

Severe Repetitive Loss / Repetitive Loss Mitigation Priorities

Streamlining Requirements, Leveraging Available Resources, and Increasing Project Effectiveness

BRIC and FMA Program Webinar Series | September 23, 2021



FEMA



Agenda

- **Welcome and Introduction**
Kayed Lakhia, FEMA
- **Flood Mitigation Assistance (FMA) Program**
Brandon Sweeza, FEMA
- **Virginia SRL/RL Mitigation Priorities**
Debbie Messmer, Commonwealth of Virginia
- **Glasgow Flood Mitigation Project**
Rebecca Joyce, Central Shenandoah Planning District Commission
- **Panel Discussion**

Photo: Greenspace created with acquisition of six residences in the SFHA, Bluestone, Virginia

Flood Costs to the Nation

- Floods are the most common natural disaster
- Floods have impacted all 50 states in recent years
- U.S. 2016 flood losses exceeded \$17 billion; five individual floods exceeded \$1 billion
- Billion-dollar inland flood events are on the rise
- One inch of water can cause a minimum of \$25,000 of damage to a home



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How the NFIP Reduces Flood Risk

Mitigation Savings

- Estimated \$1.87 billion annual flood loss savings to the fund per Congressional Research Service (CRS) Report: [National Flood Insurance Program: Selected Issues and Legislation in the 115th Congress](#), July 31, 2018

Notes

- Communities must meet minimum standards based on flood risk
- FEMA funding is available to help meet standards and reduce loss to existing repetitive and severe repetitive loss structures
 - National Flood Insurance Program (NFIP) standards are the most cost-effective way to reduce flood loss to new buildings and infrastructure.
 - Structures that comply with NFIP standards experience 80% less damage





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Mitigation



HMA
Hazard Mitigation Assistance

**Elevating your home above Base Flood Elevations (BFE)
can reduce your flood insurance premium by 50% or more!***

**Premium
Prior to Elevation**

\$2,973

**Premium at
Elevation +1' BFE**

\$983

**Premium at
Elevation +3' BFE**

\$455

FEMA Flood Mitigation Assistance (FMA) Program National Flood Insurance Fund

- Is nationally competitive
- Includes states, local communities, tribes, and territories
- Reduces or eliminates flood damage to structures and buildings insured through the NFIP
- Reduces NFIP loss exposure
- Strengthens national preparedness and resilience



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Fiscal Year 2021 Flood Mitigation Assistance (FMA) Funding



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FMA Eligibility Requirements

- Applicants and subapplicants must have a FEMA-approved Hazard Mitigation Plans by the application deadline AND at the time funding is obligated
- Subapplicants must participate in the National Flood Insurance Program (NFIP) (Not on probation or suspended)
- All structures included in the project subapplications must be insured under the NFIP (Before, During, and After)

Verify at <https://www.fema.gov/flood-insurance/work-with-nfip/community-status-book>



Acquisition Demolition/Relocation

- Property Acquisition and Structure Demolition
- Property Acquisition and Structure Relocation



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Elevation and Mitigation Reconstruction

- Structure Elevation
- Mitigation Reconstruction



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Floodproofing

- Wet Floodproofing of non-residential structures
- Dry Floodproofing of non-residential structures
- Dry Floodproofing of Historic Residential Structures



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Individual Property Priorities



SRL.bii = Severe Repetitive Loss (SRL) structure (ii)

Have at least 2 separate NFIP claim payments exceeding Market Value of Structure

RL = Repetitive Loss (RL) structure

Have at least 2 NFIP claim payments where average costs equal or exceed 25% of Market Value of Structure

SRL.bi = Severe Repetitive Loss (SRL) structure (i)

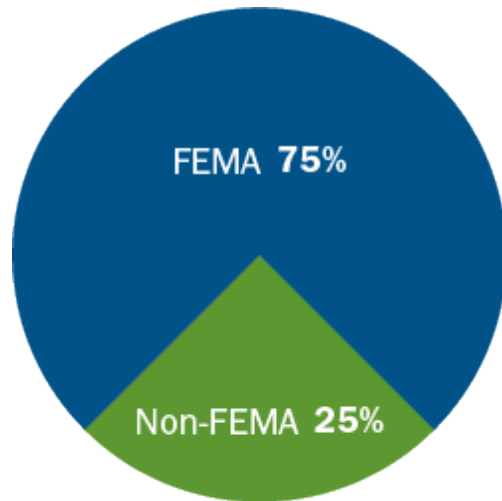
Have at least 4 NFIP claim payments of \$5,000 or more, with cumulative payments exceeding \$20,000



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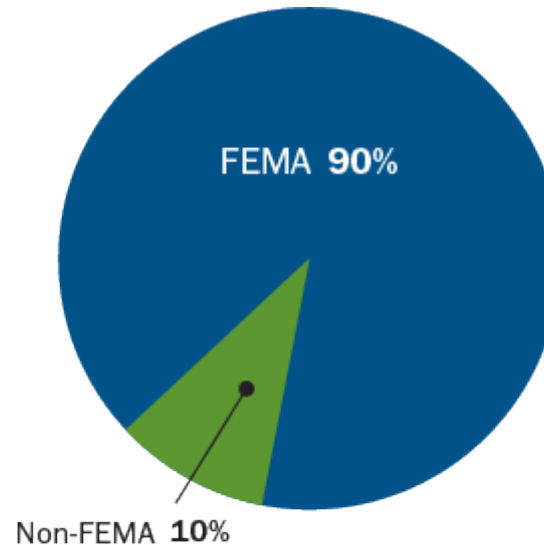
Flood Mitigation Assistance (FMA) Program Cost Share

