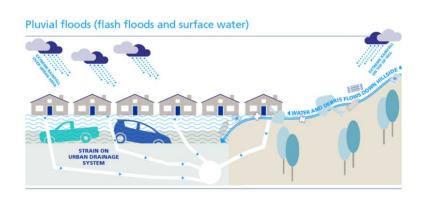
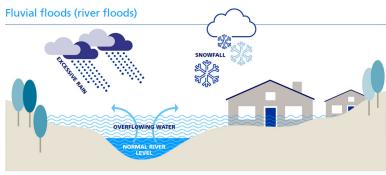
## FLOODING PRINCE GEORGE'S COUNTY

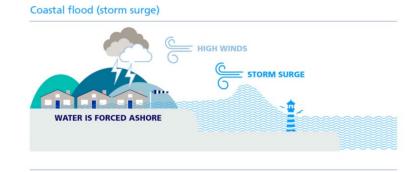
FLOOD RISK MAPPING AND FLOODPLAIN MANAGEMENT

Virtual Town Hall Meeting November 12, 20202

## FLOOD RISKS









## FLOOD RISKS

Riverine Flooding



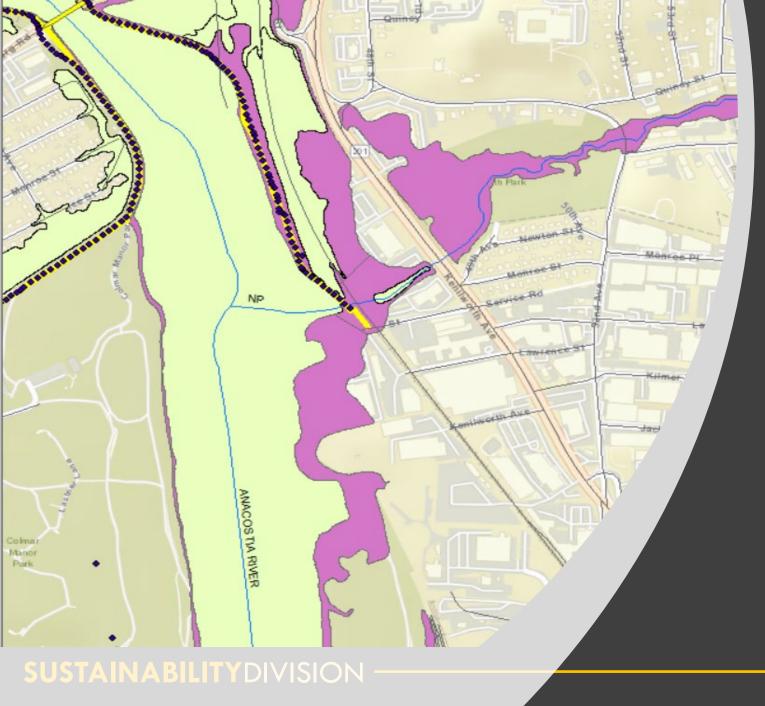
Coastal Flooding



Flash Flooding





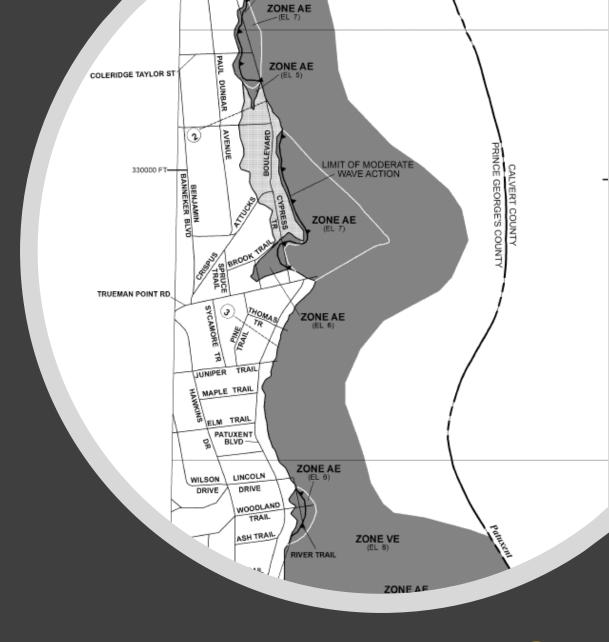


# FLOOD RISK MAPPING RIVERINE FLOODING



## FLOOD RISK MAPPING COASTAL FLOODING

 Lower Patuxent River: FEMA maps flood inundation from wave action in southern Prince George's County







