pump to the termination point on the exterior for any signs of corrosion, damage or leakage; and ensure that the line is properly supported. Go outside to check that the pump is actually discharging water (sometimes the pump will run but it won't pump any water out).
- Listen for any strange noises coming from the motor.
- Add a check valve in the discharge line near the pump if not present.
- Replace the back-up battery (if applicable) every second or third year.

If you follow the above recommendations or maintenance guide given by the manufacturer, your sump pump should operate effectively and last a very long time.

Our homeowner tips are only general guidelines. Since each situation is different, please consult with a specialist regarding your questions or specific issue. More home safety and maintenance information is available online at www.nationalinspection.net.

© 2008 All Rights Reserved, National Inspection Services



www.nationalinspection.net

ESTABLISHED 1976

National Inspection Services

Dave Tokarz, president
Direct: (970) 484-1313
Email: nationalinspect@aol.com

*When it comes to your reputation,
refer National Inspection Services.*

Certified ASHI inspector

