

The National Flood Insurance Program

Use of & Need for Terrain Data in Virginia



Jon Janowicz – FEMA Region III

May 20, 2010



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What is the National Flood Insurance Program?

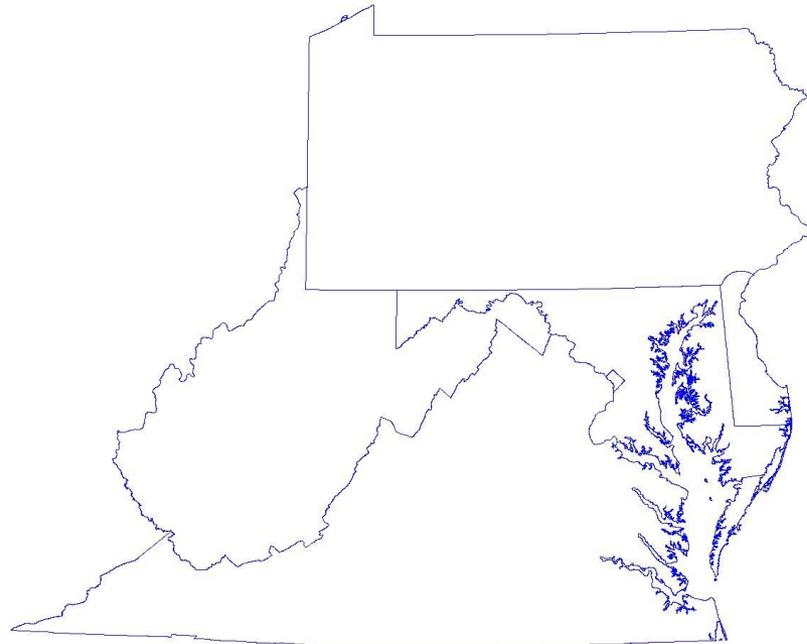
- A Federal program enabling property owners in participating communities to purchase flood insurance protection
- An alternative to disaster assistance
- Based on an agreement between the community and the Federal Government to regulate floodplain development



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The NFIP Parent Organizations

- **Federal Emergency Management Agency (FEMA)** became part of the **Department of Homeland Security (DHS)** in March 2003
- FEMA Region III Covers PA, MD, DE, DC, VA & WV



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Mission of the NFIP

- To create products that depict flood hazards
- To educate Americans about the risk of flood
- To provide flood insurance, generally unavailable in the private insurance market
- To accelerate recovery from flood damage
- To mitigate future flood losses through local floodplain regulation
- To reduce the personal and national costs of disaster



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Mapping & Studies of Flood Hazards...why we need topo.



