

**Residential Flooding:** Some insights and tips on how to protect your home and investment when flooding is unavoidable.

### **Know Your Enemy!**

In your battle to protect your home a wise homeowner will try to learn the principles the enemy operates by. Today our enemy is water. Keep the following in mind when trying to decide what to do.

1. Water relentlessly tries to seek its own level.
2. When seeking its level, water will try to move any obstruction (especially soil), but will take the path of least resistance.
3. Water vapor can cause just as much damage to your home as water in its liquid form.
4. Most homes in this area are built over holes in the ground that we call 'crawl spaces'. If the water table under your home rises high enough, your crawl space can flood even though flood waters may not touch the outside of your home.

If water levels in your area are rising and you're anticipating flooding. We suggest the following:

- ✓ Open your crawl space vents.
- ✓ Check your crawl space for water daily until flooding has subsided. Look for signs of condensation. Start on the north side first. If you are crawling, wear appropriate protective clothing and safety/respiratory gear.
- ✓ If your furnace is under the floor, then plan to use an alternate heat source. Turn off the electricity and/or gas to the furnace.
- ✓ If you are able, then raise and secure your flexible ducting for your heating/cooling system as high off the ground as is possible without kinking the ducting. This will allow the system to move air throughout the home for a longer period of time before the ducting is blocked by water. (If the flexible ducting fills with water, the ducting will need to be replaced in most cases.)

✓

**Besieged by Water!** If the water level outside your home has reached the foundation you should plan on water entering the crawl space. You should resist the urge to pump this water out! By its nature water will try to fill your crawl space (seek its level) equal to the level of the water on the outside of the foundation 24 hours a day for as long as the water level remains high. By trying to pump the water out you may actually be aiding the water as it tries to wash away the soil



supporting your home as the crawl space refills. As long as the water level in the crawl space is equal to the level of water outside your home additional flood water will not try to flow in because the pressure will be equal. A better time to pump water out of the crawl space is when the water level on the outside of the home falls. The photograph attempts to illustrate what can happen to the foundation over time if irrigation water gets too close. In the photo 22 feet of the foundation wall is unsupported where the 3-cell flashlight is resting against the “floating” footing. In essence, the wall has become a bridge!

**Drying out the Crawl Space:** In an attempt to dry out crawl spaces that have been flooded, many homeowners/contractors use fans to dry the area out. This can be a serious miscalculation on the part of the homeowner or contractor. Here's why:

Fans move the air and increase evaporation, which supersaturates the air with water. The saturated air cannot hold more water under natural conditions. Two events will want to happen each day. First, convection wants to move the saturated air from the crawl space through the floor and into the living area and walls, and then out from the attic through the roof venting. Second, water vapor wants to move to the coolest surfaces and condense. This can result in water droplets forming on your floor joists, subfloor, inside your walls and in your attic. This event may be the catalyst for mold growth in your home if these conditions persist.

The safest practice is to draw the air out of the crawl space with suction or negative air pressure. If additional fans are used to circulate the air in the crawl space, then additional suction may be required, because the air in the crawl space may become saturated from increased circulation before negative air pressure can draw it out and replace it with dryer, outside air. If you see condensation, then suction must be increased or evaporation must be decreased.

*It is our hope as professional home inspectors that this information will help you protect and maintain your home. This information applies to any build up of water or water vapor under your home.*

*If you have further questions, you may want to contact a local, certified ASHI (American Society of Home Inspectors) inspector in your area. To find the most current list of local ASHI certified inspectors, please visit our web sites.*

**Our local web site is: [www.idahoashi.com](http://www.idahoashi.com)**

**or visit our professional organizations home page at: [www.ashi.org](http://www.ashi.org)**