Non-Repetitive Loss



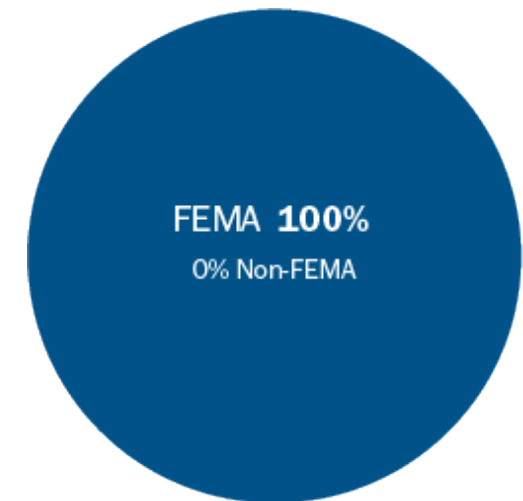
- Individual Property Flood Mitigation **Not** SRL or RL
- Community Flood Mitigation
- Project Scoping

Repetitive Loss (RL) Structures



- Individual Property Flood Mitigation
 - Repetitive Loss (RL)

Severe Repetitive Loss (SRL) Structures



- Individual Property Flood Mitigation
 - Severe Repetitive Loss (SRL)



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Individual Flood Mitigation Project Prioritization

Tier 1 $\geq 50\%$ SRL/RL

- Sorted by % of SRL/RL

Tier 2 $< 50\%$ SRL/RL

Point Based Scoring

- SRL/RL property(s)
- Substantial Damage structure(s)
- Not Secondary Dwelling Units
- Centers for Disease Control and Prevention (CDC) Social Vulnerability Index

- Projects are comprised of one or multiple properties
- Projects in Tier 1 have a significantly greater chance of being selected
- Coordinate with you Local and State Floodplain Administrator to understand SRL & RL risk in your community



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Reduce Extended Delays

- Repetitive and Severe Repetitive Property Lists are a priority under Flood Mitigation Assistance
- Expedited Benefit/Cost Analysis (BCA) may be available for certain conditions
 - Acquisition: certified community Substantial Damage structures in a Special Flood Hazard Area (SFHA)
- Pre-calculated Benefits:
 - Elevation
(Federal Share up to \$175,000)
 - Acquisition benefits
(Federal Share up to \$276,000)



Level of Design Efficiencies:

- American Society of Civil Engineers (ASCE) 24-14 design standard conformance
- If not using ASCE 24-14 engineering and feasibility documentation is required: Hazard Mitigation Assistance (HMA) Addendum, Part F
- When a structure is “altered,” applicants and subapplicants must commit to ASCE 24-14 where consistent with and “deemed to comply”
- Meets Federal Flood Risk Management Standards (FFMRS) Standard

Partial Implementation of the Federal Flood Risk Management Standard (FFRMS)

- Mitigation projects using HMA funds for certain non-critical actions involving structure elevation, dry floodproofing, and mitigation reconstruction in the Special Flood Hazard Area (SFHA)
- FFRMS Freeboard Value Approach will be required which is at a minimum the base flood elevation plus 2 feet



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Opportunities to Increase Program Participation

- Integrate State and Community hazard mitigation plans into other community development and comprehensive plans
- Incorporate climate adaptation plans
- Housing and Urban Development (HUD) State and Community Consolidated Plan:
 - Community Development Block Grant (CDBG)
 - HOME Investment Partnerships (HOME)
 - Emergency Solutions Grants Program (ESG)

- Establish partnerships to provide additional planning and technical assistance
- Empower communities to better understand their flood risk
- Reduce barriers to participation like up-front expenses

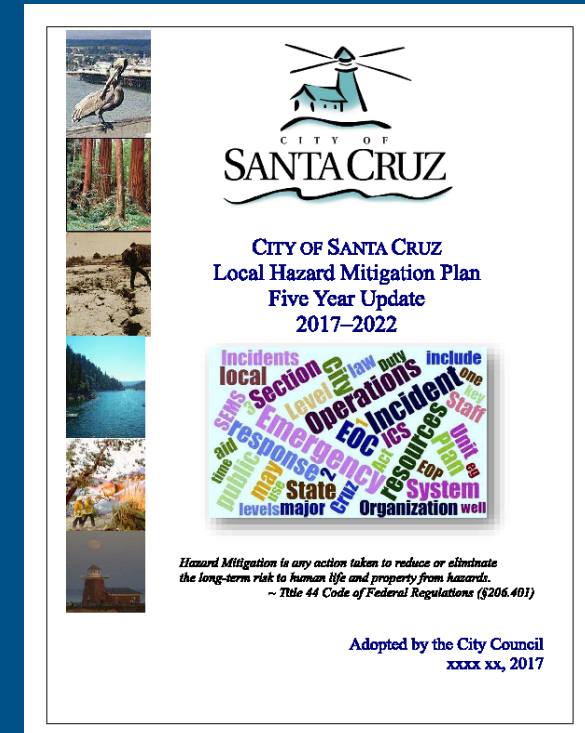
FMA Management Costs or Technical Assistance may support some of these activities if eligible



