

# Maryland's DFIRM Program – Coastal Flood Map Update

Kevin Wagner, MDE

Coast Smart Council Meeting

November 20, 2014



# Topics

- Background
- Mapping
- Regulations/MD Model Ordinance
- Insurance



# National Flood Insurance Program (NFIP)

- Created in 1968
- Administered by FEMA
- Voluntary program
- Partnership between the Federal government and the community (County or municipality)
- Three main parts: mapping, regulations and insurance



National Flood Insurance Program

## Answers to Questions About the NFIP

FEMA F-084 / March 2011



FEMA



# MDE's Role

- State Coordinating Office for the National Flood Insurance Program (NFIP)
  - Provide technical assistance on regulatory requirements
  - Assist communities with public outreach and floodplain management regulation updates
- Cooperating Technical Partner (CTP) with FEMA on flood mapping
- Regulate activities in the 100-year nontidal floodplain
  - Waterway Construction Permit



# Community's Role

- Agreed to adopt and enforce floodplain management regulations
  - Regulations based on Flood Insurance Rate Maps (FIRMs)
- Use FIRMs and Flood Insurance Study (FIS) for “development” review process
- As a participating community in the NFIP, flood insurance available to homeowners, business owners and renters



# MD NFIP Numbers

- 142 participating communities
  - 8 with No Special Flood Hazard Area (NSFHA)
- 72,751 policies
  - 2,234 V-Zone
  - 45,594 A-Zone
- \$16,369,917,500 total coverage

# Flood Insurance Rate Map (FIRM)

- Delineates flood risk based on different frequency flood events
  - **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
  - Local floodplain management & development review process
- Flood Insurance Study (FIS) key piece of information



# Flood Risk Zones

Risk	Zone – Old FIRMs	Zone – New FIRMs
Low	C	X (unshaded)
Moderate	B	X (shaded)
<b>High (Riverine/tidal)*</b>	<b>A, AH, AO, A1-A30</b>	<b>A, AH, AO, AE</b>
<b>High (Coastal)*</b>	<b>V, V1-V30</b>	<b>VE</b>

\*Mandatory purchase requirement for flood insurance, and regulatory requirements



# Limitations of FIRMs

- Doesn't show where all flooding can occur
  - State can regulate beyond the FEMA-mapped floodplain
- Doesn't take into account future conditions
  - Based on current and historical data



# Example of FIRMette

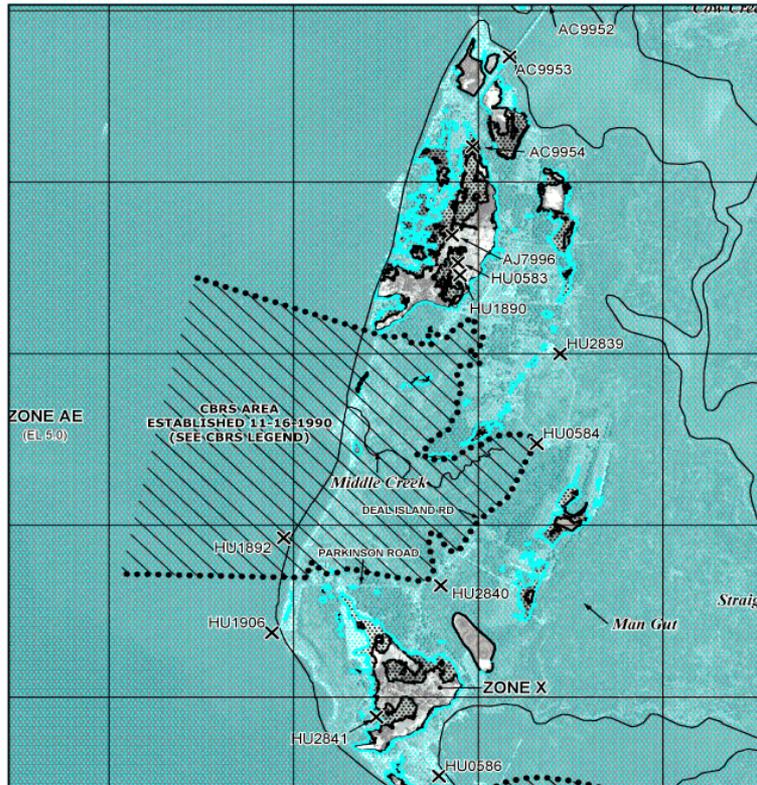
Inbox (2) - kevin.wagner@ x FEMA Flood Map Service x Intranetix Viewer [24039C0 x  
 map1.msc.fema.gov/idms/IntraView.cgi?ROT=0&O\_X=7200&O\_Y=5175&O\_ZM=0.071981&O\_SX=1036&O\_SY=744&O\_DPI=400&O\_TH=39383184&O\_EN=39383184&O\_PG=1&O\_MP=1&CT=0& ☆

Apps For quick access, place your bookmarks here on the bookmarks bar. [Import bookmarks now...](#)



Save your FIRMette

Back



MAP SCALE 1" = 2000'

0 2000 4000 FEET

NFP

PANEL 0125E

**FIRM**  
FLOOD INSURANCE RATE MAP

SOMERSET COUNTY,  
MARYLAND  
AND INCORPORATED AREAS

PANEL 125 OF 500  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SOMERSET COUNTY	24039C	0125	E