FLOOD RISK
MAPPING
FLASH / SURFACE
WATER FLOODING

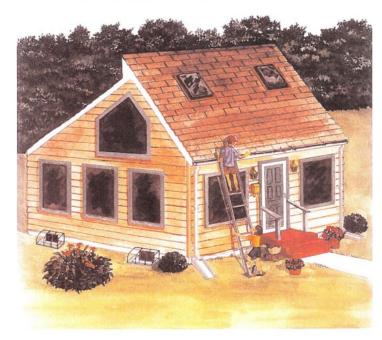




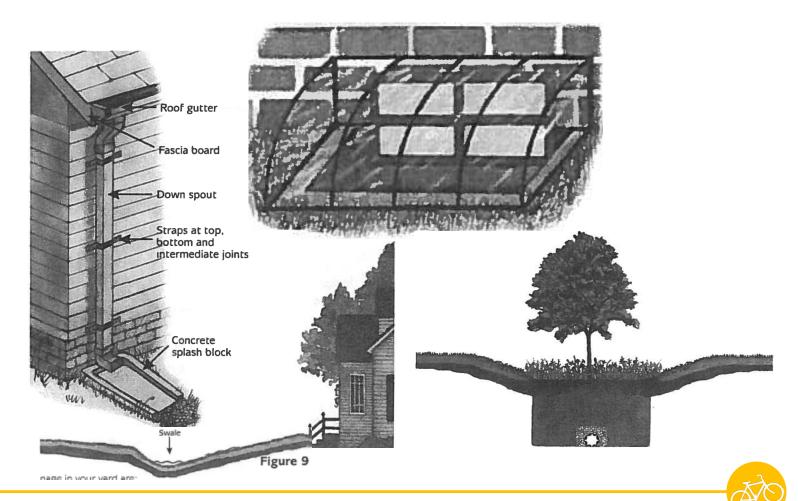
## REDUCE YOUR RISK FOR FLOOD DAMAGE

### Residential Drainage

A HOMEOWNER'S GUIDE TO DRAINAGE PROBLEMS AND SOLUTIONS



Prince George's County Department of the Environment





## CONTACT US

Prince George's County Department of the Environment 1801 McCormick Drive, Suite 500 Largo, Maryland (301) 883-5810





# Flooding, Floodplain Management and Flood Mitigation Techniques

Prince George's County Virtual Town Hall Meeting November 12, 2020

Kevin G. Wagner Community Assistance Program Manager

## **Causes of Flooding**

- Stormwater runoff
  - "Urban flooding"
- High tides/coastal storm event (hurricane, Nor'easter)
  - "Nuisance flooding"
  - King tide
  - Storm surge
  - Sea level rise and land subsidence
- Riverine/flash flood
  - Extreme precipitation
- Other:
  - Water main break
  - Sewer backup







## Nuisance Flooding

"...high tide flooding that causes a public inconvenience."

## **Water Main Break**





**Source:** CBS. (2009, December 17) *Huge Baltimore Water Main Break* [Video] YouTube. <a href="https://www.youtube.com/watch?v=5VVj6el8yMk">https://www.youtube.com/watch?v=5VVj6el8yMk</a>

## National Flood Insurance Program

- Created by the National Flood Insurance Act of 1968 (Hurricane Betsy, 1965)
- Administered by FEMA/DHS
- Participation is voluntary
  - Adopt and enforce regulations
  - Eligible for flood insurance
- Benefits of participation:
  - Flood insurance
  - Grants and loans
  - Disaster assistance
  - Federally-backed mortgages
- Partnership between the Federal government and the "community"
  - Prince George's County and City of Laurel



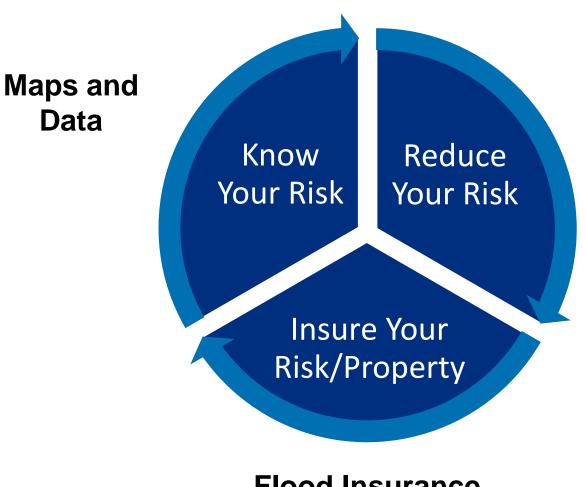
National Flood Insurance Program

Answers to Questions About the NFIP

FEMA F-084 / March 2011



## **Key Components of the NFIP**



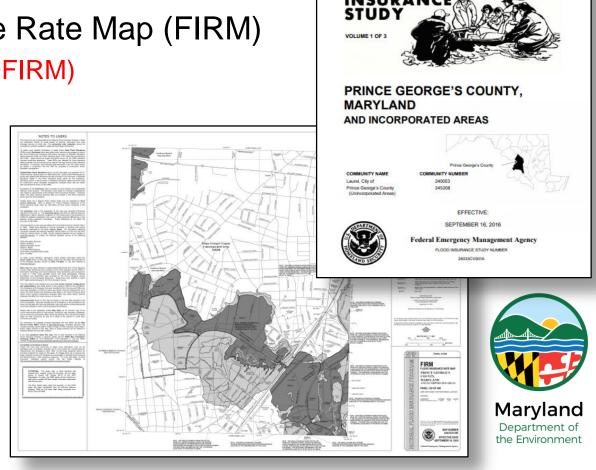
**Floodplain Management & Mitigation** 

Flood Insurance



## **Know Your Risk - Maps and Data**

- Flood Insurance Study (FIS)
- Flood Insurance Rate Map (FIRM)
  - Digital FIRM (DFIRM)
- Community Identified Flood Risk:
  - High water marks
  - Sea level rise projections
  - County floodplain



