

A GUIDE TO FLOOD HAZARDS

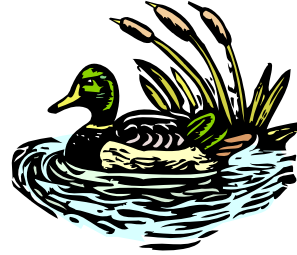


Prepared by the Harford County
Department of Planning and Zoning

NATURAL BENEFITS OF FLOODPLAINS

Floodplains are lands that are subject to periodic flooding from water. Floodplains in their natural state:

- Absorb storm water
- Store floodwaters
- Curb peak flows
- Help protect nearby buildings from flooding
- Maintain water quality
- Provide wildlife corridors
- Recharge ground water sources



Vegetated floodplains function as a **“living filter”** for both surface and sub-surface water running off the surrounding hillsides. This “living filter” can intercept and slow runoff, which will percolate into the ground and provide storage of floodwaters.

MAPPING THE FLOODPLAIN

Floodplains are the areas adjacent to streams, rivers, lakes and the Chesapeake Bay that become covered by water during a storm event. (See map on previous page.) Floodplains are often described in terms of probability. The mapped flood plain is the area expected to be flooded by a storm that has a 1% chance of occurring in any given year.



Flood Zones are identified on Flood Insurance Rate Maps (FIRMS) published by the Federal Emergency Management Agency (FEMA). On the FIRMS are special flood hazard areas that are labeled as Zone A, AE, AO, VE or V. Your insurance agent uses these zones to set rates for flood insurance. All shaded areas on the FIRMS are subject to the federal flood insurance requirement. Current FIRMS are available for review at the Department of Planning and Zoning at 220 South Main Street in Bel Air and County libraries.

THE LOCAL FLOOD HAZARD

Harford County is subject to flooding from four sources:

- 1) Tidal waters and storm surge
- 2) Rivers or streams
- 3) Storm water (urban) drainage problems
- 4) Local drainage problems

Tidal Flooding: The tidal areas in Harford County are subject to flooding from rainfall, tidal changes and storm surges. Hurricanes and nor'easters can cause dramatic changes in tidal water levels.

Riverine Flooding: Riverine Flooding occurs along creeks and rivers from rain or snowmelt. Due to the relatively small drainage areas of the creeks and rivers in the County (with the exception of the Susquehanna River) flooding usually comes quickly during or just after a heavy storm.

Urban Drainage Problems: Storm water flooding occurs anywhere in the County where the storm drains are not large enough to hold all the water from rainstorms, snowmelt and hurricanes. Blocked storm drains have caused flooding in areas that are not near streams or rivers.

Local Drainage Problems: Poor yard drainage occurs throughout Harford County. This is due in part to perched water tables, clay soils, construction in low-lying areas and poor grading. Proper grading allows rainwater to drain away from buildings. Homes with sub-grade basements are more prone to basement flooding, especially if built in wet areas with high water tables.

GUIDE TO WATER FRONT PROPERTY

Before you buy a property near the water, do your research.



- ❖ **Is your home in a floodplain?**
Check the local flood map. Flood Insurance Rate Maps (FIRMS) that depict Special Flood Hazard Areas are available at local planning offices and public libraries.
- ❖ **Do you need flood insurance?**
If your home is in a Special Flood Hazard Area, your mortgage company will require that you purchase flood insurance. Have your real estate agent check the FIRMS. Many times, a lender may not notify you of the flood insurance requirement until a couple of days before settlement.
- ❖ **Will the streets around my house be flooded during a severe storm?**
The shaded areas on the FIRMS show areas that are prone to flooding.
- ❖ **What is the estimated depth of flooding for my building?**
The FIRMS identify base flood elevations for the 1% annual storm. Your local Planning or Public Works officials can help you estimate flooding depths by using local topographic maps and base flood elevations.

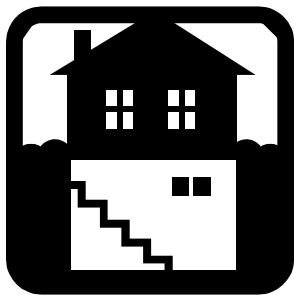
❖ **Evaluate your flood risk.**

Don't accept statements from the present owner or neighbors such as "It has never flooded." While the stream or other body of water may not have flooded recently, it could in the future.

