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Update of Maryland's DFIRM Products

Maryland Association of Floodplain and
Stormwater Managers

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Maritime Institute
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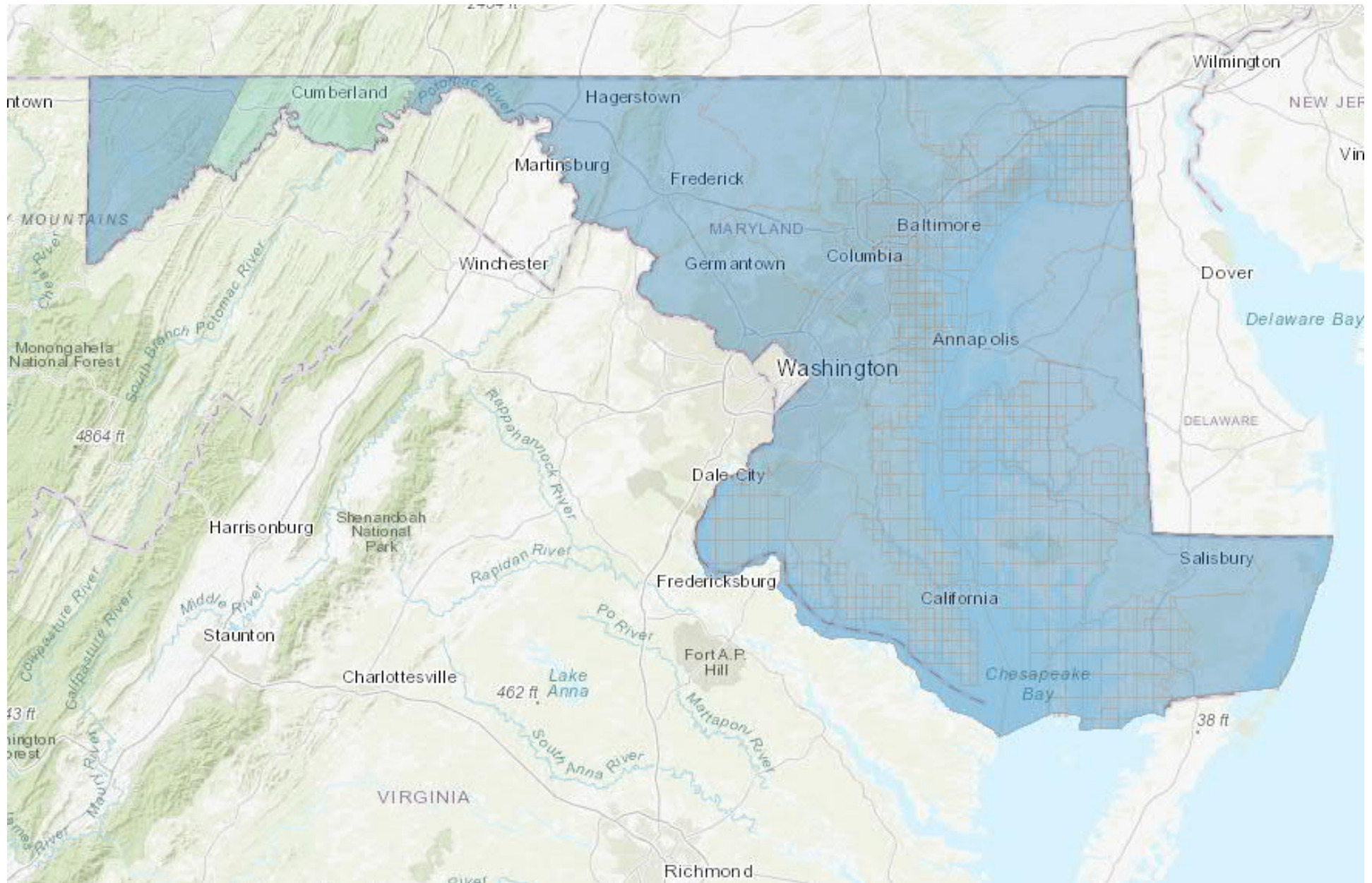
Agenda