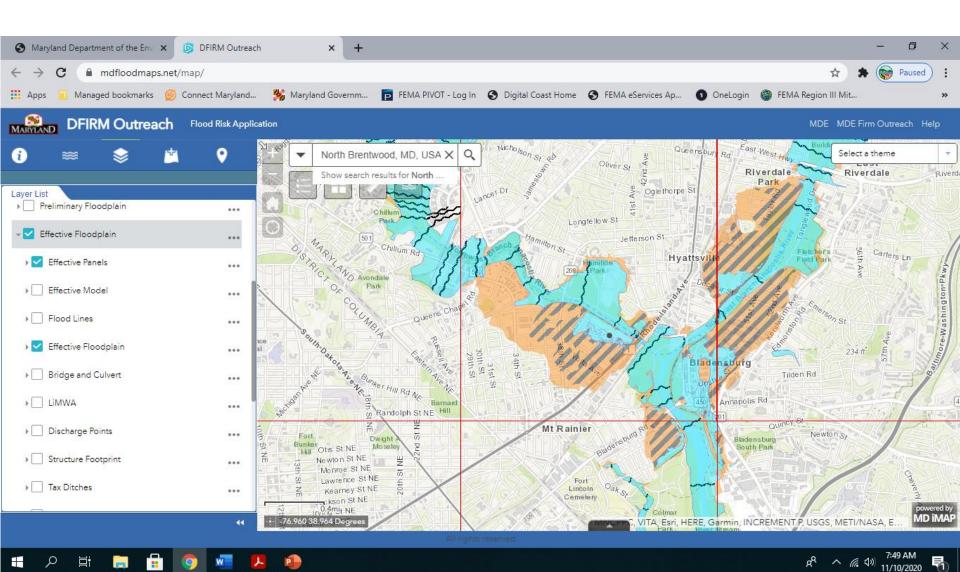
FLOOD

## Flood Insurance Rate Map (FIRM)

- Delineates flood risk based on different recurrence intervals (1% and 0.2% annual chance flood)
  - Floods don't follow map boundaries
- National standard is the 1% annual chance flood (also known as 100-year flood, or special flood hazard area)
  - Flood insurance rating
  - Floodplain management & development review process



# Maryland's Flood Risk Application <a href="https://mdfloodmaps.net/map/">https://mdfloodmaps.net/map/</a>



## **FEMA Flood Map Service Center**

- **Access Products** 
  - FIRMs & FIS
  - LOMCs
  - DFIRM Database
  - Historic Products
  - Flood Risk Products
- Access Tools
  - Make a FIRMette
  - National Flood Hazard Layer (NFHL) Viewer
- Live Mapping Support
  - FEMA Map Information eXchange (FMIX)

FEMA Flood Map Service Center: Welcome!

Looking for a Flood Map? 2

Enter an address, a place, or longitude/latitude coordinates:

Enter an address, a place, or longitude/latitude coordinates

Looking for more than just a current flood map?

Visit **Search All Products** to access the full range of flood risk products for your community.



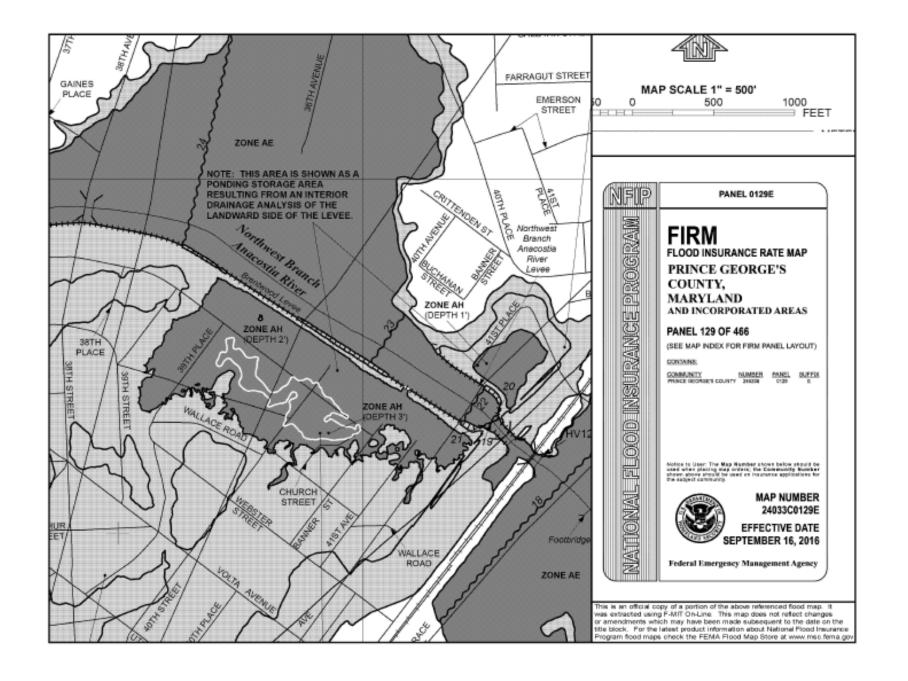
About Flood Map Service Center

The FEMA Flood Map Service Center (MSC) is the official public source for flood hazard information produced in support of the National Flood Insurance Program (NFIP). Use the MSC to find your official flood map, access a range of other flood hazard products, and take advantage of tools for better understanding flood risk.

FEMA flood maps are continually updated through a variety of processes. Effective information that you download or print from this site may change or become superseded by new maps over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet

https://msc.fema.gov





### Flood Risk Zones

Risk	Zone	Recurrence Interval
Low	X (unshaded)	<0.2%
Moderate	X (shaded)	0.2%
High (Riverine/tidal)*	A, AH, AO, AE	1.0%
High (Coastal)*	VE	1.0%

\*Mandatory purchase requirements for flood insurance, and regulatory requirements in high risk areas

Maryland

# Reduce Your Risk – Floodplain Management/Regulations

- Minimum NFIP requirements in the Code of Federal Regulations (CFR)
  - Title 44, Subchapter B, Parts 59-60, § 59.1 & § 60.3(a)-(e)

#### State Laws, Regulations and Executive Orders

- Annotated Code of Maryland, Environment Article
- Code of Maryland Regulations (COMAR)
- Climate Change and "Coast Smart" Construction Executive Order

#### Prince George's County Floodplain Management Ordinance

- Prince George's County Code, Subtitle 32. Water Protection and Grading Code
- Based on Maryland Model Floodplain Management Ordinance
- Higher Regulatory Standards (ex. Freeboard)

#### Building Codes/Maryland Building Performance Standards

- International Codes (I-Codes): International Building Code (IBC), International Residential Code (IRC), etc.
- ASCE 24: Flood Resistant Design and Construction
- ASCE 7: Minimum Design Loads for Building and Other Structures



### **Freeboard**



Source: FEMA Build Back Safer and Stronger Fact Sheet



## Reduce Your Risk - Flood Mitigation

- Use flood damage-resistant materials
- Install flood openings in enclosures
- Install backflow prevention valves
- Elevate HVAC and utilities
- Anchor fuel tanks, extend vent pipe (oil)
- Anchor accessory structures (ex. sheds)
- FRED Floodproof, Relocate, Elevate, Demolish
- Purchase flood insurance!