HOW CAN I PREVENT MY BASEMENT FROM FLOODING?

There are several simple measures you can take to reduce or prevent basement flooding.

- Inspect the drainage around your home. Does your patio, porch or deck drain the water away from your home?
- Check the grading along the foundation of your home. Do all areas slope away from the house?
- Look to see if there are cracks in your basement walls that are indicative of water problems. Inadequate drainage along the foundation can lead to damp walls, cracks, leaks and water in the basement.
- Direct rainwater away from the foundation of the building by attaching flexible plastic hosing to the downspouts.
- Clean gutters regularly.
- Maintain your yard and the swales that direct water away from your home.



Who can I call for assistance?

You may call the Harford County Housing Services Division at 410.638.3385 regarding your concerns. Additional numbers are listed on the last page of this booklet.

FLOOD WARNING SYSTEM

Harford County has developed a broad-reaching emergency notification network to keep citizens informed of potential hurricane danger and other natural disasters. The single best way for you to stay informed is to register your cell phone number and email address with the County's Connect-CTY Emergency Notification System. To register for this, please visit www.harfordpublicsafety.org. Our flood warning system disseminates information over the radio and television communications systems.

Because electrical failure is usually associated with flooding, you may not be able to rely on your television set for the latest news on a storm or hurricane. If your television is still working, you may keep abreast of the latest news on road closures, weather reports and flooding dangers for Harford County on Harford Cable Network. The EOC has a direct hook-up to the Harford Cable Network - Comcast (Channel 21), Clearview (Channel 7), Verizon (Channel 31). If you are obtaining information via a radio, please tune into WHFC (FM 91.1)



If you lose electricity, you will need a battery operated radio for up-to-date information.

The Emergency Operations Center

During emergencies, such as hurricanes, the Emergency Operations Center (EOC) is activated to alert citizens to dangerous conditions, evacuations, coordination of emergency transportation and the facilitation of rescue efforts. Modern weather tracking equipment provides up-to-date predictions. The telephone number of the EOC is 410.638.4900. During emergencies the phone line is manned 24 hours a day. Otherwise, their office hours are 8:00 a.m. to 5:00 p.m. The Emergency Information Hotline is 410.838.5800.

WHAT TO DO WHEN A FLOOD WARNING IS ISSUED

1. Turn on a battery operated radio to stay accurately informed. Keep flashlights and candles on hand.
2. Move essential items to the upper floor of your home or business if flooding is imminent. Move your vehicles so they don't get flooded.
3. If your furnace, hot water heater or appliances are at risk for flooding, turn off the gas or electricity.

4. Leave before the building becomes an island surrounded by floodwaters. Find a place to stay until the floodwaters have drained away.
5. Do not walk through floodwaters. Six inches of swiftly moving water can knock you off your feet.
6. Do not drive around road closure signs. The road or bridge may be washed out. Do not attempt to cross a flooded bridge. Two feet of moving water can carry your car away. Drowning is the number one cause of flood deaths. More people drown in their cars than anywhere else.
7. Stay away from power lines and electrical wires. Electrical current can travel through water. Electrocutation is the number two cause of flood deaths.
8. Take photos of your home before, during and after the flood for insurance records.
9. Keep your policies and deeds in a flood-proof place.
10. Report downed power lines:
BGE 1.800.685.0123; Conectiv Power 1.800.375.7117

IF YOUR HOME IS FLOODED....

- ✓ **Look before you step.**
After floodwaters have drained, the ground and floors are covered with debris, including broken bottles and nails. Floors and stairs that have been covered with mud can be very slippery. Watch out for small animals, especially snakes that may have come into your home with the floodwaters. Homeless critters may seek shelter in yours. Use a pole or stick to poke through debris. Turn things over to scare away small animals.
- ✓ **Pump out a flooded basement gradually.**
Pump out about one third of the water per day to avoid structural damage. The water inside the building can actually be holding up the walls by equalizing hydrostatic forces. Pressure on the basement walls from the ground water outside can cause the walls to crack or give way.
- ✓ **Clean everything that got wet.**
Floodwaters are polluted. They pick up sewage and chemicals from storage buildings, roads, farms, businesses, garages, etc. Don't use appliances or motors that have gotten wet until they have been taken apart, cleaned and dried.

