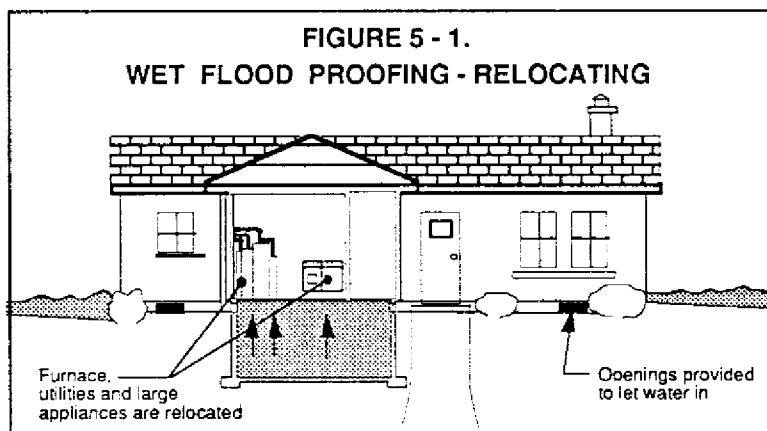


## WET FLOOD PROOFING TECHNIQUES

If all of the previously mentioned techniques are not feasible for you either due to cost or the style/condition of your home, then wet flood proofing may offer some solutions. Wet flood proofing is a technique which includes the modification of a structure and its utilities and contents to allow flood waters to flow inside of the home while ensuring that there is minimal damage to the building and contents. No credit is available from the National Flood Insurance Program to lower flood insurance premiums if this option is chosen. Building permits will be required when relocating gas or electrical utilities.

Care must be taken to raise furniture/contents above the anticipated flood level. Foodstuffs, paper goods, drugs, clothing, cleaning supplies, hazardous material, and other chemicals should be stored on shelves or on higher floors. Small portable items and lightweight furnishings can be easily moved to higher elevations prior to flooding. Appliances such as refrigerators,

ovens, washers and dryers can be raised on pads above shallow flooding depths. A fuse or circuit breaker box located in the basement is particularly dangerous and should be relocated if possible. Electrical outlets should be relocated above



expected flood levels, or a separate circuit should be installed whereby power to them can be shut off prior to a flood. Gas should be shut off at the meter prior to flooding.



**Water heater elevated on platform**

It is also prudent to protect those things in your home which are not possible to move. Furnaces and water heaters can be protected by building small floodwalls around them or raising on elevated platforms. Equipment can be covered with water-proof plastic bags or sheets and taped tightly with duct tape. Another method is to coat the equipment with protective grease.

### Why Wet Flood Proofing?

Wet flood proofing is generally appropriate in cases where an

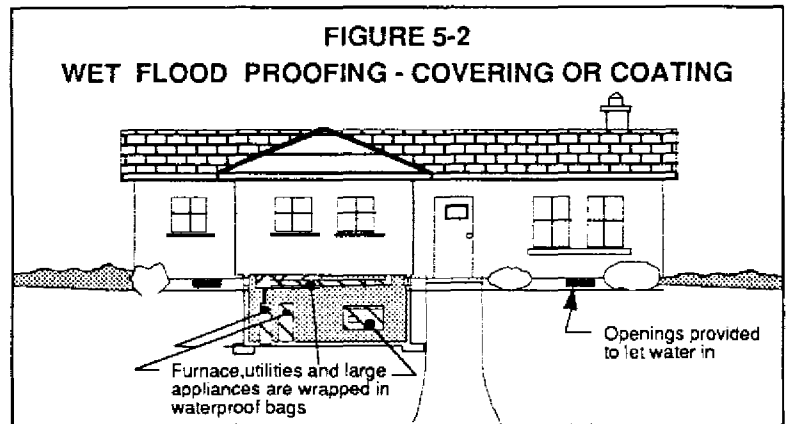
area is available above flood levels to which damageable items can be relocated or temporarily stored, or raised on elevated platforms.

### Advantages of Wet Flood Proofing

- No matter how small the effort, some wet flood proofing will reduce flood damage to your home and its contents.
- This technique can be done on a per item basis, thus reducing the cost and allowing selective protection of high-value contents.
- A home can continue to be used at its existing site.
- Loads placed on the walls and floors of your home will be greatly reduced because flood waters will enter the building equalizing the pressure on the walls.
- Costs for relocating or storing property after a flood warning, with the exception of basement property, are covered by flood insurance.