NOTE:  
THIS MAP INCLUDES BOUNDARIES OF THE COASTAL BARRIER RESOURCES SYSTEM ESTABLISHED UNDER THE COASTAL BARRIER RESOURCES ACT OF 1962 AND/OR SUBSEQUENT ENACTING LEGISLATION.  
NOTE TO USER: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER  
24039C0125E

EFFECTIVE DATE  
MARCH 03, 2011

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

# Map Modernization

- Modernize flood maps
- Meet GAO guidelines
- Competitive across country (10 Regions)
- Transition to digital products

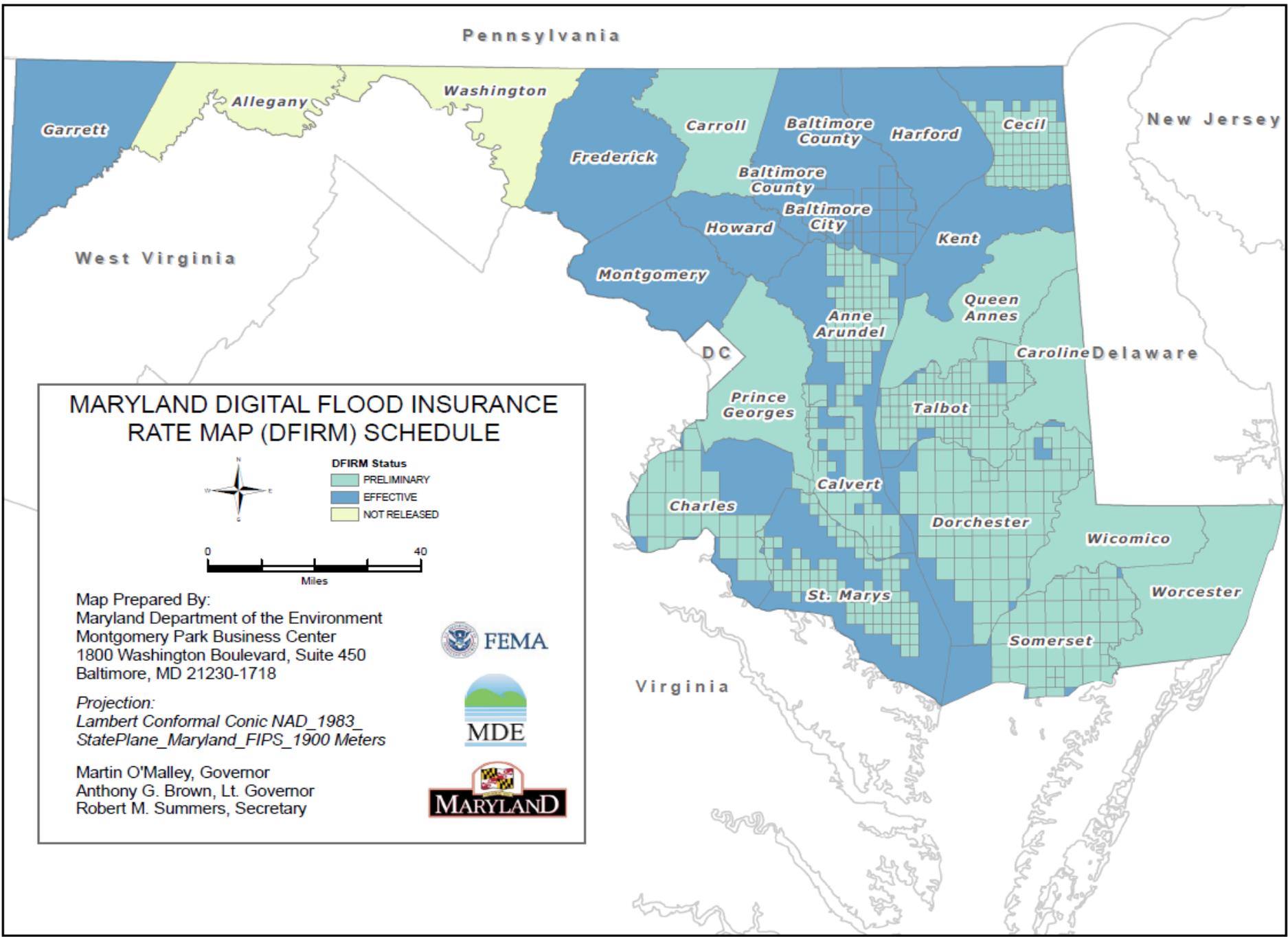


# Digital FIRM (DFIRM)

- Accessible in a variety of digital formats:
  - GIS layers
  - Google Earth
  - PDFs
  - Map viewers, etc.
- Website:

FEMA Map Service Center (MSC)  
[www.msc.fema.gov](http://www.msc.fema.gov)





## MARYLAND DIGITAL FLOOD INSURANCE RATE MAP (DFIRM) SCHEDULE



**DFIRM Status**  
 PRELIMINARY  
 EFFECTIVE  
 NOT RELEASED



Map Prepared By:  
 Maryland Department of the Environment  
 Montgomery Park Business Center  
 1800 Washington Boulevard, Suite 450  
 Baltimore, MD 21230-1718

Projection:  
 Lambert Conformal Conic NAD\_1983  
 StatePlane\_Maryland\_FIPS\_1900 Meters

Martin O'Malley, Governor  
 Anthony G. Brown, Lt. Governor  
 Robert M. Summers, Secretary