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Best Practices for Reducing Participation Barriers

- Include equity considerations in the state, tribal and local mitigation plans or plan updates
- Engage in partnerships with community-based organizations
- Conduct community outreach
- Look for non-federal match flexibility and opportunities



Funding Sources to Support Extended Outreach and Improved Participation

Project Scoping

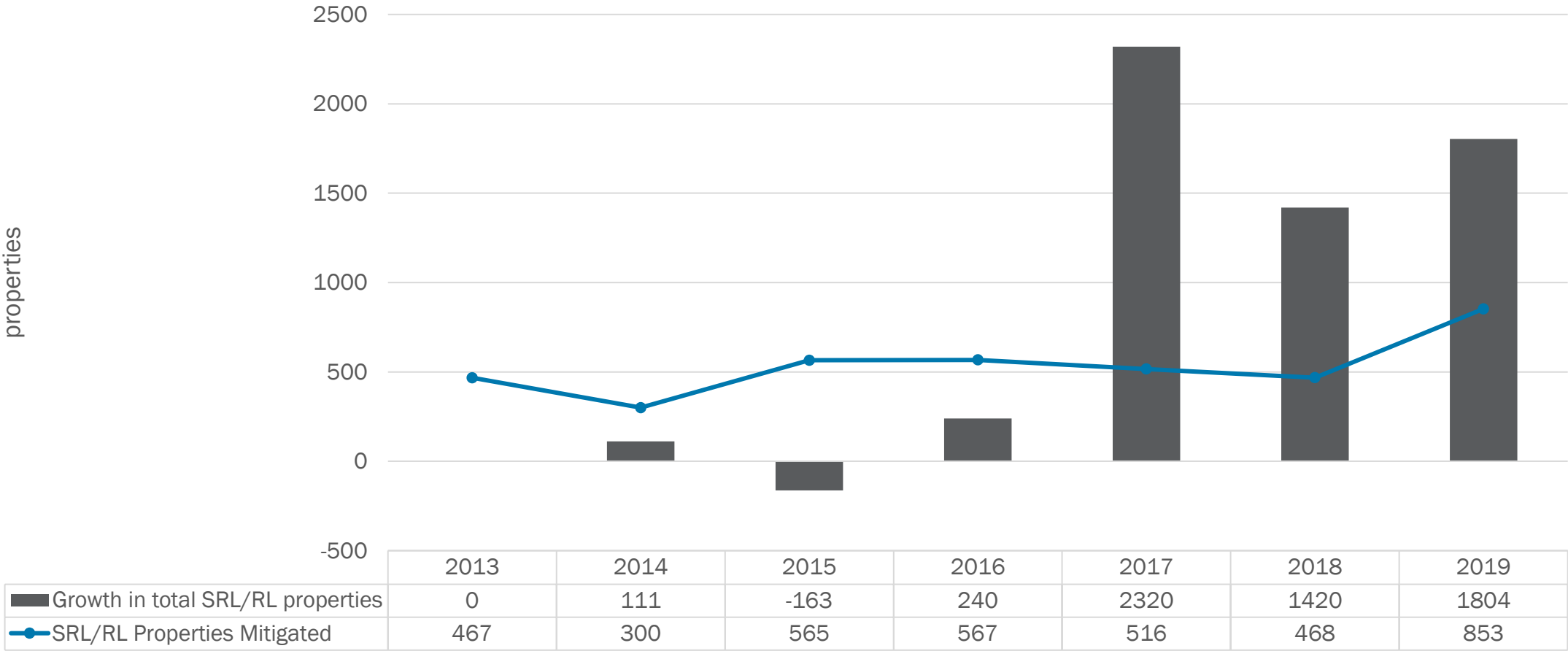
- Obtain data to prioritize, select and develop mitigation activities to benefit NFIP-insured properties
- Use the current FEMA-approved mitigation plan:
 - Community flood mitigation projects
 - Individual flood mitigation projects
- Consider project scoping for future project application development

Technical Assistance

- Financial assistance awards allow applicants to maintain a viable, sustainable FMA program:
 - Program promotion
 - Site visits
 - Application development and review
 - Planning and grants workshops
 - Staff assistance



SRL/RL Properties Mitigated vs Growth in SRL/RL Properties Since 2013



Key Takeaways

- Individual properties proposed for mitigation **must** have a NFIP policy “in force” at time of the opening of the Application Period
- Subapplications for individual property mitigation containing 50% or greater SRL/RL properties are highly competitive
- SRL property mitigation is funded at 100% & RL is funded at 90% Federal share
- To protect the federal investment, FMA mitigated structures must continue to maintain flood insurance for the life of the structure regardless of flood zone
- Utilize the Hazard Mitigation Planning process to reduce program participation barriers

How to Apply

- Eligible Applicants must apply for funding using FEMA Grants Outcomes (FEMA GO) at the [FEMA GO Portal](#)
 - Visit [FEMA GO for Hazard Mitigation Assistance Grants](#) to view the technical user manuals and support materials
- Eligible Subapplicants should contact their lead State official for details on submission deadlines and how to apply which can be found at [State Hazard Mitigation Officers | FEMA.gov](#)



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FEMA Application Deadlines

- The Application period opens on September 30, 2021
- Applications must be received in FEMA GO at by January 28, 2022, at 3:00 PM Eastern Time (ET)