## Flood Damage-Resistant Materials

#### Acceptable:

- Cement board
- Brick, tile
- Marine grade plywood
- Sprayed polyurethane foam insulation

#### Unacceptable:

- Gypsum board, greenboard
- Carpeting
- Oriented-strand board (OSB)
- Fiberglass insulation

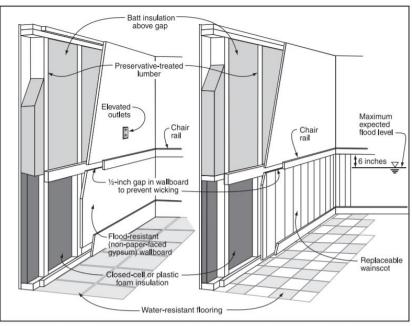


Figure 4. Partial wet floodproofing technique using flood damage-resistant materials for finished wall construction.

#### Fasteners and Connectors

Stainless steel or hot-dip galvanized



Source: NFIP Technical Bulletin 2, Flood Damage-Resistant Materials Requirement

## Flood Openings

- Reduce hydrostatic pressure on walls
- Minimum requirements:
  - Bottom of opening must be within 12" of grade
  - 1 square inch of net open area for every square foot of enclosed area OR use engineered openings
  - On at least two different walls

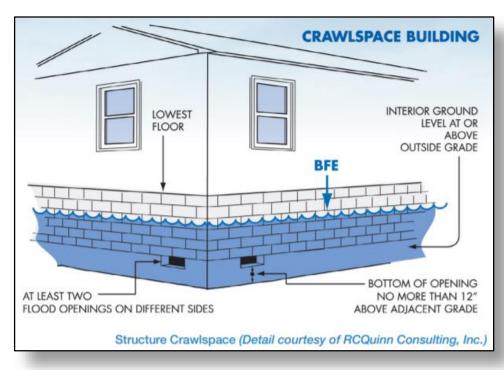






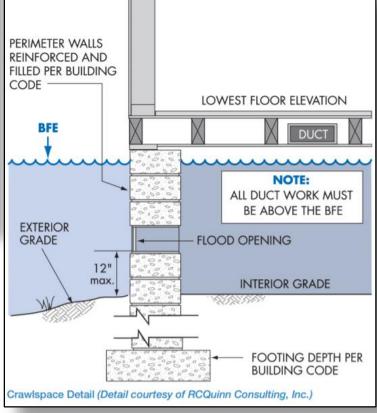


## Flood Openings



Improper flood openings can result in higher flood insurance!

Source: <u>The American Surveyor</u>, Taking the Mystery Out of Flood Openings, Vol. 10 No. 6



### **Backflow Prevention Valve**

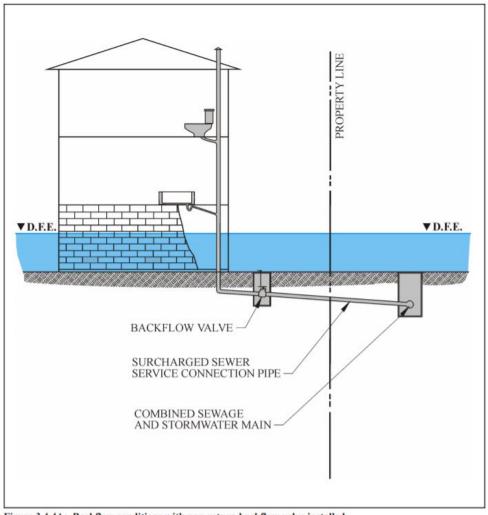


Figure 3.4.4A: Backflow conditions with non-return backflow valve installed

Source: <u>Protecting Building</u>
<u>Utilities From Flood Damage</u>,
<u>FEMA-348, November 1999</u>
(has been revised)

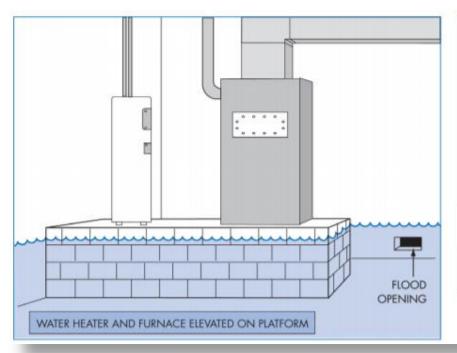


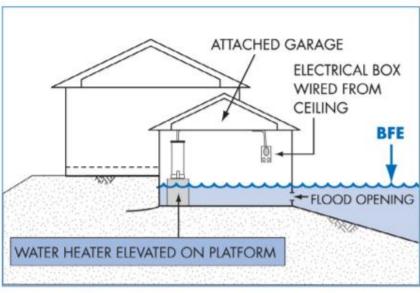
## HVAC Unit & Flood Openings – Dorchester Co.





### **Elevate Utilities**





Elevated Utilities (Detail courtesy of RCQuinn Consulting, Inc.)

