

# Interior French Drains Can Create New Problems

By Dan Howard



Wet basements are a very common household problem. They can result in mold, odors, and damage to stored personal belongings. They can affect property value and make sale of a property difficult. In a single word, wet basements are "yucky!"

## Interior French Drain Systems SIMPLIFIED

The contractor jack hammers up the floor. He then drills holes in the walls to collect the water running through the foundation walls into a four inch pipe with holes. There is some gravel poured around the pipe. The pipe is then connected to a covered plastic basin with a pump. The pump then sends the water outside of the house through a plastic pipe. The top concrete is then replaced. The customer then writes a very big check and cleans up concrete dust for the next month.

When you leave an opening in the floor to allow water to go down, the gases, mold and radon can come up from those openings. A house acts like a chimney pulling air from low areas into upper areas. That is how radon and other gases that are under a basement floor get into the living area of homes.

In most of these systems, there is a plastic corrugated material installed between the concrete floor and block wall. This is installed to allow water to run into the drain. This is referred to as "egg crate." There are also systems with other materials and shapes that are similarly open.



## Common Problems Created by Open Interior French Drain Systems

**Moisture and mold:** The soil surrounding the pipes and gravel installed under the concrete is always wet. Wet soil will grow mold. The mold spores, odor and evaporating moisture will travel into the house through the opening in the french drain system.

**Radon:** Radon normally enters homes from small cracks and openings in a concrete floor. A french drain system has a big opening along the entire perimeter of the foundation. This opening allows radon to more readily vent into the home. If you already have a radon system installed, a french drain system can pull combustion gases from your appliances back into a home.

**Improper water discharge points:** Installers of all types of systems often take the discharge pipe to outside the basement directly at the foundation edge. This saves installing the extra pipe which would get the water down hill away from the foundation. As a result, the water drains into the wall and then into the drain system. It then gets pumped to the pipe outside the wall and the process starts all over again.

**Damaged footers:** Most contractor web sites, drawings and proposals will show a pipe system that is installed beside a footer. The work with the jack hammer has a different perspective. That person needs to haul broken concrete





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out of the basement and mix and place new concrete. The smaller amount of concrete that is removed from the basement results in less work needed to haul out and replace it. Oopps, the worker often decides to take out the footer.

### Best Advice Before You Buy an Interior French Drain System

First determine if an interior drainage system is even needed. If you can fix the water problem before it enters your home, you will save money and not have the disadvantages of a system. Run downspout drains away from the house. Seal gaps at driveways, patios and sidewalks where they meet house walls. Grade surface water away from the house walls. If water is still entering the basement, then consider a french drain system

A warranty is only as good as the company. Many companies come and go in the dewatering business. A company warranty is not worth the paper it is written on when a company goes out of business. Make sure the warranty is underwritten by an insurance company.

Have a sealed french drain system with an exhaust fan installed, not an open system.

Add a battery backup for the pump. Power most often goes out when it is raining. Guess when you need your system the most?

If you have a radon system in the home, make sure the warranty for the system will still be honored. Confirm that the system will be restored by a certified radon professional. If you have not had a radon test, be prepared that an open french drain system

could increase the radon in your home.

Make sure that the footings will not be disturbed. Many installers remove portions of the footer to reduce the amount of concrete work they need to do. The IRC code specifies minimum footer sizes in section R403.1.

### What to Do If You Already Have the Problems Caused by Open French Drain System

All is not lost, even if you are one of the countless thousands with one of these systems already installed and shaking your head singing a chorus of “A fine time to tell me Lucille.”

Find an independent engineer, contractor or property inspector that understands the systems and solutions to the problems created by a french drain system. Mold, radon, moisture, odor and structural damage are all potential problems that may need resolved. Adding the features of a sealed system can resolve many of the sources of the problems. Additional advice may be needed to resolve the consequences of the original system such as mold and structure defects.

There are new systems that the better contractors now use that are “sealed” systems. What that means is the perimeter of the system is sealed at the lid and walls so that moisture, mold and radon do not vent into the basement. Sealed systems also avoid the issue of combustion gases from hot water tanks, furnaces and gas dryers back venting into the home. You will find links and information about those improved systems in the online copy of this article at: [www.EnviroSpect.info/frenchdrain](http://www.EnviroSpect.info/frenchdrain).

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For more information visit their website at [www.EnviroSpect.com](http://www.EnviroSpect.com)

Email questions to: [Dan@EnviroSpect.com](mailto:Dan@EnviroSpect.com). Like us on Facebook or connect @DanHoward251.



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Kittanning Borough

This beautiful Victorian is just waiting for the right person to continue the days of glory connected with this period house, or just enjoy the décor as it is but plenty of room for families or just a great Bed and Breakfast with all the bedrooms and seating areas offered by this 1885 circa. Prime location in town.

MLS#1014994 \$49,900



Cowanshank Township

Looking for a move in ready 4 bedroom, look no further. This house has lots to offer including a bonus room off of one of the bedrooms. This house has 2 garages, one is in need of some repair but makes great storage. Don't miss out on this one!

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W. Kittanning Borough

Nicely updated 3 bedroom home with living room, dining room and kitchen with appliances. Nestled on a quiet street with a fenced back yard for additional privacy.

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MLS#1009647