Technical Assistance

- Applicants experiencing technical problems outside of their control must notify FEMA by 3:00 PM ET on January 26, 2022

FMA Resources

- [FMA Website](#)
- [FY 2021 FMA Notice of Funding Opportunity](#)
- [FMA Resources](#)
 - [Community Flood Mitigation](#)
 - [Individual Flood Mitigation](#)
 - [Project Scoping](#)
 - [Geospatial File Eligibility Criteria](#)
- [HMA Cost Share Guide](#)
- [Unified Hazard Mitigation Assistance Guidance & Addendum](#)
- [Benefit-Cost Analysis Toolkit](#)
- Property Elevation and Acquisition Job Aids:
 - [Elevation Job Aid](#)
 - [Acquisition & Demolition Job Aid](#)
 - [Acquisition & Relocation](#)

Need Help?

General questions about the FMA program can be directed to the appropriate [State Hazard Mitigation Officer](#) or [FEMA Regional Office](#).

- **FEMA GO Helpline:**
femago@fema.dhs.gov or 1-877-611-4700
- **Benefit Cost Analysis (BCA) Helpline:**
BCHelpline@fema.dhs.gov or 1-855-540-6744
- **Feasibility and Effectiveness Helpline:**
FEMA-BuildingScienceHelp@fema.dhs.gov
- **Environmental and Historic Preservation:**
EHPHelpline@fema.dhs.gov or 1-866-222-3580
- **Hazard Mitigation Assistance (HMA) Helpline:**
1-866-222-3580



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Additional Resources

FEMA Resources

- [Building Community Resilience with Nature Based Solutions: A Guide for Local Communities](#)
- [Innovative Drought and Flood Mitigation Projects](#)
- [Unified Federal Environmental and Historic Preservation Review Guide for Federal Disaster Recovery Assistance Applicants](#)
- [Acquisition Technical Review Supplement T1.1](#)
- [Elevation Technical Review Supplement T1.3](#)
- [Flood Risk Reduction Technical Review Supplement T1.4](#)
- [Flood Risk Reduction Supplement E1.4: Hazard Mitigation Assistance Environmental Planning and Historic Preservation](#)
- [Second-Story Conversion – Elevation Project Design Considerations for Hazard Mitigation Assistance Applicants](#)
- [Tribal Mitigation Planning and HMA Grant Application Development](#)

State Resources

- NFIP Coordinators:
<https://www.floods.org/membership-communities/connect/state-floodplain-managers-scs/>
- State Hazard Mitigation Officers:
<https://www.fema.gov/grants/mitigation/state-contacts>



FMA Grant Totals

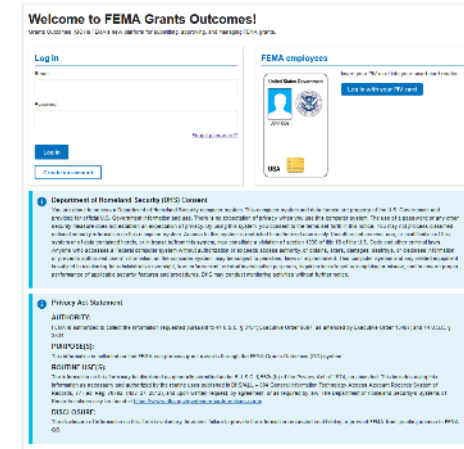


Grant	Eligible Obligated	Projects	Federal Obligated	State Obligated	Local Obligated	Properties Elevated/To Be Elevated	Properties Acquired/To Be Acquired	Stormwater Management
SRL 2009	\$1,851,000.00	1	\$1,342,196.00	\$0.00	\$149,133.00	8	0	0
SRL 2012	\$1,660,365.00	3	\$1,660,365.00	\$0.00	\$0.00	7	0	0
FMA 2013	\$7,203,675.80	7	\$7,153,937.00	\$0.00	\$49,738.80	23	6	0
FMA 2014	\$2,364,925.97	4	\$2,346,772.78	\$0.00	\$18,153.19	8	4	0
FMA 2015	\$2,824,305.50	5	\$2,824,305.50	\$0.00	\$0.00	5	5	0
FMA 2016	\$8,382,051.64	6	\$8,270,835.14	\$16,666.50	\$94,550.00	18	4	0
FMA 2017	\$1,797,638.00	2	\$1,756,940.00	\$0.00	\$40,698.00	4	4	0
FMA 2018	\$6,319,015.00	8	\$5,909,945.15	\$12,500.00	\$396,569.85	19	5	0
FMA 2019	\$15,366,596.00	8	\$12,625,276.00	\$0.00	\$2,741,320.00	12	9	1
Totals	\$47,769,572.91	44	\$43,890,572.57	\$29,166.50	\$3,490,162.84	104	37	1



Soliciting the Best Applications

- Getting the Word Out to Everyone
- Work directly with NFIP Coordinator/Staff
- Help localities get their SRL/RL updated lists
- Use vdem.emgrants.com
- Peer review process from the Stakeholder meeting
- VDEM inputs applications into FEMAGO



Early Steps

- Getting the word out to everyone
 - Applicant's Briefings
 - Press Releases
 - Emails to all subgrantees
 - Past applicants – last years' applicants who were not funded
- Communication with NFIP staff and helping subgrantees get their most updated SRL and RL lists – key since priority is for these properties