# Preliminary FIRM/FIS

- Draft map/study
- Could be used for regulatory purposes
- Websites:

FEMA Risk Assessment, Mapping, and Planning Partners (RAMPP)

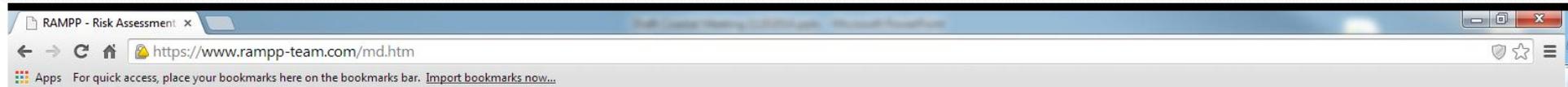
[www.rampp-team.com/md.htm](http://www.rampp-team.com/md.htm)

Maryland DFIRM Outreach Program

[www.mdfloodmaps.com](http://www.mdfloodmaps.com)



# www.rampp-team.com/md.htm



## Maryland - Mapping Status

Please visit [The Maryland DFIRM Outreach Program](#) website for more information on your county.

For more information concerning current coastal analysis and mapping projects that might affect your community, please visit [www.r3coastal.com](#)

### Watershed Projects

To access the materials for the **Conococheague-Opequon**, **Gunpowder-Patapsco**, **Lower Susquehanna**, **Middle-Potomac-Anacostia-Occoquan**, **Middle Potomac-Catoctin**, or **Monocacy** Watershed projects, click [here](#). Projects are listed in alphabetical order by watershed name.

### ALLEGANY COUNTY

#### Digital Flood Insurance Rate Map (DFIRM) Dates

Preliminary Flood Map Release: **04.14.11**  
Appeals Period\*:  
Letter of Final Determination\*: **10.05.15\***  
Final Effective DFIRM: **04.05.16\***

#### Meeting Dates

CCO: **06.13.11**

#### Contacts

FEMA Map Information eXchange (FMIX):  
1-877-336-2627  
Project Planner Molly Kaput: 215-931-5746  
Project Engineer Robert Pierson: 215-931-5650

### ANNE ARUNDEL COUNTY - COASTAL

#### Digital Flood Insurance Rate Map (DFIRM) Dates

Preliminary Flood Map Release: **5.23.13**  
Appeals Period\*: **02.12.14 - 05.12.14**  
Letter of Final Determination\*: **08.18.14**  
Final Effective DFIRM: **02.18.15**

#### Meeting Dates

Flood Risk Review: **03.25.13**  
CCO: **08.06.13**  
Open House: **09.09.14**

#### Contacts

FEMA Map Information eXchange (FMIX):  
1-877-336-2627  
Project Planner Molly Kaput: 215-931-5746  
Project Engineer Robin Danforth: 215-931-5573

### BALTIMORE COUNTY - PHYSICAL MAP REVISION - COASTAL STUDY

#### Preliminary Interactive Flood Map Index

[Flood Insurance Study \(Vol. 1\)](#)

[Flood Insurance Study \(Vol. 2\)](#)

[Allegany County Mapping Fact Sheet](#)

[Ordinance Level Worksheet](#)

#### [Preliminary Interactive Flood Map Index](#) Updated

[Flood Insurance Study \(Vol. 1\)](#)

[Anne Arundel County Mapping Fact Sheet](#)

[Ordinance Level Worksheet](#)

#### [Anne Arundel County, MD Flood Information Portal](#)

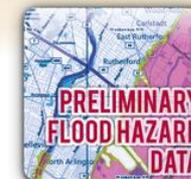
Panels that are currently effective can be found at the [FEMA Map Service Center](#).

### FEMA Region III Maryland

-----September 2014-----

Preliminary maps dated October 1, 2014 and later will no longer be posted to this website. Maps can be accessed at FEMA's Map Service Center by clicking [here](#).

Note: Map availability on the MSC could be delayed several days after the map's preliminary date.



Preliminary data provide the public an early look at their home or community's projected risk to flood hazards. Preliminary data include: new or revised Flood Insurance Rate Maps (FIRMs), Flood Insurance Study (FIS) reports, and FIRM Databases. For more information, visit the [Preliminary Flood Hazard Data](#) webpage.

# www.mdfloodmaps.com

Maryland Department of the Environment

mdfloodmaps.com

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## DFIRM OUTREACH PROGRAM

DIGITAL FLOOD INSURANCE RATE MAPS

HOME HOMEOWNERS/TENANTS COMMUNITIES MORE INFORMATION

### ABOUT DFIRM

FAQs  
Glossary

Participants  
FEMA  
MDE

National Flood Insurance Program  
nrip.gov

FEMA Insurance Information Site  
floodsmart.gov

Maryland DFIRM Release Schedule

### KNOW YOUR RISK

BUCKEYSTOWN PARK

Governor Martin O'Malley  
Lt. Governor Anthony G. Brown

Flood Risk Application  
View Maryland Flood Maps Home

**Flood Risk Beta Application**  
View Maryland Flood Maps Home

#### DFIRM Outreach

The State of Maryland in conjunction with the Federal Emergency Management Agency (FEMA) has been systematically updating Flood Insurance Rate Maps (FIRMs) for communities over the past several years. This site is designed to guide homeowners/renters as well as communities through the process of determining their current flood risk as well as future flood risk based on the preliminary Digital Flood Insurance Rate Maps (DFIRMs).