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Base Flood Elevation

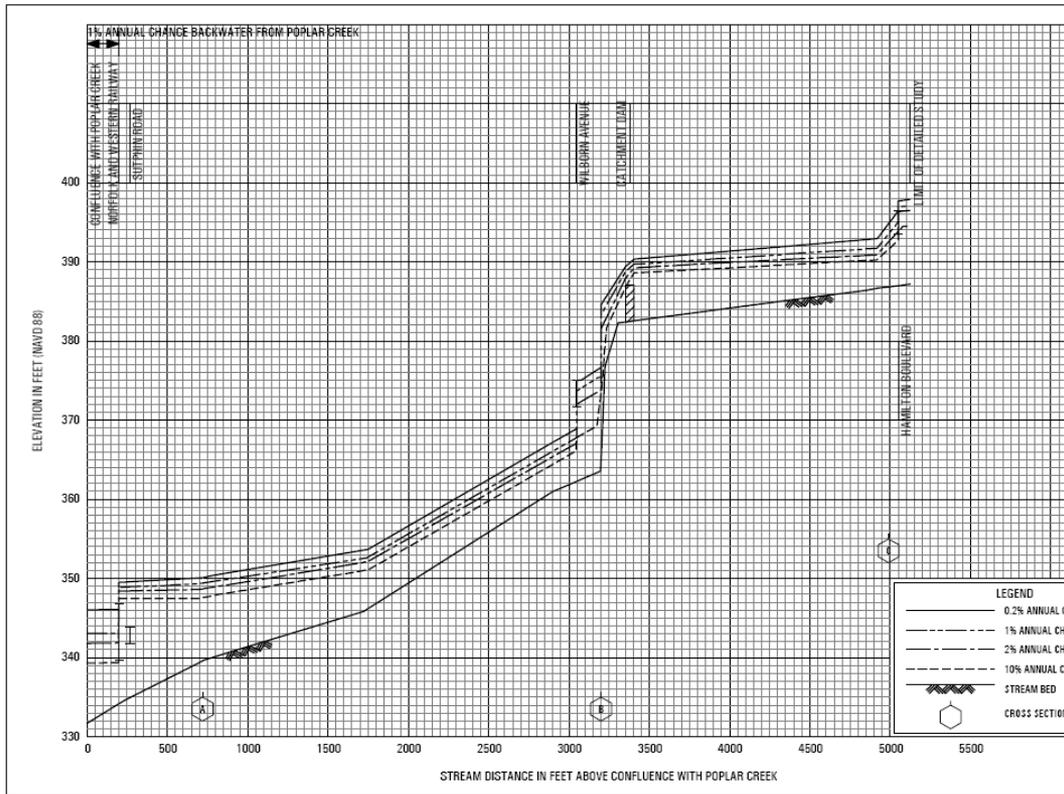
BFE

The height of the base (100-year) flood in relation to a vertical datum.



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Community Tools for Floodplain Management – Flood Insurance Study Report with Profiles

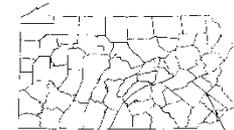


FLOOD INSURANCE STUDY



VOLUME 1 of 2

LEHIGH COUNTY, PENNSYLVANIA (ALL JURISDICTIONS)



Lehigh County

COMMUNITY NAME	COMMUNITY NUMBER
ALBERTUS, BOROUGH OF	420584
ALLENTOWN, CITY OF	420585
CATASAUKUS, BOROUGH OF	420586
COOPERSBURG, BOROUGH OF	420587
COPLAY, BOROUGH OF	421807
EMMAUS, BOROUGH OF	420588
FOUNTAIN HILL, BOROUGH OF	421808
HANOVER, TOWNSHIP OF	422261
HEIDELBERG, TOWNSHIP OF	421809
LOWER MACUNGIE, TOWNSHIP OF	420589
LOWER MILFORD, TOWNSHIP OF	421039
LOWELL, TOWNSHIP OF	421811
LYNN, TOWNSHIP OF	421812
MACUNGIE, BOROUGH OF	420590
NORTH WHITEHALL, TOWNSHIP OF	421813
SALESBURY, TOWNSHIP OF	420591
SLATINGTON, BOROUGH OF	420592
SOUTH WHITEHALL, TOWNSHIP OF	420593

COMMUNITY NAME	COMMUNITY NUMBER
UPPER MACUNGIE, TOWNSHIP OF	421044
UPPER MILFORD, TOWNSHIP OF	421815
UPPER SALICUM, TOWNSHIP OF	420594
WASHINGTON, TOWNSHIP OF	421816
WEISENBERG, TOWNSHIP OF	421817
WHITEHALL, TOWNSHIP OF	420595