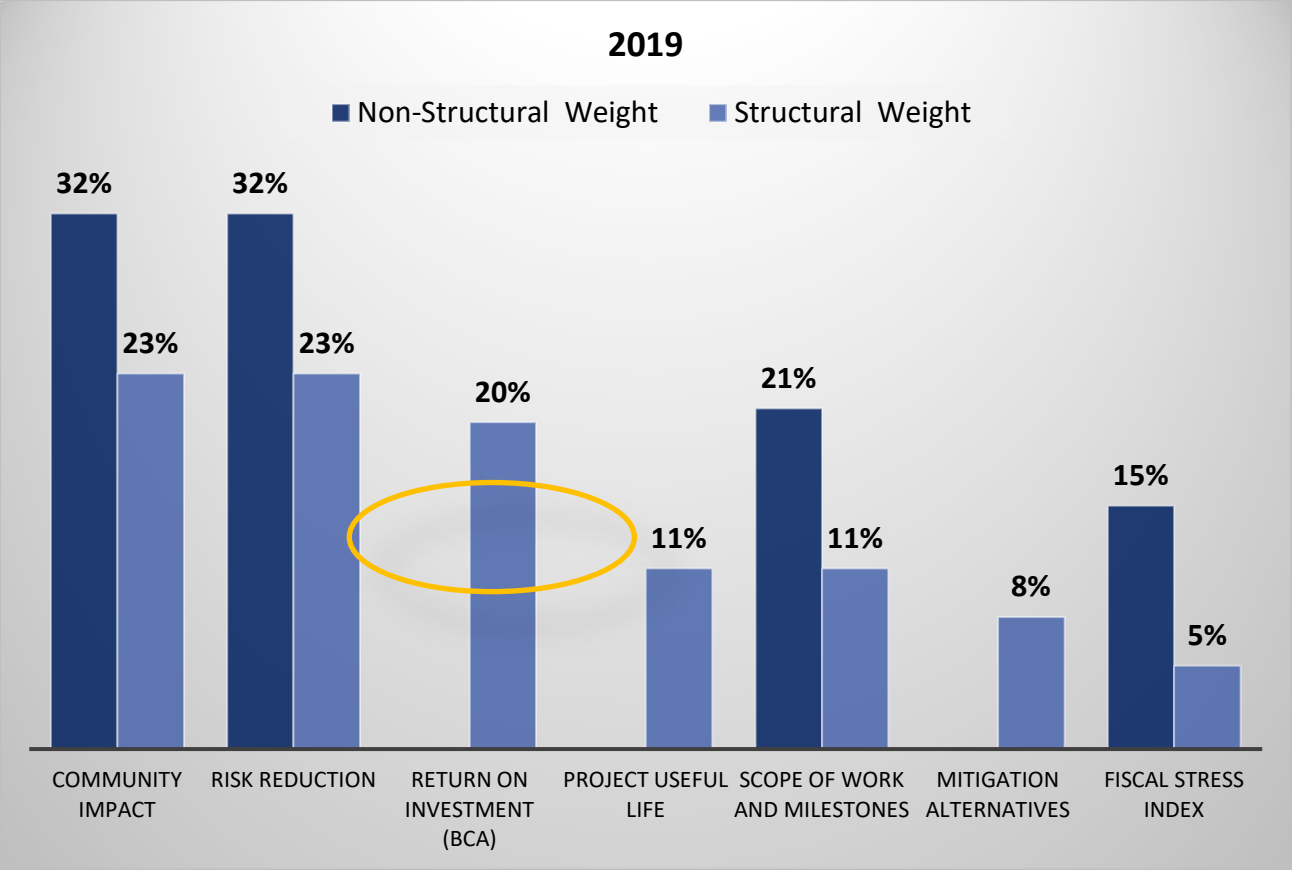


Virginia HMA Stakeholder Workshop

- Each year VDEM convenes a group of subject matter experts to weigh in on how we want to prioritize, and score hazard mitigation assistance grant applications
- Focus was on equity and how to incorporate vulnerable populations into the scoring
- All HMA projects end up being peer reviewed based on the scoring criteria and weights