The DFIRMs are digitally converted flood insurance rates maps that will be compatible with GIS (Geographic Information Systems). The improvements in spatial accuracy provided by the new base map, and the availability of electronic floodplain information should greatly enhance the ability to use the maps for planning, permitting, and insurance applications.

#### Researching Your Future Flood Risk

The DFIRMs are being released on a community by community basis. It is important to investigate your flood risk status and contact your insurance agent to make necessary modifications to your coverage while the maps are still preliminary. The digital files will be available when these maps become effective.

#### Using This Website

To use this website we recommend starting with your area of interest. If you are a homeowner, please visit the HomeOwners/Tenants section. If you are interested in an entire community, please visit the Communities section.

#### Technical Requirements

To use this website it is recommended to use a high speed internet connection with Mozilla Firefox, Google Chrome, or Microsoft Internet Explorer Versions 9.0 or 10.0 (optimal version). Compatibility view needs to be enabled if running Internet Explorer Version 9.0 or higher. Additionally, Adobe Flash Player 10.0 or higher is required.

#### Preliminary Schedule

Washington - January 2015: Riverine  
Allegany - TBD: Riverine

#### Effective Schedule

Queen Anne's - November 2014: Riverine/Coastal  
Calvert - November 2014: Coastal  
St. Mary's - November 2014: Coastal  
Caroline - January 2015: Riverine  
Somerset - February 2015: Coastal  
Anne Arundel - February 2015: Coastal  
Dorchester - March 2015: Coastal  
Cecil - May 2015: Coastal  
Charles - May 2015: Coastal

Floodplain

# Flood Risk Application

Maryland Department of t x DFIRM Outreach x

www.mdfloodmaps.net/dfirmimap/index.html

Apps For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now...

**MARYLAND** DFIRM Outreach **Flood Risk Application** MDE | MDE Firm Outreach | Help

How To Details FAQs Contents

This tool is designed to aid you in researching your flood risk in the state of Maryland.

Content on this site is typically updated with in a 30 days of any maps or data released by FEMA, so please check back as the status of your county may have changed. It is important to investigate your flood risk status and contact your insurance agent to make the necessary modifications to your coverage. A schedule for tentative county effective dates can be found [here](#).

Email questions or comments to [flood.maps@maryland.gov](mailto:flood.maps@maryland.gov)

**How to use the application:**

**Find your address:**  
Enter an address into the "Find a place" box on this page to zoom to the closest match.

- or -

Select the county you are interested in from the "zoom to county" drop down box.

- or -

Select the "X/Y" icon to enter State Plane Meter x and y coordinates and zoom to location.