REVISED:
JULY 16, 2004



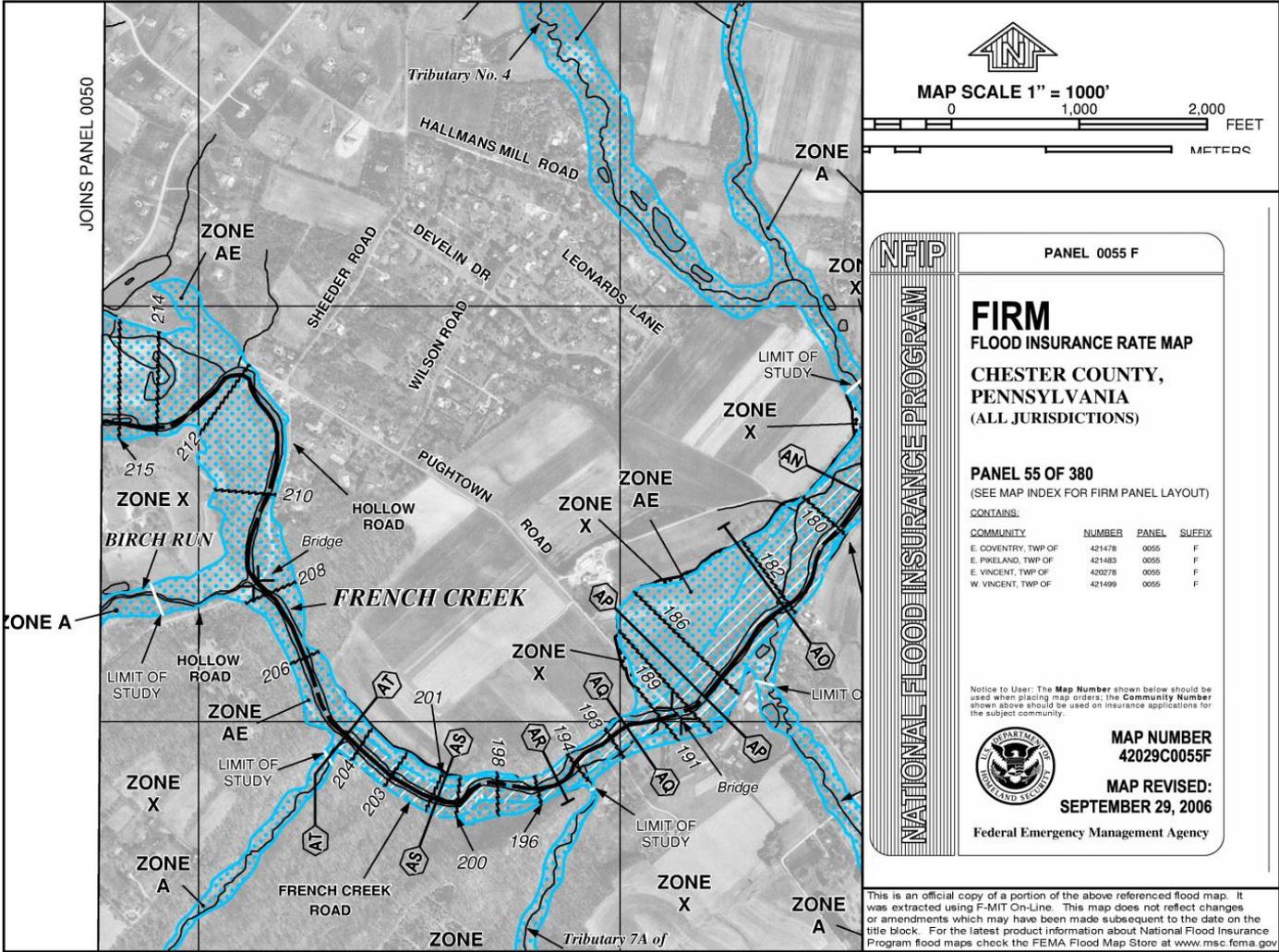
Federal Emergency Management Agency

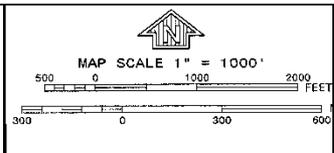
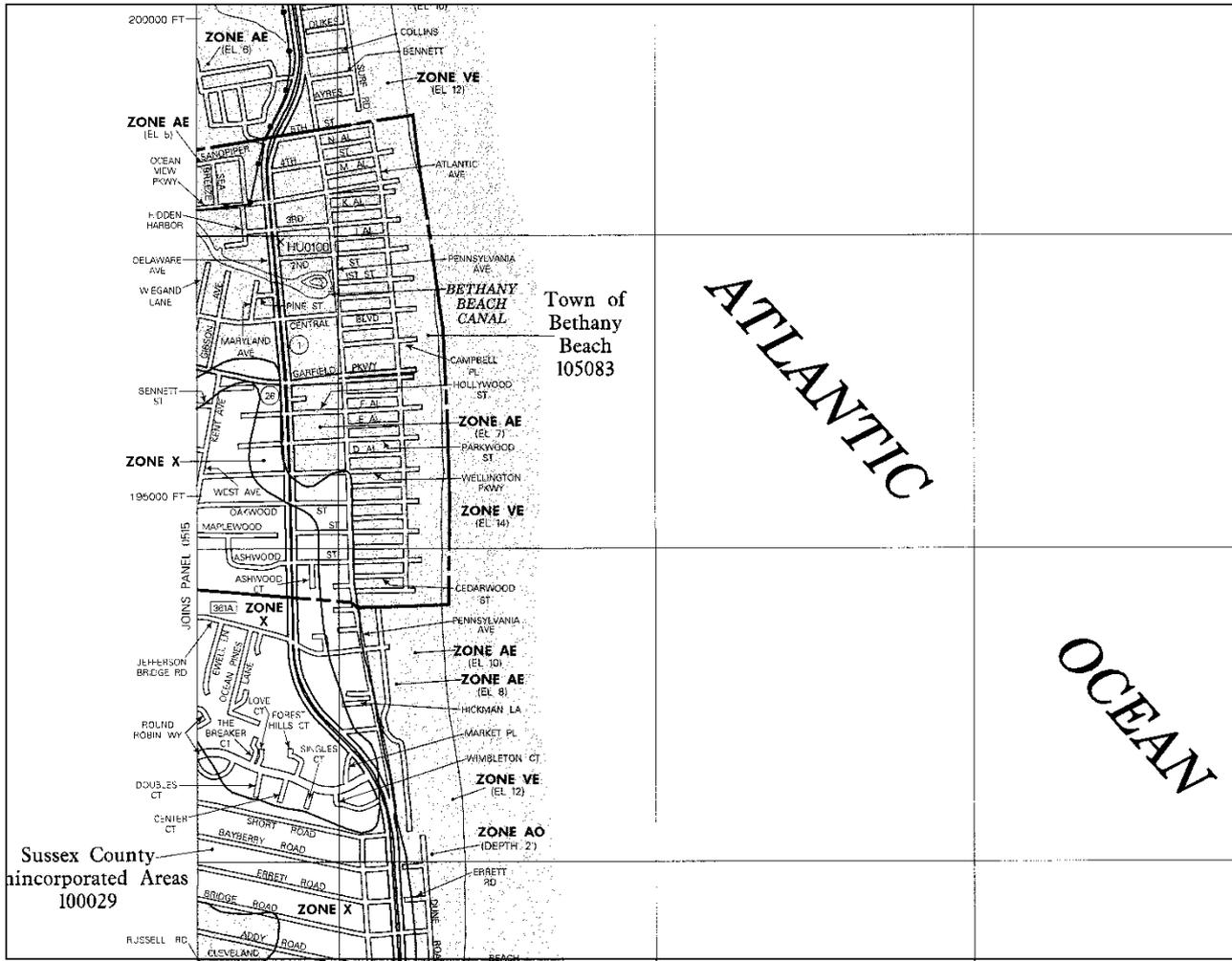
FLOOD INSURANCE STUDY NUMBER
4207CV001B



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Community Tools for Floodplain Management – Flood Insurance Rate Map





NFIIP PANEL 0520J

FIRM FLOOD INSURANCE RATE MAP
 SUSSEX COUNTY,
 DELAWARE
 AND INCORPORATED AREAS

PANEL 520 OF 660

FIRM MAP INDEX FOR FIRM PANEL LAYOUT

CONTAINS:	NUMBER	PANEL	SHEET
COMMUNITY	10000	0520	000
DELAWARE BEACH TOWNSHIP	10000	0520	000
SUSSEX COUNTY	10000	0520	000

NOTE:
 THIS MAP INDICATES APPROXIMATE BOUNDARIES OF COASTAL BARRIERS IN FLOODPLAIN SYSTEM UNITS AND/OR UNDESIGNED UNDESIGNED ROADS OR BRIDGES UNDER THE QUALIFIED BARRIER IMPROVEMENT ACT OF 2004 (P.L. 108-364).
 ROAD TO ROAD: The map number shown below reflects the most recent edition of the Community Number System (CNS) which is used to identify individual parcels for the purpose of flood insurance.