#### Non-elevated utilities results in higher flood insurance!

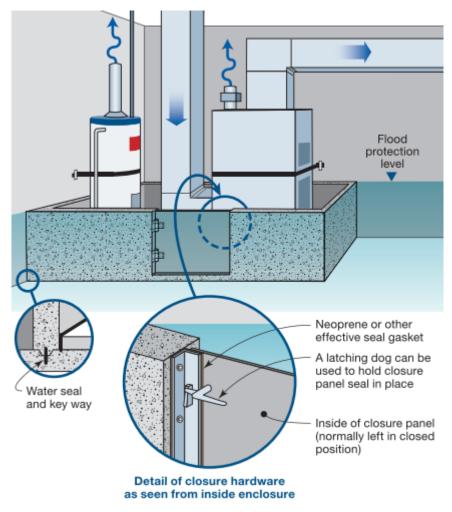


Source: The American Surveyor, Taking the Mystery Out of Flood Openings, Vol. 10

No. 6

Maryland
Department of
the Environment

## **Dry Floodproofing Utilities**

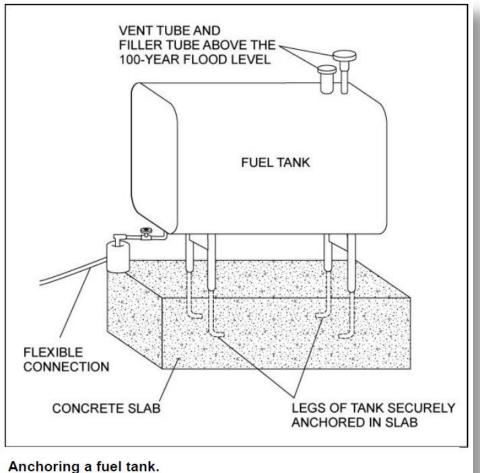




Source: Protecting Building Utility Systems From Flood Damage, FEMA P-348, Edition

2, February 2017

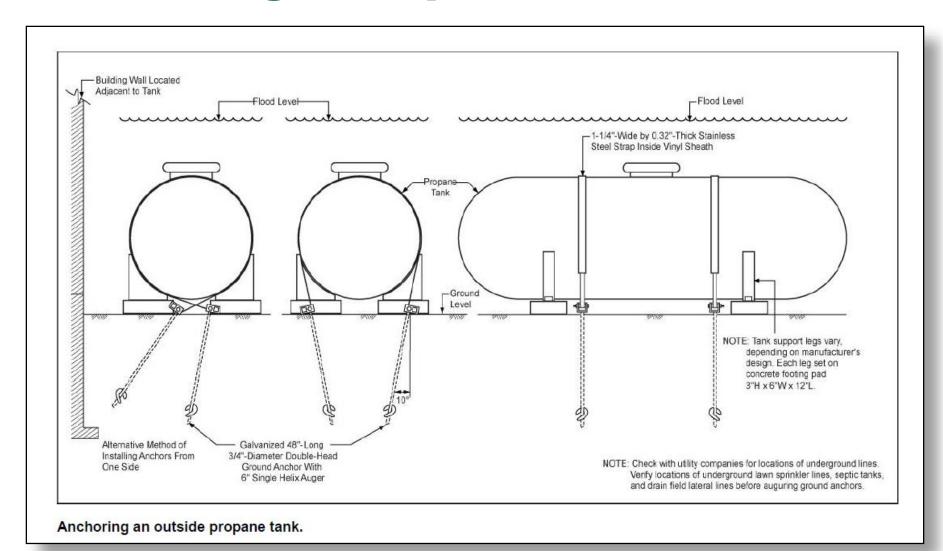
## **Anchoring a Fuel Tank**



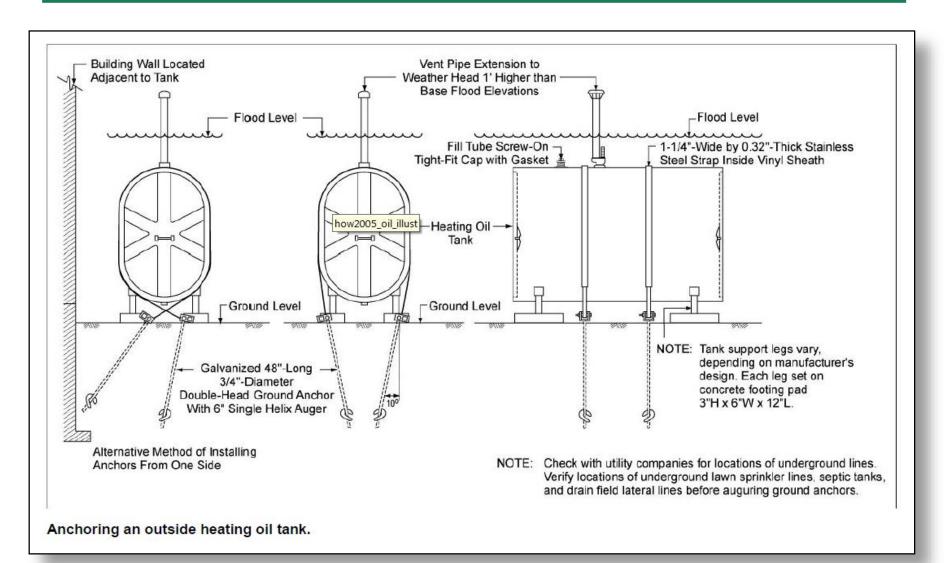


Source: FEMA Anchor Fuel Tanks Fact Sheet, April 2008

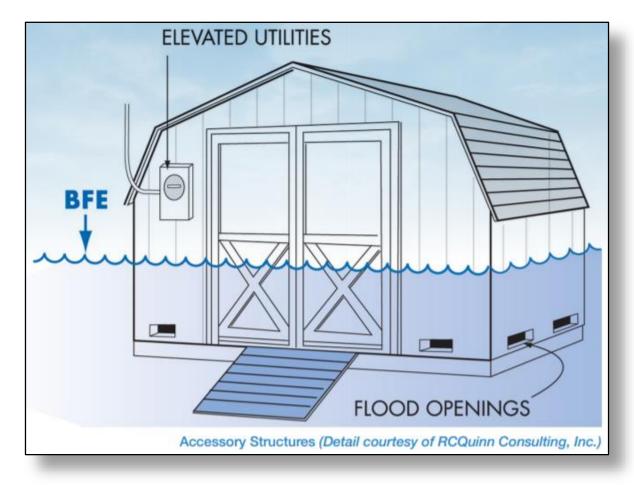
## **Anchoring a Propane Tank – Outside**



