

how to: avoid water in your basement

The primary cause of water in the basement is poor grading outside the house where the slope of the yard grade is toward the house. Detached or failed gutters and down spouts that do not divert water away from the walls of the house also contribute considerably to water problems. The solution to water in the basement problems caused by poor grading is easy to understand but may be costly to implement. But, a solution is necessary.

To identify the problem areas, walk around the house and look for any depressions in the soil. The common places are at down spouts, and the walls close to the house, especially those adjacent to window wells, chimneys and concrete slabs or steps.

When you locate the depressions or low spots, you must remove the soft soils and then create a positive slope away from the house with a dense soil, such as clay. Then bring back the soft soil on top of the clay. Soft soils may include topsoil, sod or mulch. These soils have very high air content and tend to hold water like a sponge. Typical topsoil is approximately 40 percent air.

Also, be sure to remove any sand or stone away from the walls of the house, as water will filter through the sand or gravel, accumulate at the bottom and eventually find an opening in the masonry basement wall.

Regrading addresses the cause of the problem. If landscaping, flower beds or concrete patios or walks have to be replaced, it may not be economically practical to regrade. A generally accepted solution is to install a drainage system with a sump pump in the basement/crawl space to receive water that enters the area. A sump pump will discharge water that enters. However, it does not address the cause of the problem. In addition, the water that enters still causes high humidity, which, in turn affects your comfort level and may cause mold to develop.

In the majority of cases, regrading is less expensive than a drainage system and sump pump because only low areas have to be addressed. Regrading may cost \$10 to \$20 per linear foot if flower beds or shrubs do not inhibit work. And, in most cases, only a portion of the perimeter has to be addressed. Regrading costs may range from a few hundred dollars to address low areas or downspout extensions alone to \$1,500 to \$2,500 to regrade the perimeter for a house that is approximately 42' x 26'.

The drainage system, called a hydrostatic pressure relief system, typically goes around the perimeter of the basement. The cost is generally \$20 to \$30 per linear foot, plus \$400 to \$500 for the sump pump, sump pit, discharge piping and electric outlet. If your home has a 42' x 26' basement, the cost for a French drain may be \$3,000 to \$4,000.

Both procedures can be expensive, but these situations do occur in homes. The cost may not allow you to go to dinner parties with the most expensive dress or jacket, but you will have peace of mind in knowing that John, Jr. will not be ringing your host's phone to tell you he is ankle deep in water.