MAP NUMBER
 10000C0520J
 MAP REVISED
 JANUARY 6, 2005
 Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using FIRM Online. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the most current information about National Flood Insurance Program flood maps, check the FEMA Flood Map Service Center's website.



Flood Insurance Rate Map Elements

- Digital Map Products
 - ESRI Countywide Geospatial Databases & Shape Files
 - Google KMZ Files
 - National Flood Hazard Layer – seamless, national, current
 - USGS Quarter Quadrangle Ortho-photography – Default Base
 - Digital Terrain Data Sets from Multiple Sources



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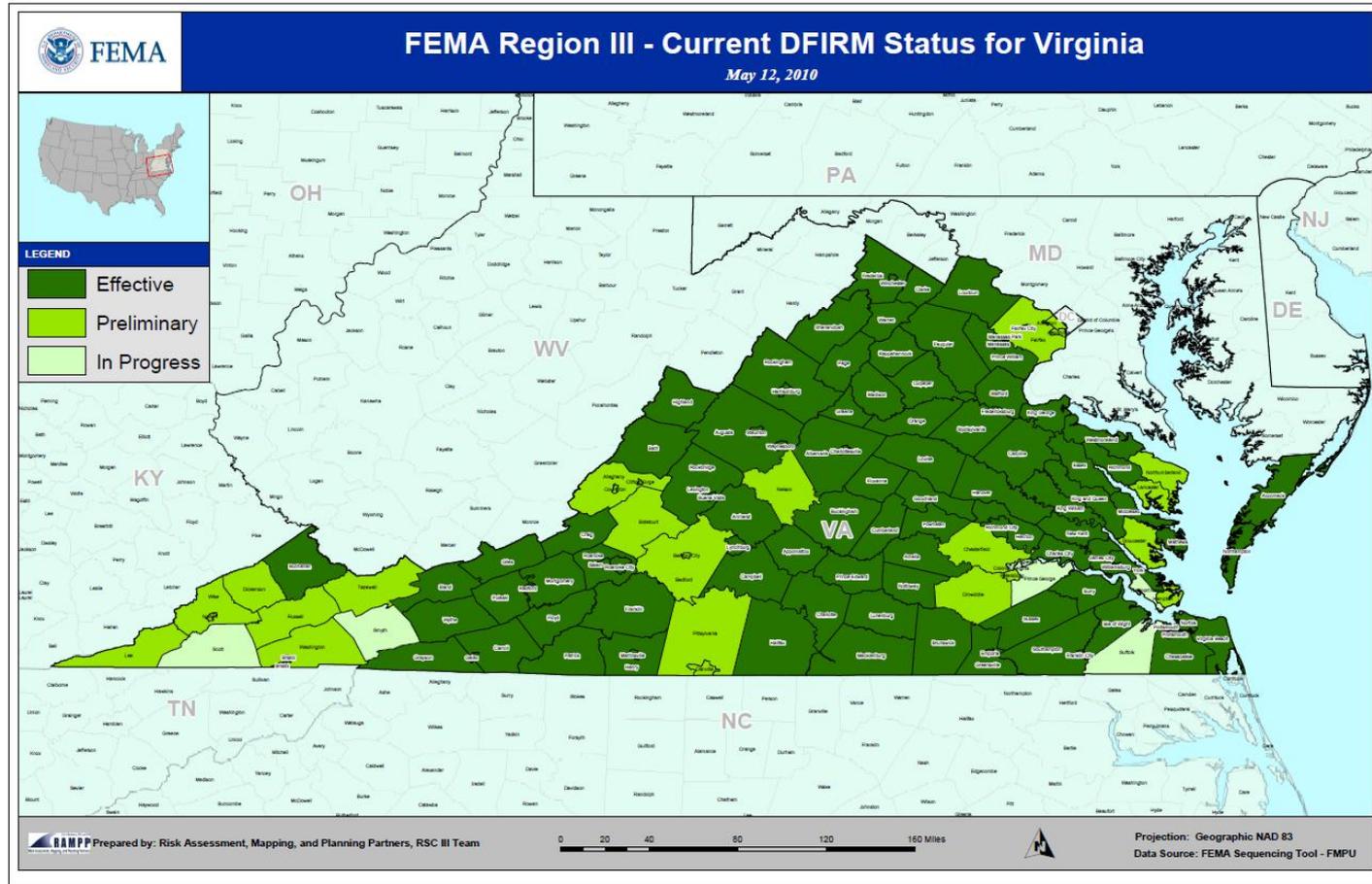
Map Modernization