## **Anchoring a Heating Oil Tank – Outside**



## **Accessory Structures**





**Source:** The American Surveyor, Taking the Mystery Out of Flood Openings,

Vol. 10 No. 6

# Insure Your Risk/Property – Flood Insurance

- Check with your insurance agent
- Building and contents coverage
- Available to homeowners, business owners and renters within the community
- Homeowners insurance doesn't usually cover flood damage
- Can purchase even if structure is located outside high risk flood hazard area (Preferred Risk Policy)

Marvland

 Mandatory purchase requirement for structures in a high risk area with a federally-backed mortgage

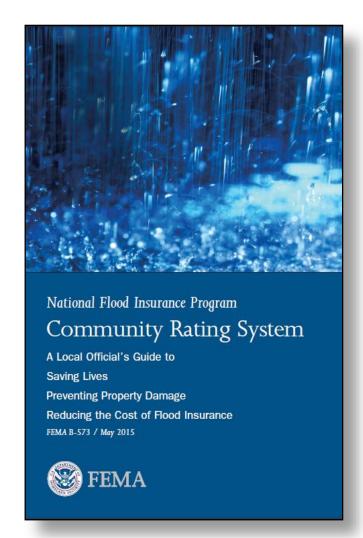
### Flood Insurance

- Flood insurance typically goes into effect 30 days after your purchase.
- Premium is based on several factors:
  - Certain fees and surcharges
  - Year of building construction
  - Building occupancy
  - Number of floors
  - Location of its contents
  - Flood risk (e.g., it's flood zone)
  - Location of the lowest floor in relation to the Base Flood Elevation on the flood map (flood openings will determine)
  - Deductible and amount of building and contents coverage
- A Preferred Risk Policy (PRP) can be purchased for as little as \$325 per year.
- Read the policy. Know what's covered, and what isn't.





# Community Rating System (CRS)



- Voluntary incentive program
- Recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements
- For every 500 points earned, up to a 5% reduction in flood insurance
- Prince George's Co. is a Class 5, and receives up to a 25% reduction!

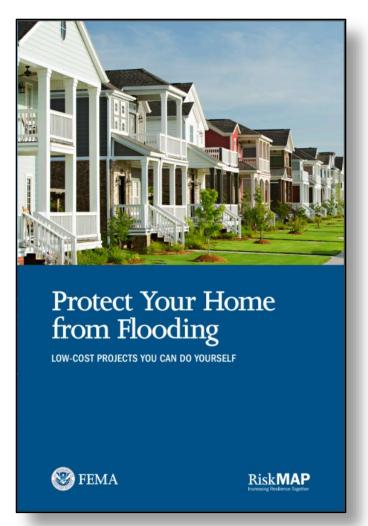
Department of

### **FEMA Publications**

- Protect Your Home from Flooding: Low-Cost Projects You Can Do Yourself
- Mitigation for Homeowners Fact Sheet
- NFIP Technical Bulletins
  - 12 bulletins that provide guidance for complying with the NFIP's building performance requirements
    - TB 1: Requirements for Flood Openings in Foundation Walls and Walls of Enclosures
    - TB 2: Flood Damage-Resistant Materials Requirement
- Homeowner's Guide to Retrofitting
- Protecting Building Utility Systems From Flood Dan



# Protect Your Home from Flooding: Low-Cost Projects You Can Do Yourself



#### OUTSIDE THE HOME

- Install a rain barrel
- Elevate utilities and service equipment
- Anchor outdoor fuel tanks

#### INSIDE THE HOME

- Protect your valuable possessions
- Seal your foundation and basement walls
- Install food vents
- Install a sump pump
- Prevent sewer backups
- Use food-resistant building materials
- Raise electrical system components
- Protect utilities and service equipment
- Anchor indoor fuel tanks
- Install a flood alert system



# Thank you!

#### Kevin G. Wagner

Community Assistance Program Manager Maryland Department of the Environment 240-362-2143 (mobile)

kevin.wagner@maryland.gov







### Prince George's County Town Hall November 12, 2020







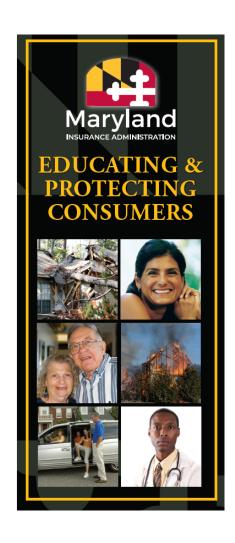
Joy Hatchette, Associate Commissioner Consumer Education and Advocacy Unit <u>joy.hatchette@maryland.gov</u>

#### **Agenda**

- What is the Maryland Insurance Administration?
- Do you have the right automobile coverage?
- Do you have the right homeowners coverage?
- Insurance Preparedness Tips: Know what is not covered



### What is the Maryland Insurance Administration



The Maryland Insurance Administration (MIA) is the state agency that regulates insurance in Maryland. The MIA:

Licenses insurers and insurance producers (agents or brokers).

Examines the business practices of licensees to ensure compliance.

Monitors solvency of insurers.