- **Status of Maryland DFIRM Mapping Effort**
- **Projects Underway**
- **Benefits to date**
- **Caution on Restoration Projects**
- **Next Steps**
- **Open Discussion**

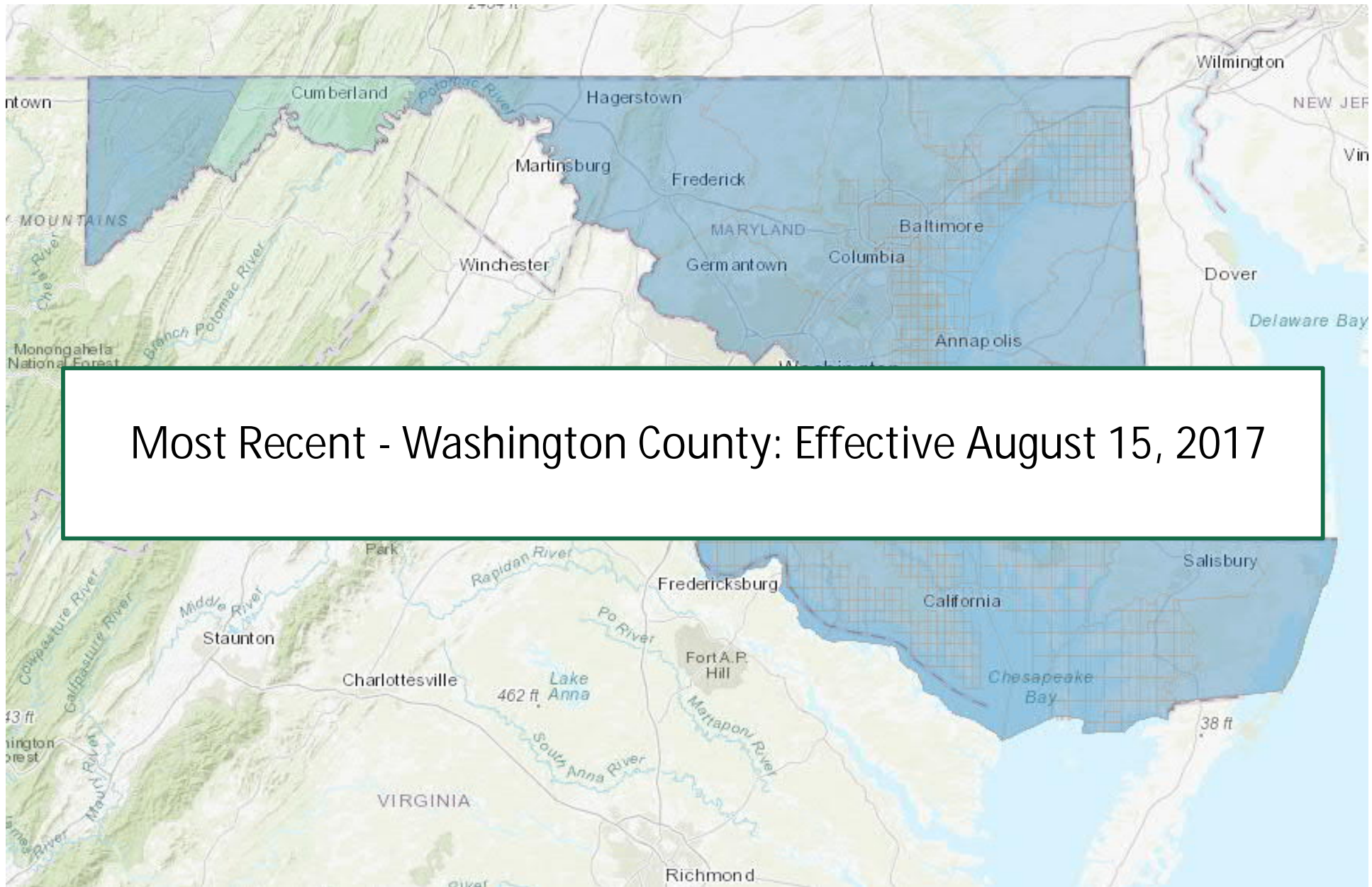


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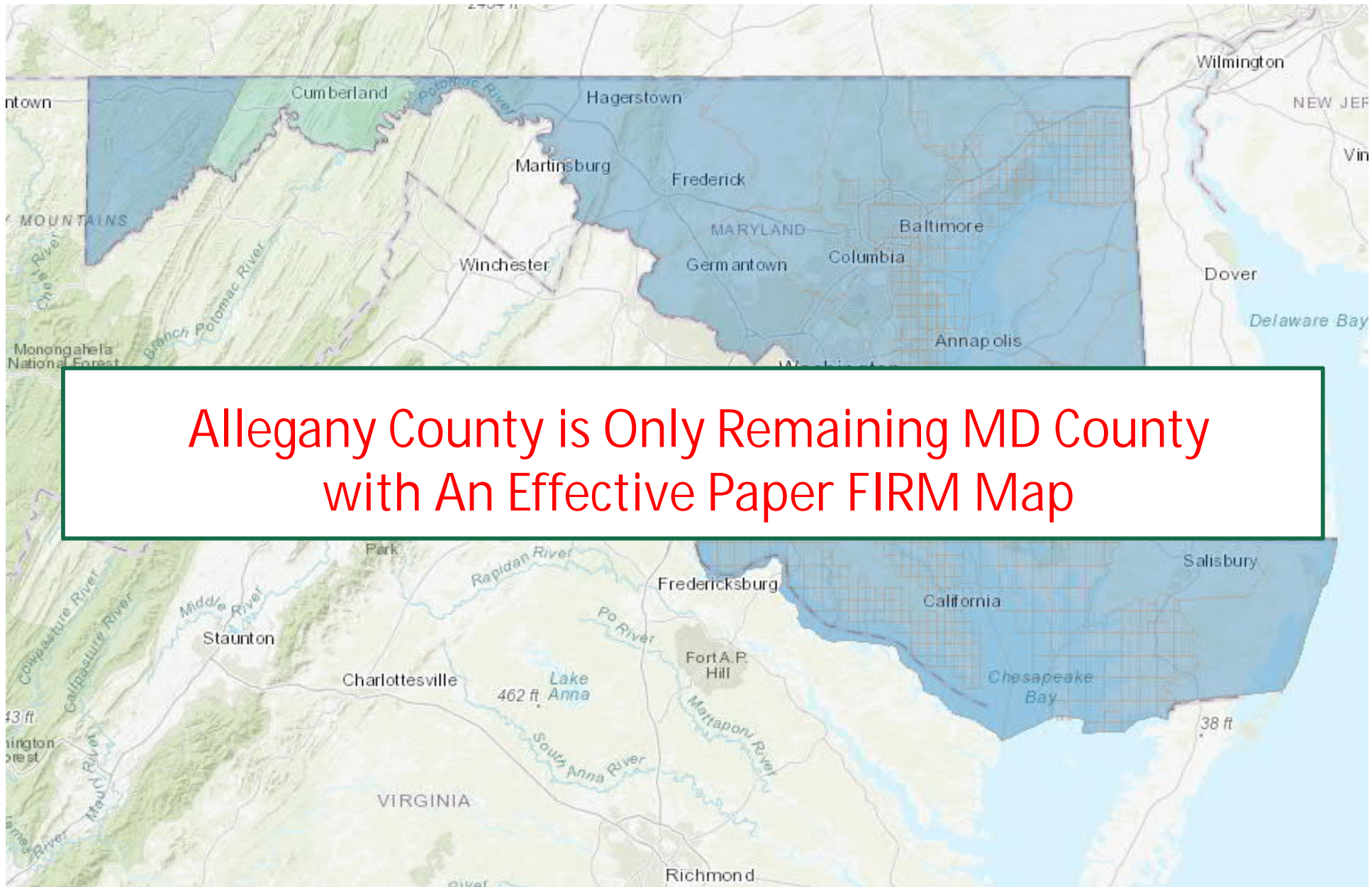
Status of Maryland's DFIRM Mapping