- 5-yr Project to Create Countywide Maps for Region III
 - Over \$50 million investment in Region III
 - 100% Coverage for Region III will be available by 2011
 - Digital Web Application are Springing Up
 - WVU Site for WV - www.mapwv.gov/flood/
 - Google from FEMA – www.msc.fema.gov
- Partnerships over 5-yrs
 - Engineering Firms – AMEC, Baker, Dewberry, Gannett Fleming, Greenhorne & O'Mara, Medina, URS, AECOM, others
 - Federal Agencies – USGS in PA, NJ, WV, DE; US Army Corps – Phila, Balti, Pitts, Hunt, Norfolk, Nashville, others
 - Universities – Vir Tech, WVU, George Mason, Univ Maryland, Temple, others
 - State involvement through the State NFIP Coordinators



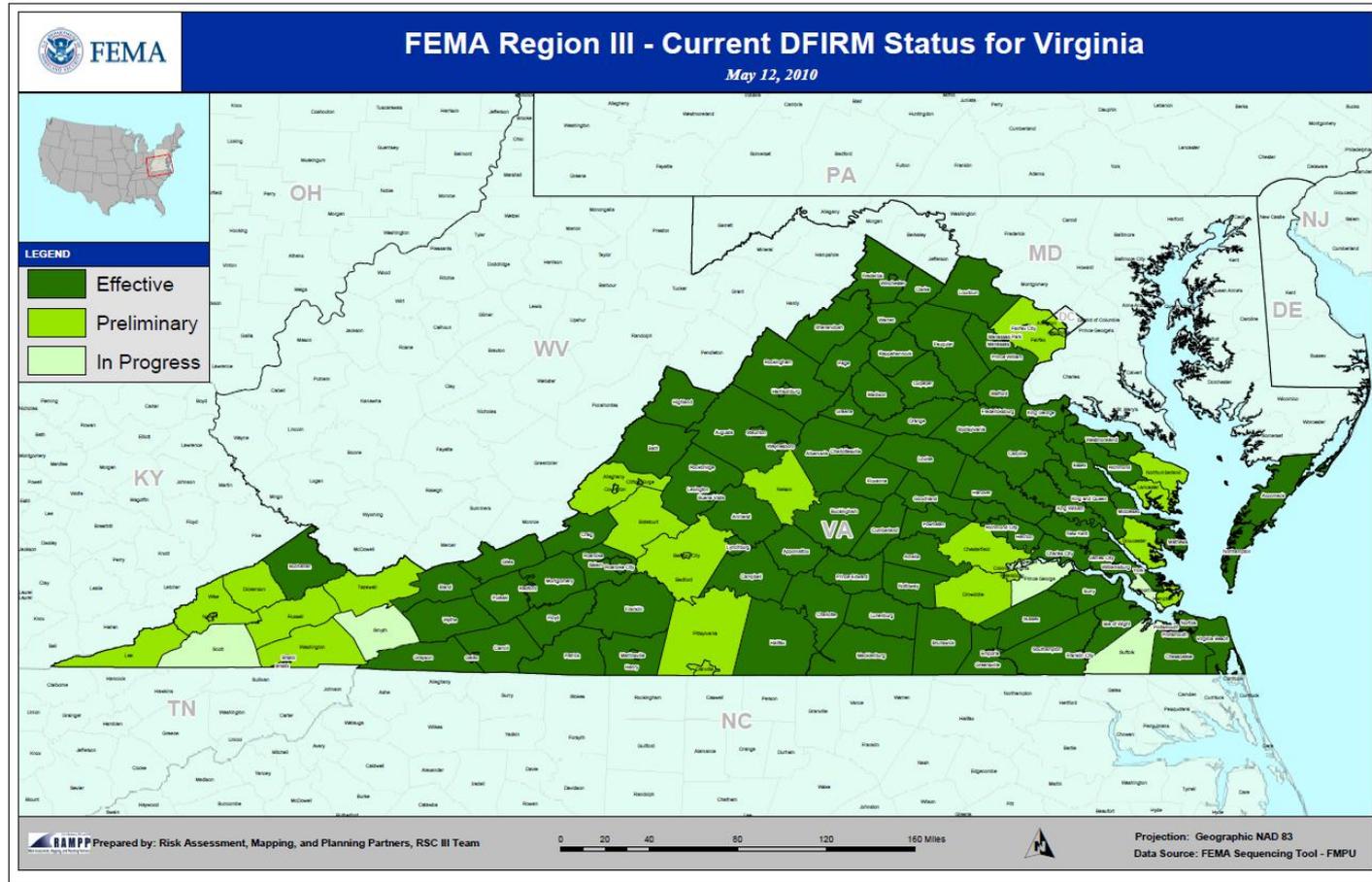
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Map Modernization in Virginia