- ✓ **When in doubt, throw it out.**
Spoiled food, flooded cosmetics, carpets and medicines can be health hazards.
- ✓ **After a flood, have air ducts cleaned out.**
Hire a professional to ensure removal of mold and mildew.
- ✓ **Use a generator outdoors**
A generator emits carbon monoxide exhaust. These fumes are deadly if trapped inside a home.

REPAIRING YOUR FLOODED HOME

In order to protect your building from future flood damage, evaluate the source of the flooding and what can be done. Consult a professional engineer or architect before proceeding with costly renovations and repairs.



Where repairs and improvements to a building in the floodplain increase its value by more than 50%, the construction is considered “substantial”, and the building must be elevated to the flood protection level which is one foot above base flood elevation.

BUILDING PERMITS

All repairs, additions, reconstruction or other alterations will require a building permit from the Department of Planning and Zoning. Even re-grading or filling in the floodplain requires a permit. The Department is located at 220 South Main Street in Bel Air (410.638.3103). Business hours are 8:00 a.m. until 5:00 p.m., Monday through Friday, except holidays.

FLOOD INSURANCE

Most standard property insurance policies do not cover a property for flood damage, sump pump failure or sewer backup. Water damage caused by flooding from waters that have come into a building from the outside (through a door, window or wall) is only covered through flood insurance. Renters can purchase contents coverage for flooding, even if the owner does not carry flood insurance for the building.

- *What does your homeowner’s insurance policy cover?*
Do you have sump pump failure coverage? Do you have sewer back up insurance? Each company has different amounts of coverage, exclusions and deductibles.

- *Don't wait until the next flood to buy insurance protection.*
There is a 30-day waiting period before National Flood Insurance coverage takes effect, except when the lender requires insurance at settlement.
- *Are the contents of your home insured if there is a flood?*
Coverage for contents is purchased separately from coverage for the building (foundation, furnace and hot water heater). Discuss with your agent the appropriate amount of coverage for you.
- *Do you have emergency telephone numbers readily available?*
Make sure you keep all emergency numbers handy, including your insurance agent's contact information.



HISTORIC FLOOD DAMAGE

Property damage caused by hurricanes in Harford County occurred in June 1972 (Hurricane Agnes), September 1985 (Hurricane David), September 1999 (Hurricane Floyd) and September 2003 (Hurricane Isabel). Storm surge from Isabel ranged six to eight feet above normal levels and approached the 100-year flood levels, causing approximately \$12.5 million in damages in Harford County. While nearby Cecil County experienced catastrophic flooding from Hurricane Floyd, Harford County's damage was not as extensive as the 100-year flood levels were not reached. For Deer Creek and Winters Run, the highest recorded peak flows occurred in August 1933, with the second highest in June 1972 and the third greatest in February 1985. The Susquehanna River reached 100-year flood levels during Hurricane Agnes. There was a terrible hurricane in 1885 that created devastation throughout the region. The 1885 storm was considered the 100-year or 1% annual storm. It has not been equaled or exceeded in 125 years.



FOR MORE INFORMATION CONTACT:

Harford County Department of Planning and Zoning	410.638.3103
City of Aberdeen	410.272.1600
Town of Bel Air	410.638.4540
City of Havre de Grace	410.939.1800
Housing and Building Inspections	410.638.3385
Emergency Operations	410.638.4900
Maryland Department of the Environment Flood Insurance Program	410.537.3000
Federal Emergency Management Agency (FEMA) Region III	215.931.5512
National Flood Insurance Program	1.800.638.6620

WEBSITE

Harford County	www.harfordcountymd.gov
Harford County EOC	www.harfordpublicsafety.org
FEMA	www.fema.gov