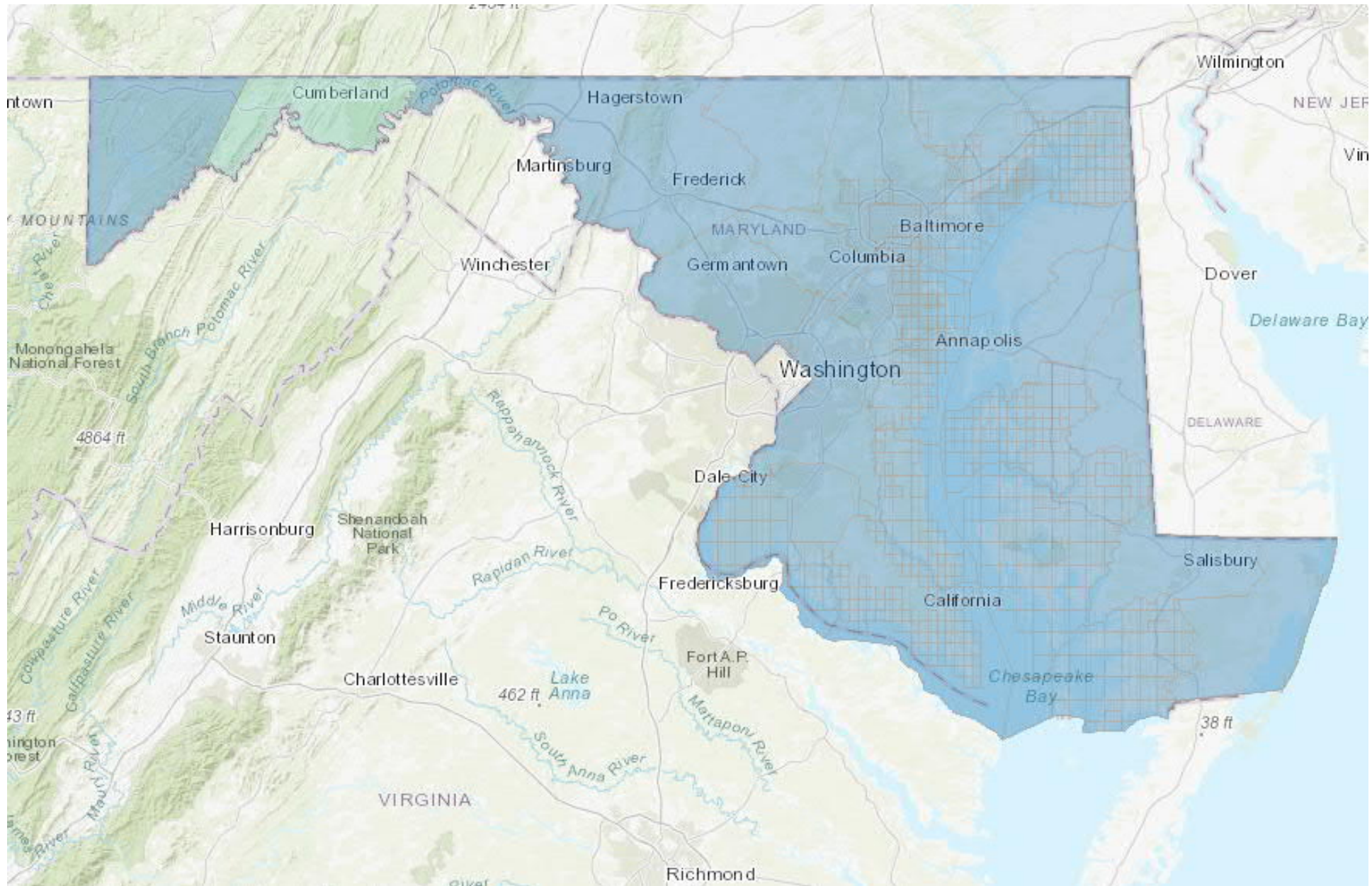
Status of Maryland's DFIRM Mapping



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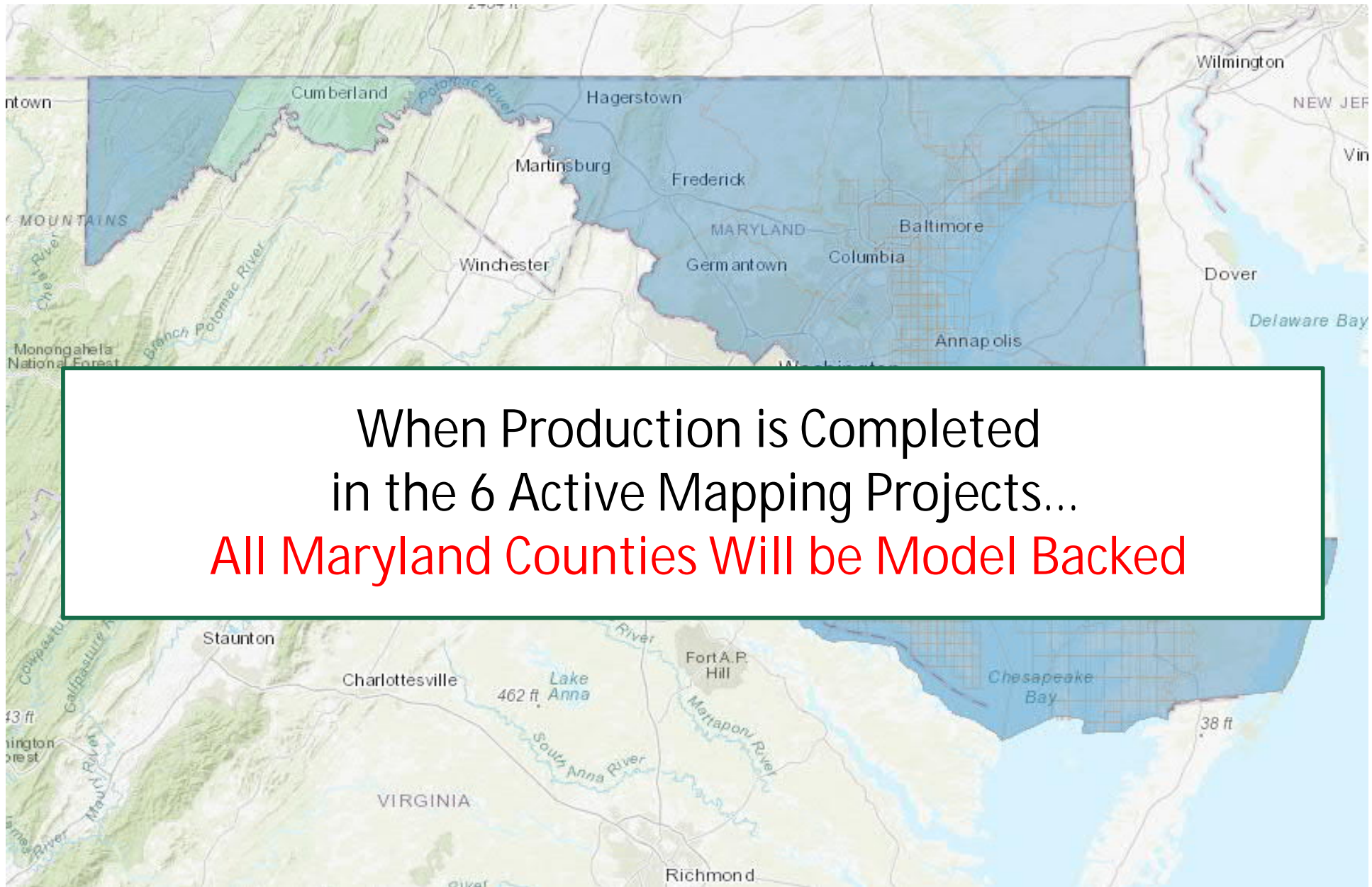


Status of Maryland's DFIRM Mapping

Digital Floodplain Products (DFIRM's) Available in all 24 Counties (23 Effective)

- Chesapeake Bay and Atlantic Coast Tidal Areas Now Complete
- 17 MD Counties Effective with Updated Riverine Models
- 6 Counties Only a Digital Conversions – DFIRM Data is limited to digital 100-year floodplain layer (from early FEMA CTP Project)
 - 2 of 6 have been Upgraded to Model Backed – Currently Preparing for Map Adoption Process (Allegany and Frederick)
- Remaining 4 Digital Conversions Are Now in Production and Also Include Upgrade to Model Backed Riverine Products