Reviews/approves insurance policy forms. Reviews insurance rates to ensure rates are not inadequate, excessive or unfairly discriminatory.

Investigates consumer and provider complaints and allegations of fraud.

Maryland

# What is the Maryland Insurance Administration?

If you feel that your insurer or insurance producer acted improperly, you have the right to file a complaint. Examples of improper actions include:

- Improperly denying or delaying payment of all or portions of a claim;
- Improperly terminating your insurance policy;
- Raising your insurance premiums without proper notice;
- Making false statements to you in connection with the sale of insurance or processing of insurance claims; and,
- Overcharging you for services, including premium finance charges.



### Disaster Preparedness

Marylanders in recent years have sustained a significant amount of damage to their homes and personal property as a result of tornadoes, floods and hurricanes.

While you may not be able to control natural disasters, there are steps you can take to lessen the exposure to these types of losses and ensure that you have the appropriate insurance to cover potential damages.





# Do you have the right automobile coverage?

When it comes to auto insurance coverage, **Comprehensive Coverage** provides you the coverage for property damage to your insured vehicle resulting from occurrences other than collision.



➤ Flooding

**≻** Theft

> Vandalism



> Glass breakage not resulting from an accident

➤ A vehicle striking an animal

If you have only liability coverage, your insurer will not pay for the above types of damage or for damage to your vehicle from a collision.



#### Do you have the right homeowners coverage?

Review your policy to determine what is covered and what is excluded. Are the following covered under your current policy?

- windstorm damage
- debris or tree removal
- Water/Sewer Backup
- additional living expenses



#### Do you have enough insurance coverage?

Make sure you have enough coverage to repair or rebuild your home in the event of a disaster.

Ask your insurance producer or insurer about purchasing coverage to protect against inflation.

Notify your insurance producer or insurer if you make improvements or additions to your home to ensure they are covered.

Determine whether you need additional coverage for antiques, collectibles, jewelry, computers, or other expensive items that may not be included in basic contents coverage.



### Do you have the right insurance coverage?

#### **Know the difference between ACV and RCV**

- Actual Cash Value (ACV) is the cost to replace the damaged property with "like kind or quality" minus depreciation for age and use.
- Replacement Cost Value (RCV) is the cost to replace the damaged property with "like kind or quality", at full cost without depreciation, less the amount of your deductible.
- It's important to remember you may not receive the full replacement cost until you actually repair or replace the damaged property.



### Know what you will have to pay

#### Know what your deductibles are.

Some policies have a separate percentage deductible for certain types of events, for example wind.

Some policies have a deductible based on the amount of insurance coverage on your home.

Example: If your dwelling is insured for \$100,000, and your policy has a 2% deductible for certain perils, your deductible would be \$2,000.



#### Be Prepared

- Create an inventory of all your possessions and keep it updated. The NAIC's checklist is available at: <a href="https://www.naic.org/documents/index disaster section i nventory checklist.pdf">https://www.naic.org/documents/index disaster section i nventory checklist.pdf</a>
- Photograph and/or video each room and the exterior of your home.
- Safeguard your records insurance policies, inventory list.
- Keep handy your insurance producer's name, telephone number, and your policy number(s).
- Know how to shut off the gas, electricity and water. Be prepared to board up vulnerable places around the house.





# Insurance Preparedness Tips: Know what is not covered.

Most homeowners, renters, and condo insurance policies exclude the following from coverage:

- ✓ Mudslide
- ✓ Earth Movement
- ✓ Groundwater or seepage
- ✓ Flood



While some private insurers may offer some coverage for flooding as an endorsement to your homeowners, renters, or condominium policy, flood insurance can also be purchased from the National Flood Insurance Program (NFIP). For more information, contact your insurer, insurance producer, or go to the NFIP's website, <a href="https://www.floodsmart.gov">www.floodsmart.gov</a>.



# Water damage and Flooding: Homeowners policies do not cover ALL types of water damage

The terms of your homeowners policy will determine what types of water damage are covered and the amount of coverage available. *Most homeowners policies DO NOT cover flooding*.



#### What is a flood?

The Standard Flood Insurance Policy, which is available from the National Flood Insurance Program (NFIP), defines a flood as:

a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties (at least one of which is your property) from:

- ➤overflow of inland or tidal waters; or
- >unusual and rapid accumulation or runoff of surface waters from any source (rain is a source of surface water); or



#### What is a flood?(continued)

> mudflow (mudflow is defined as, "A river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water);

#### or

➤ collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined above.



# What water damage claims might be covered by your homeowners policy?

- ➤ If you have purchased a water/sewer back-up endorsement, it will pay for the damage done by the water or sewage that backs up into your home (subject to terms, conditions and limits). Many policies **WILL NOT** cover the cost to repair or replace the pipe or drain.
- The scope and amount of the water/sewer coverage will be determined by your homeowners policy.
- ➤ Maryland law requires that your insurance company offer you this type of coverage with the same limits as you have for dwelling coverage and most companies offer several additional coverage limit options.



# What water damage claims might be covered by your homeowners policy?

- ➤ If a pipe in your home suddenly bursts and water flows all over the floors, generally a homeowners policy will cover the damage caused by the water.
- ➤ Generally, the repair or replacement of the pipe itself is not covered.
- If you have a **slow** leak, regardless of when you discover it, most homeowners policies will not cover the damage that results from that leak.
- ➤ Also, it is important that during the winter, you maintain appropriate heat in your home, especially if you are planning on being away from your home. If a pipe bursts due to your failure to maintain appropriate heat, the loss may not be covered by your insurance policy.
- ➤ You should check the terms of your policy to learn more about the scope and amount of coverage that your specific policy provides.