2019 Scoring Criteria



Benefit Cost Analysis accounted for 20% of the project score in 2019



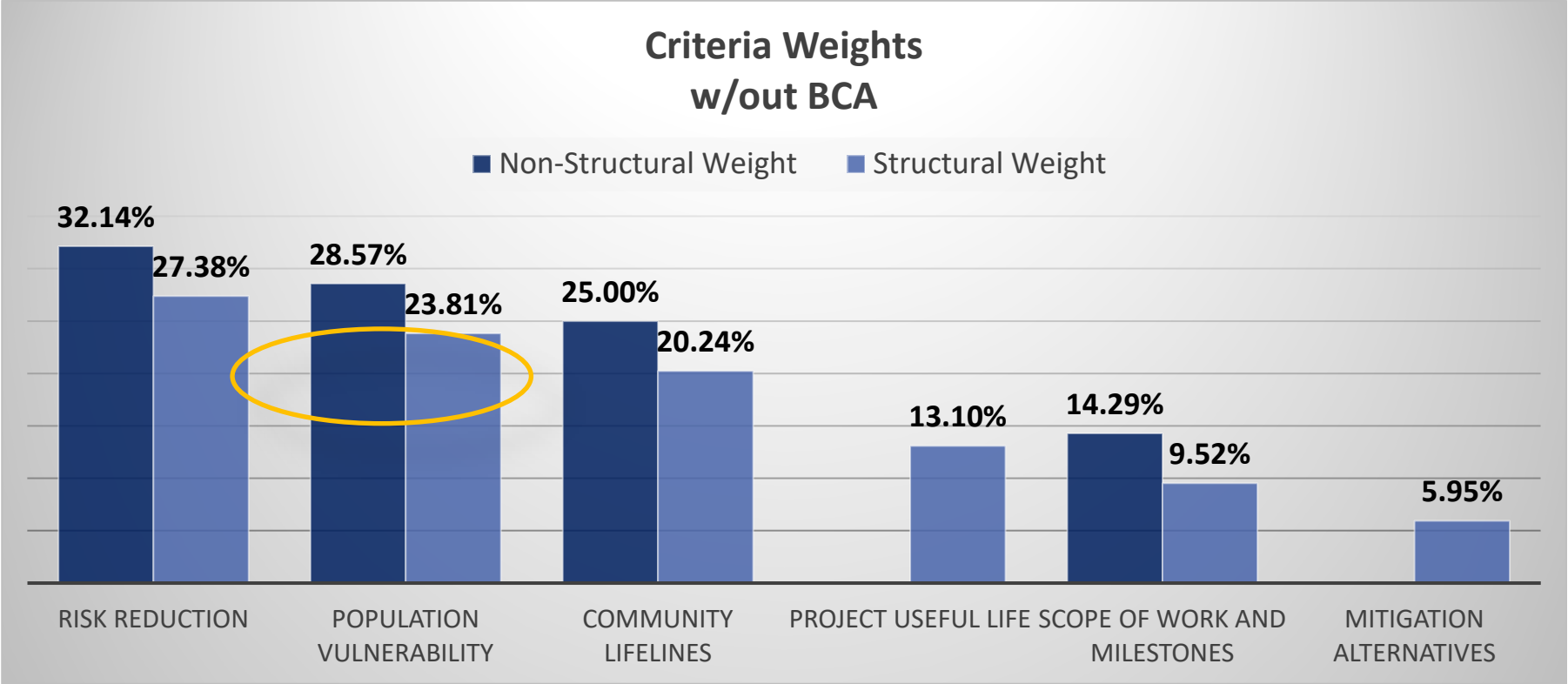
August 2020 Virginia HMA Stakeholder Workshop

A recommendation was made to remove the Benefit Cost Analysis from the scoring criteria from previous years

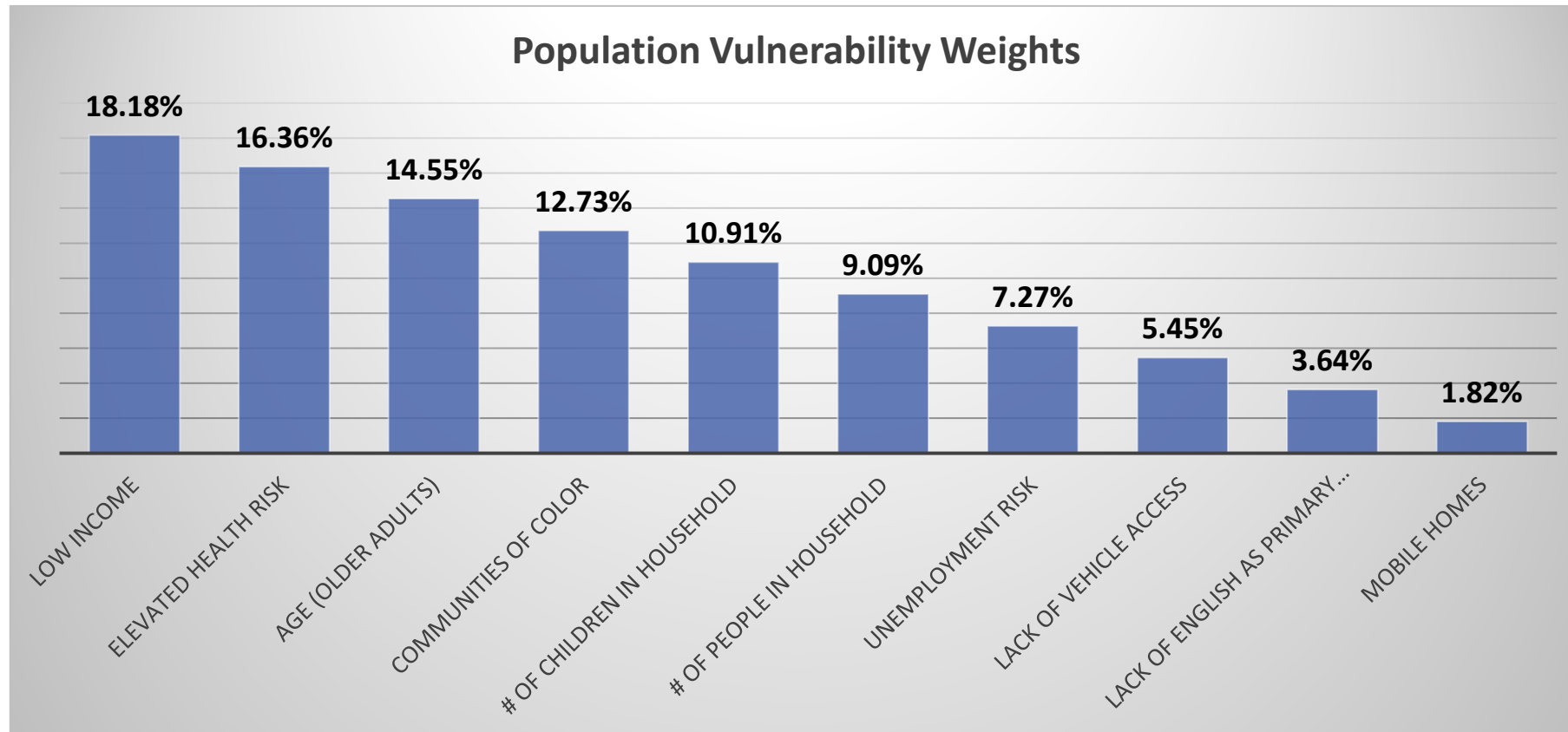
- 1) Based on the Virginia Coastal Policy Center Report
- 2) The minimum FEMA requirement for a BCA is a 1.0, and giving additional points for higher BCA had an unintended consequence on scoring
- 3) Using the FEMA project useful life as a factor kept the long-term risk requirement we were looking for