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How did we use topo in Virginia?



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What is next in Virginia?

Risk MAP with:

- Coastal Flood Hazard Study
- Improved Riverine Floodplains
 - Big Projects – Loudoun
 - Improved A Zones by Auto H&H



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Risk MAP (Mapping, Assessment Planning) Vision

Through collaboration with State, Local, and Tribal entities, Risk MAP will deliver quality data that increases public awareness and leads to action that reduces risk to life and property



Risk MAP Alignment

The main components of the Risk MAP Solution are the foundation for motivating action to reduce risk

Vision

Risk MAP will deliver quality data that increases public awareness and leads to action that reduces risk to life and property

Multi-Year Plan

Risk MAP Program Measures

Goal 1: Data Gaps

Address gaps in flood hazard data

Goal 2: Awareness & Understanding

Measurably increase public's awareness & understanding

Goal 3: Mitigation Planning

Lead effective engagement in Mitigation Planning

Goal 4: Digital Platform

Provide an enhanced digital platform

Goal 5: Synergize Programs

Align Risk Analysis programs and develop synergies

Risk MAP Solution

Watershed

Elevation Data Strategy

Levels of Study

Risk Assessment

Mitigation Planning

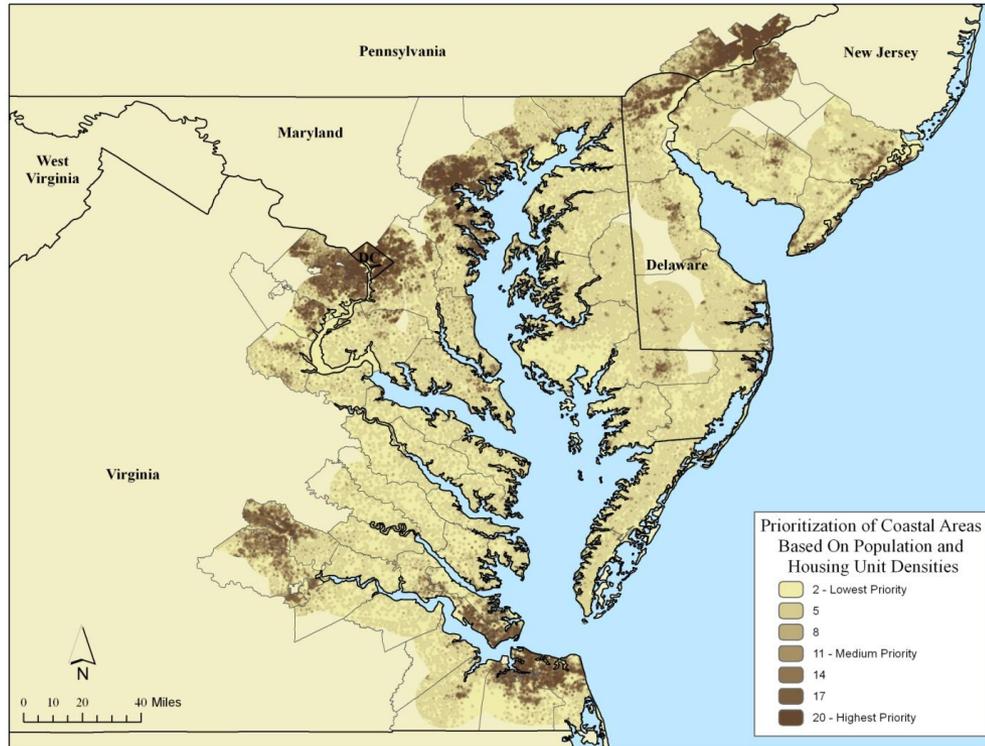
Risk Communications and Program Outreach