### Disadvantages of Wet Flood Proofing

- Those areas flooded will need thorough cleaning to ensure no bacteria or insects have been left by flood waters. This may be minimized by deliberately flooding the area with clean water prior to an imminent flood.
- A potential residual damage to the home and contents not relocated or protected remains.



- Flood insurance is still required.
- Evacuation is still necessary.

### Costs

Compared with the other flood protection measures previously discussed, wet flood proofing is the least costly. Principal costs include labor and equipment to rearrange utility systems, move items, and cleanup mud and water after a flood. Actual costs can vary greatly depending upon the specific



**Air conditioning unit on raised platform**

action taken; however, much of the effort required may be accomplished by the homeowner with little or no costs involved.

## **Conclusions**

With wet flood proofing, water still gets into your home and there is still the anxiety of wondering when a flood will occur. The need to monitor conditions and evacuate continues. In short, if flood levels rise to or above the first floor of a home, wet flood proofing should be considered a temporary strategy to reduce damage until enough money can be saved to protect your home. In many cases, wet flood proofing as a realistic approach to alleviating the hazards posed to your household by flooding offers minimal protection. However, wet flood proofing can be effective when flood waters only enter garages, storage areas, workshops, etc.

## FLOOD INSURANCE PROGRAM

This manual has thus far presented suggestions to reduce flood damage that involve physical alterations to your home. There is also the insurance option. This does not reduce damage but may provide a claim payment which will assist in paying for cleanup and recovery expenses.

Flood insurance is purchased through your property casualty insurance agent as a separate policy from your homeowner's policy. If your agent has no knowledge of flood insurance, then he or she should contact their regional or corporate office. The insurance is made available through the Federal Government's National Flood Insurance Program (NFIP). Any home can be covered by flood insurance whether it is in a floodplain or outside a floodplain, as long as your city, town, or unincorporated county has joined the NFIP. Almost all Virginia communities have done so. If you want to know if your community participates in the NFIP, call the Department of Conservation and Recreation, Bureau of Rivers and Shores at (804) 371-6095.

The average flood insurance policy in Virginia costs about \$350.00 per year for building and contents coverage. Ask your agent for a premium quote. If your home is not located in a floodplain mapped on the NFIP Flood Insurance Rate Maps, then you may purchase a special "Preferred Risk" policy which is less expensive than the standard policy.

With the standard policy, insurance up to \$185,000 for your home and up to \$60,000 for contents is available. The deductible for this policy is \$750 for pre-Flood Insurance Rate Map (FIRM) structures and \$500 for post-FIRM structures which is applied separately to buildings and contents. Specific rates and deductibles can be determined by your insurance agent.

Applicable premiums for homes are based on the elevation of the first floor with respect to the 100-year flood elevation (see example below). The 100-year flood is a statistical concept used to measure the risk of flooding and is used as the flood protection level for the National Flood Insurance Program. It is a flood having a 1% chance of being equalled or exceeded in any given year.

### EXAMPLE: Standard Policy Premium

To purchase insurance for \$80,000 building/\$30,000 contents based on elevation of the lowest floor above or below the Base Flood Elevation, the premiums are listed below:

Elevation	Premium
+2 ft	\$208
+1 ft	\$250
0 ft	\$355
-1 ft	\$1029.50

Note: -2 ft must be forwarded to Washington to be rated at actuarial rates.

The Preferred Risk Policy (PRP) is designed for property located outside the Special Flood Hazard Areas where the flood risk is lower (B, C, or X zones on the FIRM). Once a PRP is purchased, continuous coverage is guaranteed even if there is a subsequent change in the FIRM. PRP insurance for buildings ranges from \$20,000 to \$100,000 and contents range from \$5,000 to \$25,000. The deductible for this policy is \$500 and is applied separately for building and contents coverage. Premiums are flat and vary from \$75 to \$150 (\$25 more if building has a basement). Coverage of \$20,000 for a structure and \$5,000 for contents can be purchased for an annual premium of \$75. Insurance rates change and vary dependent on inflation, new mapping, etc. Quoted figures are as of the date of this publication.

A flood insurance policy only insures against the peril of a flood, defined as a general and temporary condition of partial or complete inundation of normally dry land areas. It will not, for example, cover sewer backup due to high water table where a general condition of flooding is not present. It will not cover rain damage that may be the result of a broken window or roof opening. It will cover, within limits, certain reasonable expenses involved in the removal of contents to a safe place away from the danger of imminent flooding, the placement of sandbags to provide some protection from flooding, and the return of those contents to the insured premises.

If you choose not to purchase flood insurance and your home is subject to basement flooding due to sewer backup during conditions other than general flooding, then consider adding a sewer backup rider to your homeowner's policy.