# What water damage claims might be covered by your homeowners policy?

- ➤ If rain enters your home through your roof that has been properly installed and maintained, your homeowners policy will typically cover the damage.
- ➤ If rain enters your doors or windows, this may or may not be covered depending on whether it is surface water and it enters from ground level.



### How do I get coverage for flood damage?

You can purchase a flood insurance policy:

- ➤ from the National Flood Insurance Program (NFIP);
- ➤ in the private market; or
- ➤ through a surplus lines carrier.

Talk with your trusted insurance producer to discuss these options.



#### Facts about flood insurance sold by the NFIP

You can purchase flood insurance at any time. There is usually a 30-day waiting period after premium payment before the policy is effective but there are some exceptions including but not limited to:

- ➤ If the initial purchase of flood insurance is in connection with the making, increasing, extending, or renewing of a loan, there is no waiting period. Coverage becomes effective at the time of the loan.
- The 30-day waiting period may not apply if your property experiences flood damage caused by wildfire in your community.



#### What does flood insurance sold by the NFIP cover?

You can insure residential properties up to \$250,000 for the building, and up to \$100,000 for the contents. Commercial properties can be insured for up to \$500,000 for the building, and up to \$500,000 for the contents.



#### What does flood insurance sold by the NFIP cover?

# There are two types of coverage available under the National Flood Insurance Program:

- ➤ Building property, which includes the insured building and its foundation, insulation, electrical and plumbing systems, built in cabinets, furnace, hot water heater, as well as major kitchen appliances like the refrigerator, stove and a detached garage.
- ➤ Contents coverage for your personal property. (For example, personal belongings such as clothing, furniture, and electronic equipment; curtains; portable and window air conditioners; portable microwave ovens and portable dishwashers.)
- These coverages are purchased separately and carry separate deductibles.







#### Flood Insurance

Basements are any area of a building with a floor that is below ground level on all sides.

#### Basement items COVERED by flood insurance

- Unimproved structural parts (drywall, foundation and utility connections)
- Essential equipment (sump pumps, water tanks, furnaces and air conditioners)
- > Clean-up

#### Basement items NOT COVERED by flood insurance

- ➤ Basement improvements (finished walls, floors or ceilings)
- Personal belongings kept in a basement generally are not covered



#### **Reduce Your Risk**

Decide how to prepare and protect your home from flooding based on your home's flood risk and create a plan to mitigate the risk to your property: <a href="www.ready.gov/make-a-plan">www.ready.gov/make-a-plan</a>

#### **Outside the Home:**

- ✓ Maintain proper water runoff and drainage
- ✓ Improve lot grading
- ✓ Reduce impervious surfaces around your home
- ✓ Install a rain barrel
- ✓ Elevate utilities and service equipment
- ✓ Anchor outdoor fuel tanks



#### **Reduce Your Risk**

#### **Inside the Home:**

- ✓ Protect your valuable possessions
- ✓ Seal your foundation and basement walls
- ✓ Install flood vents
- ✓ Install a sump pump
- ✓ Prevent sewer backups
- √ Use flood-resistant building materials
- ✓ Raise electrical system components
- ✓ Protect utilities and service equipment
- ✓ Install a flood alert system



#### **After A Loss**



- ✓ Contact your insurer promptly after sustaining a loss.
- ✓ Take photographs and/or video of the damaged areas.
- ✓ Make only those repairs necessary to prevent any further damage. Do not make permanent repairs before talking to your insurer.
- ✓ Before you remove any damaged property from the premises, be sure an insurance adjuster or your insurance producer has seen the damage.





- √ Keep all receipts for emergency repairs and for temporary living expenses.
- ✓ As soon as possible, prepare a detailed inventory of all damaged or destroyed property. Give a copy to the insurance adjuster and keep a copy for yourself. It should include:
  - Description and quantity of items.
    - Date and place of purchase
    - Cost estimate to replace.
- ✓ Be present when your insurance adjuster inspects your property.
- ✓ Be cautious in accepting a settlement offer or cashing a settlement check. Cashing a check may bar you from seeking additional compensation later on if it turns out that the settlement offer is inadequate. It is a good idea to confirm in writing that cashing the check will not bar you from seeking additional compensation later.



#### Reminder



- ➤ If your insurer denies any part of your claim, be sure they put the denial in writing and you keep a copy of all the paperwork.
- ➤ You can avoid bad repairs and workmanship by using licensed, reputable contractors. Be sure they secure the appropriate building permits.

Maryland Home Improvement Commission 1-888-218-5925 or 410-230-6309

www.dllr.state.md.us/license/mhic/

- Contact your insurer and claims adjuster any time you find additional damage not previously reported and inspected.
- Insurers consider loss history and claim frequency when making decisions on whether they will insure you, renew your policy and the cost of your policy.



#### **Contact Information**

# Maryland Insurance Administration 800-492-6116 or 410-468-2000

www.insurance.maryland.gov



#### **Questions after the Town Hall? Please contact:**

Ronald Gill, Jr., Director
Prince George's County Department of Emergency Management
CountyEOC@co.pg.md.us

Joy Hatchette, Associate Commissioner, Consumer Education & Advocacy Unit Maryland Insurance Administration joy.hatchette@maryland.gov

Dawn Hawkins-Nixon, Associate Director of the Sustainability Division Prince George's County Department of Environmental Resources DHNixon@co.pg.md.us

Jess Nusbaum, State Individual Assistance Officer and Community Preparedness Coordinator Maryland Emergency Management Agency

<u>Jessica.nusbaum@maryland.gov</u>

Kevin Wagner, Community Assistance Program Manager Maryland Department of the Environment <a href="mailto:kevin.wagner@maryland.gov">kevin.wagner@maryland.gov</a>

Donald Walters, Chief, Claims Branch Federal Emergency Management Agency donald.waters@fema.dhs.gov