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Risk MAP

Coastal Hazard in Virginia

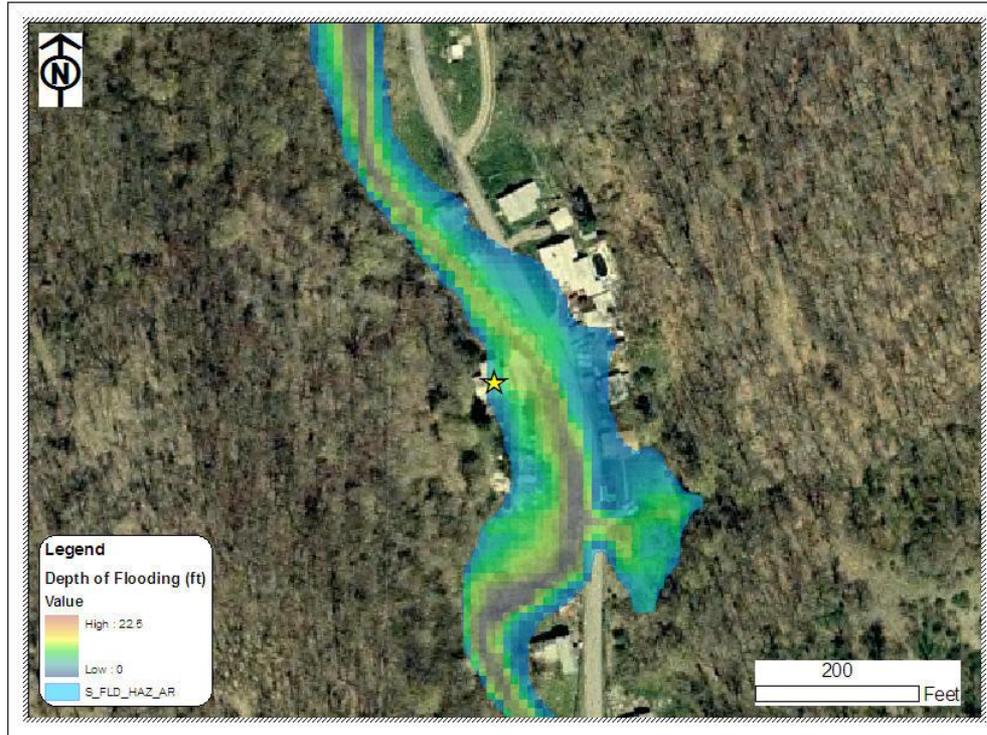


Needs High Quality Lidar



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Riverine Hazard in Virginia



Can use less dense data – WV 3m, for rural areas



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Near Term Opportunities in Virginia

1. National Topographic Data Inventory for the NFIP
2. Potential for HQ Investment in Regional Priority Areas



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Topo Issues in Virginia

Quality Documentation

- Metadata
- Accuracy Documentation



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