FY 20 HMA Scoring Criteria



Breakdown of Population Vulnerability Weights



Equity Analysis for Mitigation Project Planning

Background

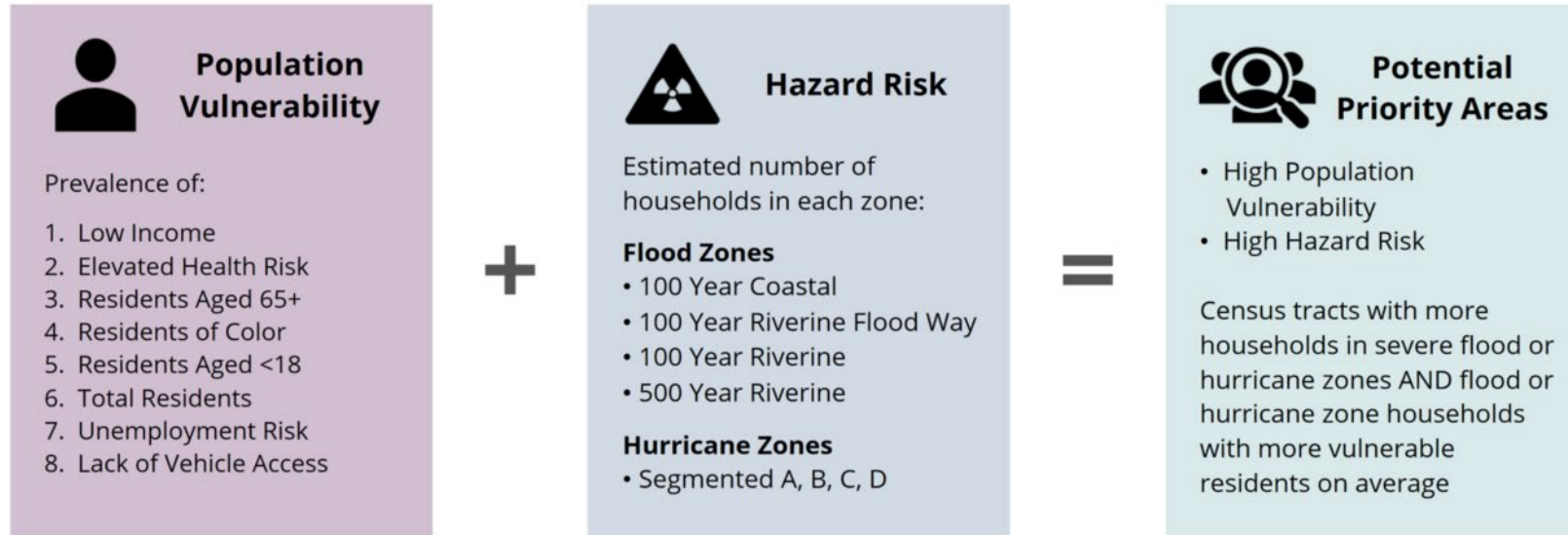
The **COVID-19 equity leadership taskforce** (ELT) was codified by Senate Bill 1296 to ensure that emergency management programs and plans **provide support to at-risk individuals and populations disproportionately impacted by disasters**.

- The ELT includes executive representatives from the **Office of Diversity, Equity and Inclusion, Virginia Department of Health, and Virginia Department of Emergency Management (VDEM)**.
- Virginia's ELT utilizes a **novel data-driven approach** to inform the COVID-19 Unified Command about at-risk populations and geographic areas of increased risk.
- The ELT partnered with Deloitte to conduct **analysis to identify vulnerable and at-risk populations** based on socioeconomic status and health risks for COVID-19 complications, informing **location-based decision-making** for PPE distribution, targeted outreach, testing sites, and potential vaccination sites.



Using Population Vulnerability and Hazard Risk to Prioritize Locations

Combining population vulnerability and hazard risk at the locality and census tract levels can help identify potential priority areas to support with future mitigation projects.



The objective of the equity analyses was to identify potential areas in each locality to consider for prioritization of mitigation projects based on the ability of the population to safely respond to and recover from floods or hurricanes.



