

Basements May Flood if Drainage Is Poor

No matter where your house is located, your basement could flood during heavy rainfalls if drainage is poor, says Charles Schwab, Iowa State University Extension professor, Ag and Biosystems Engineering.

"If your house is in a floodplain, use dikes, block outlets that might back-up into the basement, waterproof the walls and block windows and doors with sandbags," said Schwab.

During extreme flooding, water pressure can collapse foundation walls. In some cases it might be preferable to allow the basement to flood and equalize water pressure. Contact local authorities to determine the possibility of basement collapse, Schwab said.

To avoid flood problems in the future, home owners can take several steps to improve drainage around the house.

- * Build small diversions or ditches to channel water away from your lot. Various regulations concerning water flow will apply and you must not change the flow in a way that adversely affects your neighbor. Before beginning a project, check with your neighbors and local officials.

- * Use surface inlets to carry water to a surface drain. The drain outlet can empty into street gutters or storm sewers if permitted by local building codes.

- * Grade your yard so that surface water drains away from the house. Often the fill used around a house settles and leaves a low area. This low spot must be filled so water runs away from the house. In the first 10 feet away from the house, the soil should drop a minimum of 6 inches. A minimum grade of 1 foot in 1000 feet generally is adequate after the first 10 feet.

To prevent wood rot, there must be at least eight inches between the soil and the wood siding, Schwab says. The soil directly around the house should be of slow permeability so water does not penetrate near the house. Rock and gravel should not be used on the surface, since they will serve as a conduit for water into the ground.

"Many lots are poorly graded and large amounts of earth will need to be moved. Get professional advice before starting a major grading project," Schwab says.

- * Install roof gutters and downspouts to carry water away from the house. Thousands of gallons of water will fall on the roof during a heavy rain and must be removed quickly from the area around the house. Downspouts can empty into a subsurface drain or be discharged over a grassy area.

"Don't use the same subsurface drain for perimeter tile around the foundation and for the downspout. If the drain capacity is insufficient, excess water will be dumped around the basement footings," Schwab says.

Water from downspouts that empty onto the lawn must be dumped and spread far enough from the house so the water does not enter the basement. On steeply sloping well-drained lawns with no basement water problems, a simple splash block usually will be sufficient. For houses with basement water problems, the water should be dumped at least 5 to 10 feet from the house, Schwab says.

Compliments of Buchanan County Extension
2600 Swan Lake Blvd., Suite A
Independence, IA 50644
(319) 334-7161
(319) 334-6641 (fax)