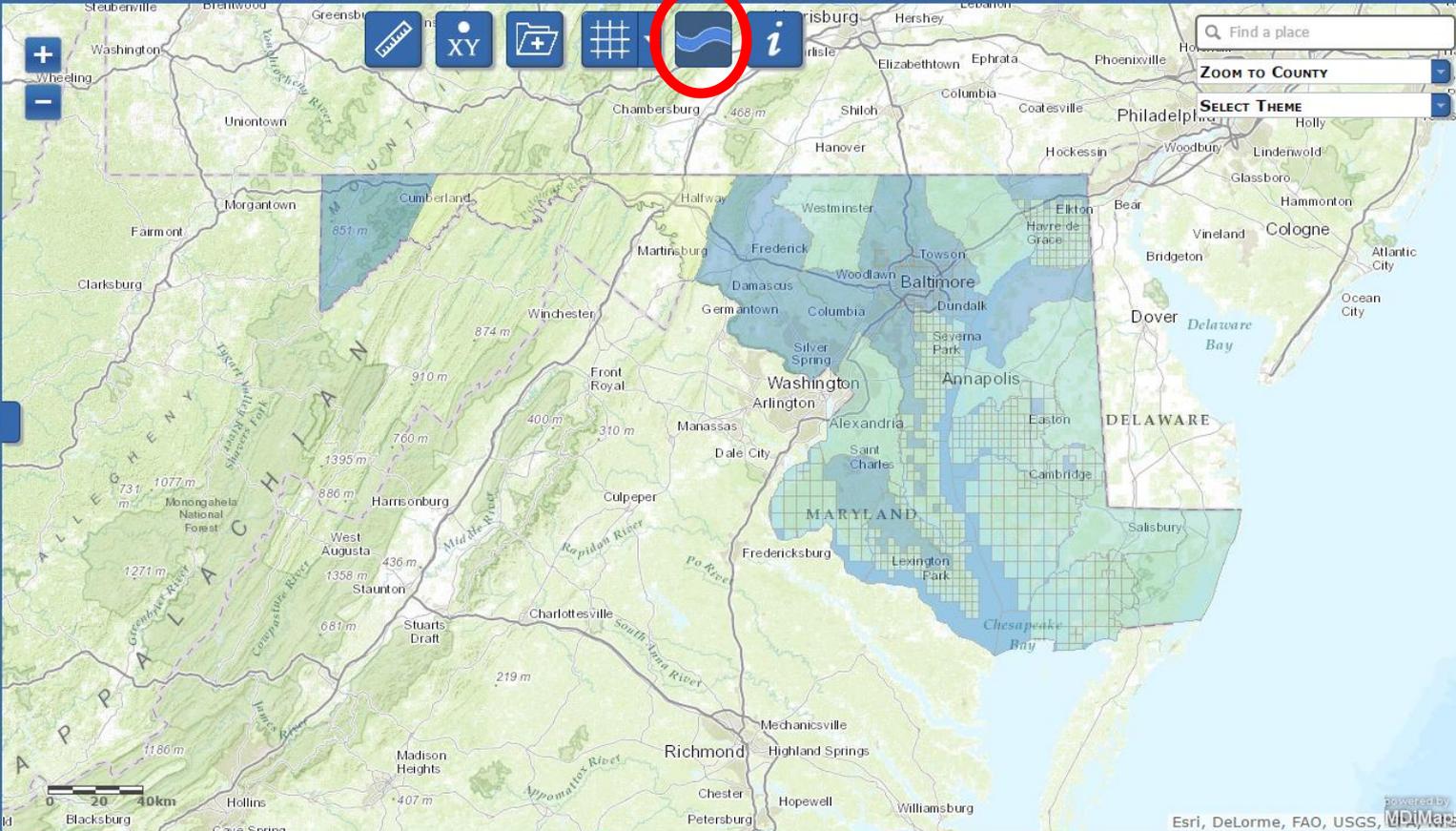
- or -

In or out icons or a scroll mouse may be used for zooming your view

Find a place

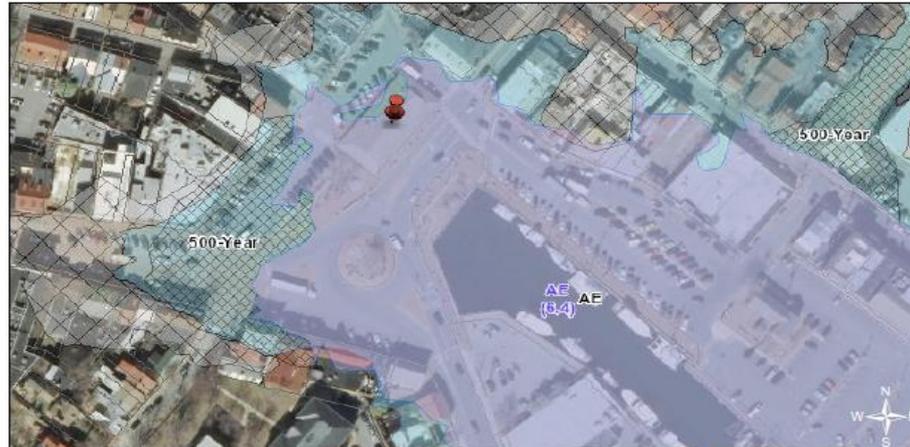
ZOOM TO COUNTY

SELECT THEME



Esri, DeLorme, FAO, USGS, 

## Flood Risk Map



This map is not the official regulatory FIRM or DFIRM. Its purpose is to assist with determining potential flood risk for the selected location.

X/Y: 444439/145683 (State Plane Meters)  
 The selected location on the map is within Zone AE.  
 DFIRM Panel Number: undefined  
 Scheduled Preliminary Release Date: 5/2013  
 Effective/Current FIRM Panel Number: 24003C0251E  
 \*Scheduled DFIRM Effective Date: 2/2015  
 \*Dates are subject to change  
 For information about local floodplain regulations (i.e. local ordinances and building codes), or inquires related to mandatory flood insurance purchase requirements, please contact your community's floodplain management office: 410-263-7720

**Disclaimer:**  
 The Mapping Services provided herein are for reference only. The user of this information understands and acknowledges that the data may be inaccurate or contain errors or omissions and the user assumes full responsibility for any risks or damages resulting from any use of or reliance upon this data. MDE and their Agents or Affiliates do not guarantee the accuracy or reliability of the data generated from this service.

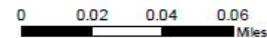
The user of this information should always consult official FEMA flood maps and certified elevation data if there is any doubt of a property's flood risk. Please consult with your local, county, and/or community floodplain administrator for availability of official DFIRMs in your county.



October 31, 2014

### Legend

- XY Location
- Preliminary Riverine Floodplain**
  - 100 Year Floodplain
  - Floodway
  - 500 Year Floodplain
  - Preliminary Riverine Panels
- Preliminary Coastal Floodplain**
  - 100 Year Floodplain
  - Floodway
  - 500 Year Floodplain
  - Preliminary Coastal Panels
- Floodplain**
  - 100 Year Floodplain
  - Floodway
  - 500 Year Floodplain
  - Panels



Data Sources:  
 Preliminary and Effective Floodplain: FEMA  
 FIRM and DFIRM Grid: FEMA  
 High-Resolution Aerial Photography: MD iMap

Map Projection: WGS 1984 Web Mercator Auxiliary Sphere

flood.maps@maryland.gov

# Effective FIRM/FIS

- Effective map/study
- Shall be used for regulatory and insurance purposes
- Websites:

FEMA Map Service Center website

[www.msc.fema.gov](http://www.msc.fema.gov)

Maryland DFIRM Outreach Program website

[www.md floodmaps.com](http://www.md floodmaps.com)



# www.msc.fema.gov

Inbox (2) - kevin.wagner@ x FEMA Flood Map Service x

https://msc.fema.gov/portal

Federal Emergency Management Agency

About Contact Us FAQs Languages

FEMA

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Before, During & After a Disaster

Disaster Survivor Assistance  
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Tools, Teams, Individual & Public Assistance

Topics & Audiences  
Grants, How to Help, Private Sector, Think Tank, Tribal

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News Releases, Social Media, Mobile, Data Feeds

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Need Help ?