Status of Maryland's DFIRM Mapping



Recent Updates:

- **Washington County:**
 - **Effective August 2017**
- **Allegany County:**
 - **LFD Scheduled for February 2018**
 - **Effective Scheduled for August 2018**
- **Frederick County** by U.S. Army Corps of Engineers – Baltimore District (Using State Process)
 - **Scheduled for Preliminary in 2018**



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Production Schedule

- **Baltimore City** by MDE (Using State Model Backed Process) Scheduled for **Preliminary Summer 2018**
- **Baltimore County** by MDE and County as CTP (Using State Process) Scheduled for **Preliminary Summer 2018**
- **Montgomery County** by MDE as CTP (Using State Process) Targeted for **Preliminary Fall 2018**
- **Saint Mary's County** (Riverine Product Update Using State Process) Partially funded – **Planning Underway (Next Step – Bridges and Culverts)**



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Status of Maryland's DFIRM Mapping

Digital Data Currently Available

- Depth Grids Computed in All Coastal Areas
- 2000 + Geo-Referenced Riverine Flood Models Posted on mdfloodmap.com site and available for download
- 18,000 Cross-Sections with Base Flood Elevations on web site
- 14,000 Bridge and Culvert Inventories Posted on web site
- Remaining 4 of 6 Digital Conversions Now in Production with Upgrade to Model Backed Riverine Products

Benefits to Date

- **Over 200,000 web hits (getting best available data and BFE's to evaluate Risk and Insurance)**
- **Model Downloads Readily Available for Integration Into Permit process**
- **IMAP Template Compatibility with other State Data Sets – Generated Resiliency Discussions and Collaboration.**
- **Others**



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“Maryland’s 2006 Business Plan”

- “In Maryland – **the average age of our floodplain maps is 18 years.**” (And the data used to produce those maps at 25 + years)
- **Fast forward to 2017** - If we had chosen digital conversions...The average age of the study and models would now be **approaching 30 years !**
- **Current Mapping in Maryland – Average age is under 4 years ! (Also includes a Significant Upgrade in Floodplain Regulations – with Many Higher Standards !)**



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Status of Maryland's DFIRM Mapping

- ❑ Average Age Of Effective Floodplain Maps is 4 years
- ❑ Data Readily Available for Permitting, Insurance, and Elevation Certificates
- ❑ Maryland's Approximate A-Zone Models Accepted by FEMA for LOMR's and Best Available Data
- ❑ State Permit Integration Underway

Caution on Stream Restoration Projects

- **Communities that Participate in the NFIP Program **Agree to Maintain Records of All Activities / Development within their floodplain****
- **That means - Permitting All New Construction for Buildings **AND...****
- **Notifying FEMA of Changes in their floodplain – **Including Submitting LOMR for Stream Restoration Projects****



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Caution on Stream Restoration Projects

- **Communities in Maryland Now Have Accurate Digital Record of Where Their Floodplains Are**
- **Communities have Models of their Floodplain Studies**
- **Communities MUST Notify FEMA of ALL Changes within the Floodplain.**
- **Stream Restoration Projects Typically Impact Floodplain Boundaries and Elevations**
- **Protecting \$ 14.5 Billion in Flood Coverage !**



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Upon Completion ...

- **Model Backed Riverine Analysis Available via Download** in 23 of 24 Counties
- Data is Available in 24th County – but need to contact County Directly (for now)
- **Working on a Process to Exchange Data** (for Models) and Collaborate Review Process for Floodplain Studies between State Agencies Using Effective FEMA Models. **(Goal is to Maintain Updated Flood Studies in State Permit Review Process / Roll into Local and FEMA Approvals)**



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Next Steps

- **2 foot and 3 foot freeboard layers (definite)**
- **Converting Site layer to Match NFHDL layer (still wrestling with text and formatting)**
- **Extracting Velocity Data from Models to Generate Stream Stability Indexes**
- **Rainfall / Floodplain Map Updates on the fly (Why Not – looking for A Process) / Expedient Pilot This Year**



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Next Steps ...

- **3D Viewer**
- **Building Footprints Where Available**
- **Elevation Certificates**
- **Others ! (Suggestions / Ideas ?)**



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Comments / Questions

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