## Flood Map Service Center

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Welcome to FEMA's Flood Map Service Center!

Looking for a Flood Map?

Enter an address or a place:  
 Search

[Search All Products](#)

### 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.

Announcements

# Flood Risk Application

Maryland Department of t x DFIRM Outreach x

www.mdfloodmaps.net/dfirmimap/index.html

Apps For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now...

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In or out icons or a scroll mouse may be used for zooming your view

Find a place

ZOOM TO COUNTY

SELECT THEME

# Risk MAP

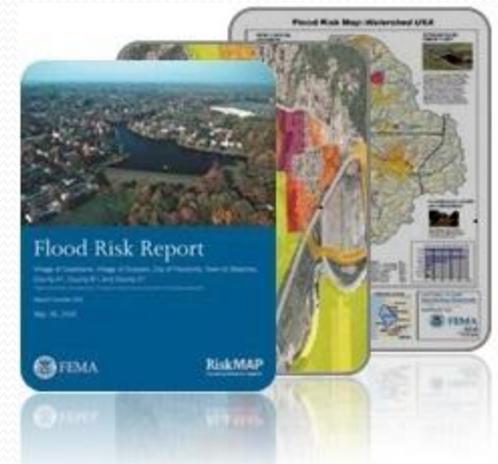
- Risk Mapping, Assessment and Planning



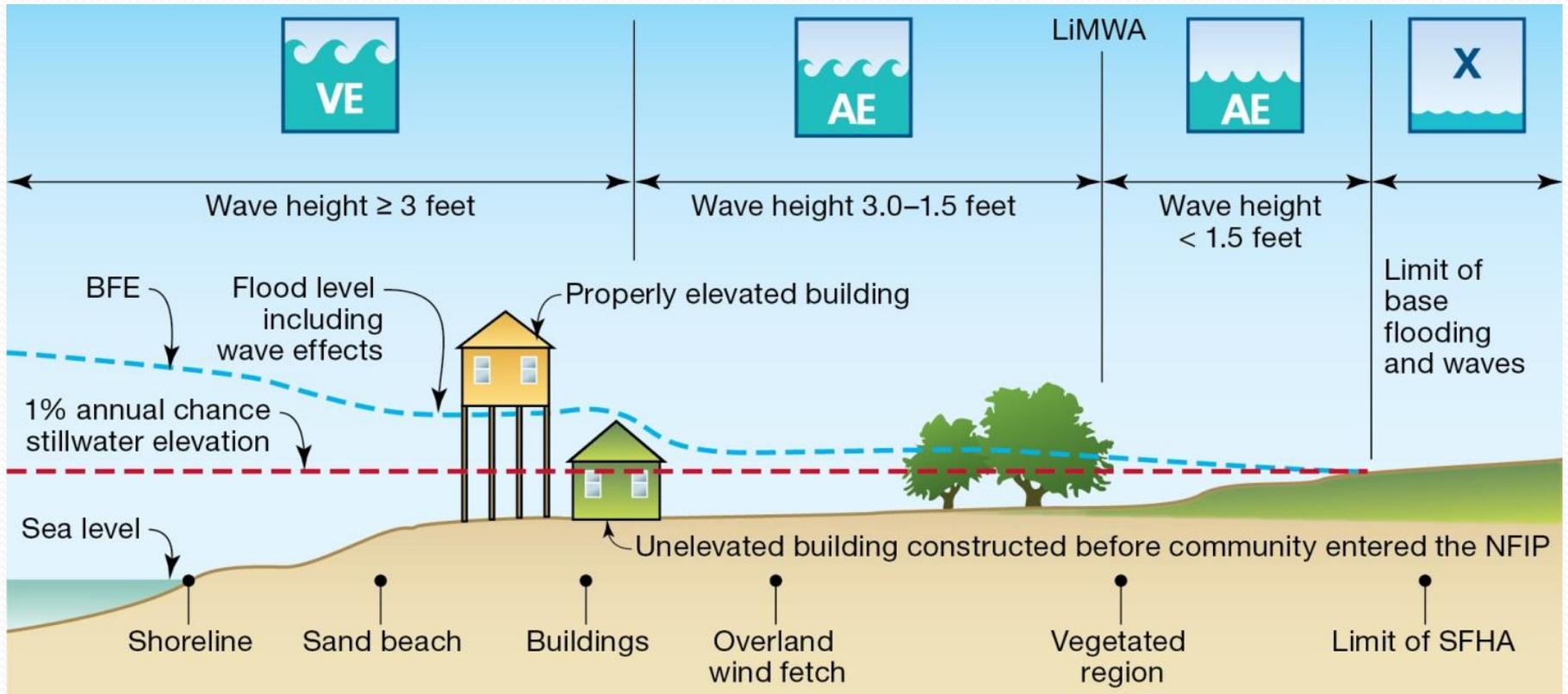
# Coastal Analysis

- New study throughout Region III (MD, DE, VA, PA)
- Affects all tidal and coastal floodplains
- New advisory line on FIRM
  - Limit of Moderate Wave Action (LiMWA)
- Non-regulatory products:
  - Flood Risk Map
  - Flood Risk Report
  - Flood Risk Database (CSLF, depth grids, etc.)
- Website:

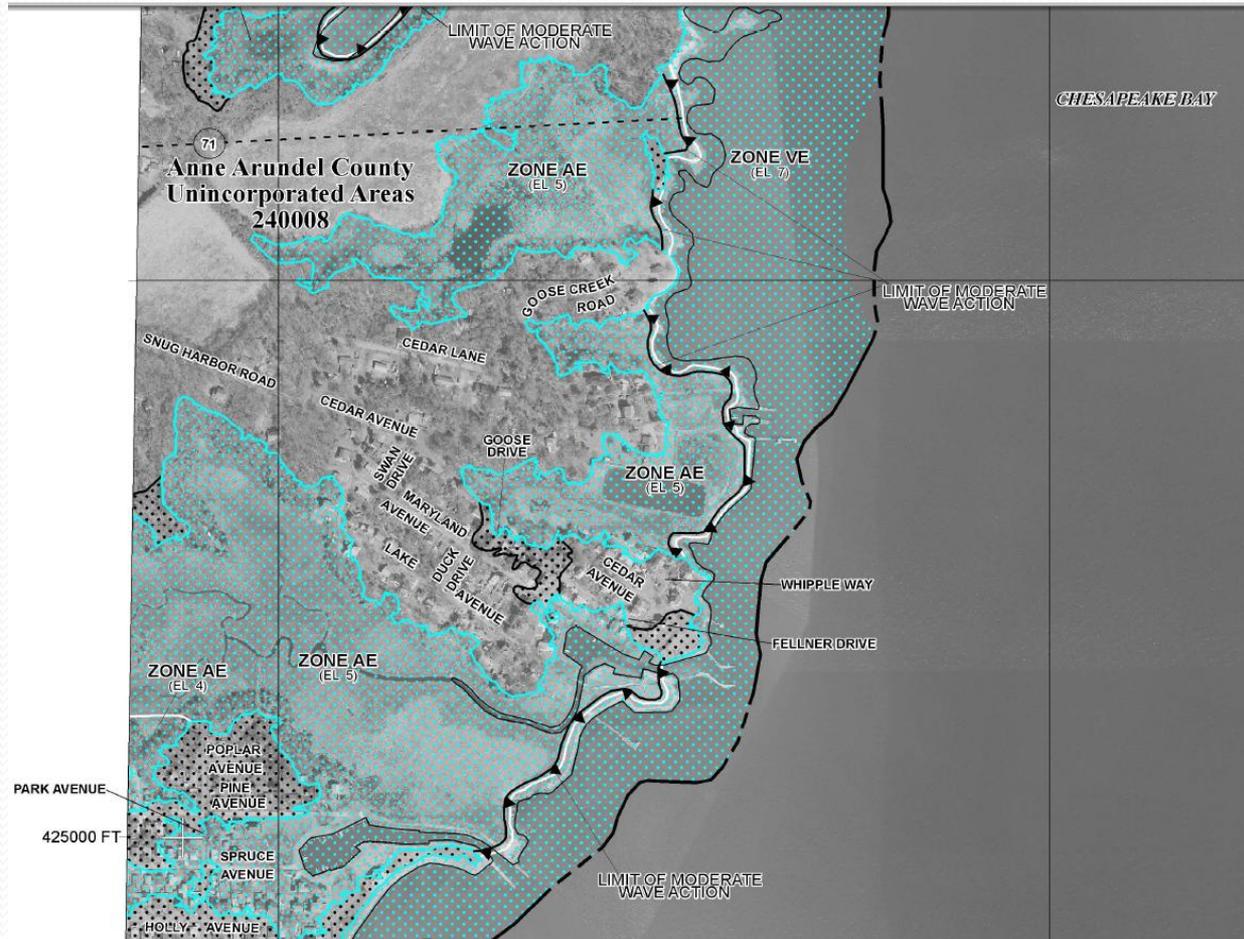
FEMA Region III Coastal Analysis & Mapping  
[www.r3coastal.com](http://www.r3coastal.com)



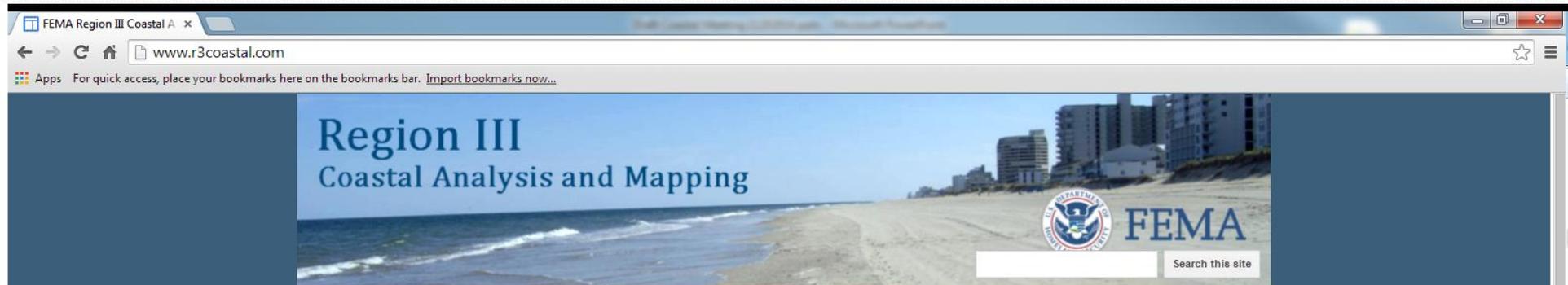
# Coastal A Zone (CAZ)



# Limit of Moderate Wave Action (LiMWA)



# www.r3coastal.com



- ▼ Coastal Study Home
  - Storm Surge Study
  - Coastal Hazard Analysis & Mapping
  - Outreach
- Coastal Flood Zones Overview
- Contact Information
- Meeting Information
- Study Partners
- Subscribe to Mailing List
- Additional Resources
- FAQs
- Glossary & Acronyms
- Sitemap

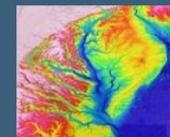


The storm surge study is one of the most extensive coastal storm surge analyses to date, encompassing coastal floodplains in three states and including the largest estuary in the U.S. Ultimately, the study will update the coastal storm surge elevations within the states of Virginia, Maryland, Delaware, and Pennsylvania including the Atlantic Ocean, Chesapeake Bay and its tributaries, and the Delaware Bay. This study differs from the storm surge mapping performed as part of Hurricane Evacuation Studies in that the resulting stillwater elevations are based on probability of occurrence as opposed to Hurricane Category events. Emergency Managers should still utilize their hurricane evacuation studies and hurricane category storm surge maps for evacuation planning and decision-making purposes.

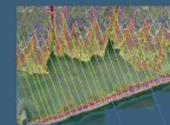
An updated coastal flood study is needed to obtain a better estimate of coastal flood hazards and risk for Region III. The current, or effective, Flood Insurance Rate Maps (FIRMs) are outdated primarily due to the age of data and methodologies used in producing the effective

## About the Study

The Federal Emergency Management Agency (FEMA) Region III office has initiated a coastal analysis and mapping study to produce updated Digital Flood Insurance Rate Maps (DFIRMs) for coastal counties within Region III. The new coastal flood hazard analyses, initiated in the Fall of 2009, will utilize updated 1% annual chance stillwater elevations obtained from a comprehensive storm surge study being concurrently performed by FEMA Region III.



Storm Surge Study



Coastal Hazard Analysis & Mapping



Outreach

# Regulations

- Every community required to update their local floodplain management ordinance
- Minimum NFIP requirements in Code of Federal Regulations (CFR), 44 CFR 60.3
- MD Model Floodplain Management Ordinance exceeds minimum requirements
- State waterway regulations in Code of Maryland Regulations (COMAR), 26.17.04
- International Codes (IBC and IRC)
  - Enhancements in 2015



# Model Ordinance Higher Standards

- Two foot freeboard requirement
- Subdivision access roads at or above BFE
- Electric panelboards elevated 3 feet above BFE
- Coastal A Zone provisions
  - V Zone standards
- Manufactured homes not allowed in floodways or V Zones
- Limit critical and essential facilities
  - Not allowed in V Zones, CAZs or floodways
- Limit accessory structures to 300 square feet



# Flood Insurance

- Homeowners insurance may not cover flood damage
- Can purchase even if outside high risk area
- Mandatory purchase requirement for structures in mapped floodplain with federally-backed mortgage
- Lots of variables affect the rate:
  - Flood zone, date of construction, building elevations, BFE, etc.

- Website:

National Flood Insurance Program (NFIP)

[www.FloodSmart.gov](http://www.FloodSmart.gov)



# www.FloodSmart.gov



Call toll free: **1-888-379-9531** or **have us call you**

- HOME
- FLOODING & FLOOD RISKS
- ABOUT THE NATIONAL FLOOD INSURANCE PROGRAM
- RESIDENTIAL COVERAGE
- COMMERCIAL COVERAGE
- POLICYHOLDER RESOURCES
- PREPARATION & RECOVERY

#### RESOURCES

- > Agent Site
- > Agent Locator
- > Community Rating System
- > Community Resources
- > File Your Claim
- > Frequently Asked Questions
- > Glossary
- > Flood Facts
- > Media Resources
- > Toolkits
- > Email Updates



- Protect What Matters
- Hurricane Season**
- Recent Changes
- New Flood Maps
- Flood After Fire

#### LATEST NEWS

The Homeowner Flood Insurance Affordability Act was signed into law by the President March 21. It amends some provisions of the Biggert-Waters Flood Insurance Reform Act of 2012. [Find details here](#) as they are made available.

View and download flood maps for your community for free on the newly updated FEMA [Flood Map Service Center!](#)



#### GET COVERAGE FOR AS LOW AS \$129 PER YEAR

Find out about our Preferred Risk Policy for homes in moderate-to-low risk areas.

[LEARN MORE](#)



#### WHAT COULD FLOODING COST ME?

This interactive tool shows the cost of a flood to your home, inch-by-inch.

[LEARN MORE](#)

#### One-Step Flood Risk Profile

#### HOW CAN I GET COVERED?

- Rate your risk
- Estimate your premiums
- Find an agent

Address:

City:

State:

Zip code:

Residential?  Yes  No

[Privacy Policy](#)

# Questions?

- David Guignet, P.E., CFM  
Chief, Regulatory Services Division  
410-537-3775  
[dave.guignet@maryland.gov](mailto:dave.guignet@maryland.gov)
- Kevin G. Wagner, CFM  
Natural Resources Planner  
301-689-1495  
[kevin.wagner@maryland.gov](mailto:kevin.wagner@maryland.gov)