Population Vulnerability Attributes



Population Vulnerability

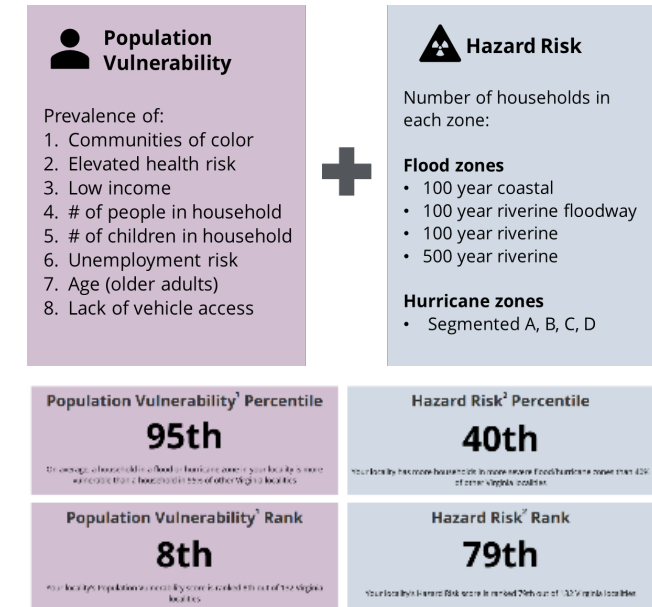
Attribute	Weighting	Description (in a household)
Low Income	19%	Estimated number of adults with income less than \$30,000
Elevated Health Risk	17%	Estimated number of adults with one or more serious health conditions
Residents Aged 65+	15%	Estimated number of adults who are age 65 and older
Residents of Color	13%	Estimated number of Black or African American or Hispanic or Latino adults
Residents Aged <18	12%	Estimated number of children
Total Residents	10%	Estimated number of adults and children
Unemployment Risk	8%	Estimated number of adults at high risk of unemployment
Lack of Vehicle Access	6%	Does the household lack access to a motor vehicle?

1. Two attributes - English as a Primary Language and Prevalence of Mobile Housing - were dropped from consideration based on the 8/20/2020 BRIC Working Group Session
2. Attribute contributions to Population Vulnerability were weighted as a result of the BRIC Working Group Session on 8/20/2020



Data-Driven Equity Workshop Selection

- To assist Virginia localities in their BRIC grant application process, locality-specific reports were created that highlight mitigation project opportunities at the intersection of population vulnerability and hazard risk.
- ✓ Analysis was conducted for **all 132 Virginia localities** with at least one house in a flood or hurricane zone
- ✓ **Based on the combined population vulnerability and hazard risk** of the 132 localities, **VDEM identified the top 40 localities** with the highest combined rankings to participate in the **equity workshops**
- ✓ The locality-specific analyses were shared with each locality in advance of the workshop to kickstart the discussion on **identifying vulnerable areas with hazard risk, and how to potentially support those areas with grant funding**
- ✓ **VDEM hosted 13 workshops with 40 localities** from June – August with partners from Old Dominion University, the Virginia Department of Conservation and Recreation, and Deloitte

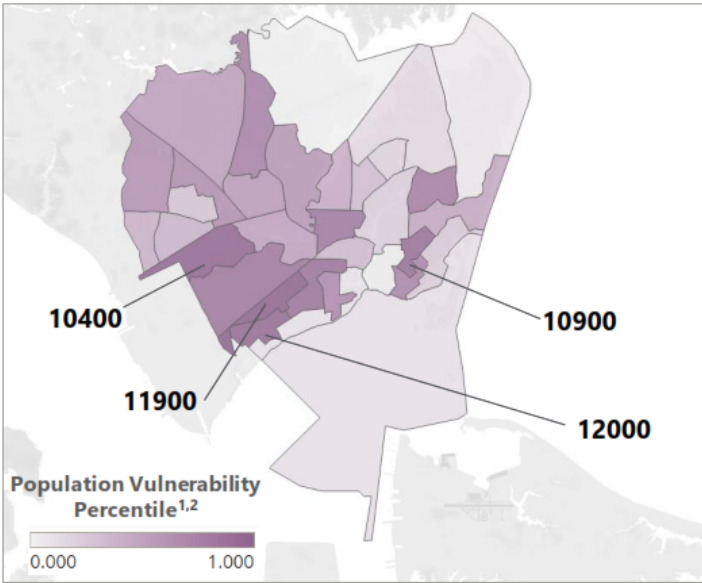


Population Vulnerability by Itself

What areas in your locality have the greatest population vulnerability?

When designing mitigation projects, it may be helpful to consider specific census tracts that are home to the most vulnerable individuals in the event of an environmental disaster.

Population Vulnerability¹ in Hampton City



Top-5 Census Tracts for Population Vulnerability¹

Within-Hampton City Percentiles											
#	Census Tract	# of House-holds	Pop. Vul.	Comm. of Color	Elevated Health Risk	Low Income	# of People	# of Children	Unem. Risk	Age	Vehicle Access
1	11900	1,809	100th	100th	100th	97th	66th	63rd	78th	66th	78th
2	10400	3,813	97th	97th	94th	81st	75th	66th	53rd	88th	81st
3	12000	1,884	94th	69th	97th	88th	63rd	72nd	44th	47th	72nd
4	10900	1,350	91st	91st	41st	91st	59th	75th	91st	63rd	91st
5	11800	2,749	88th	72nd	91st	75th	41st	38th	38th	53rd	75th

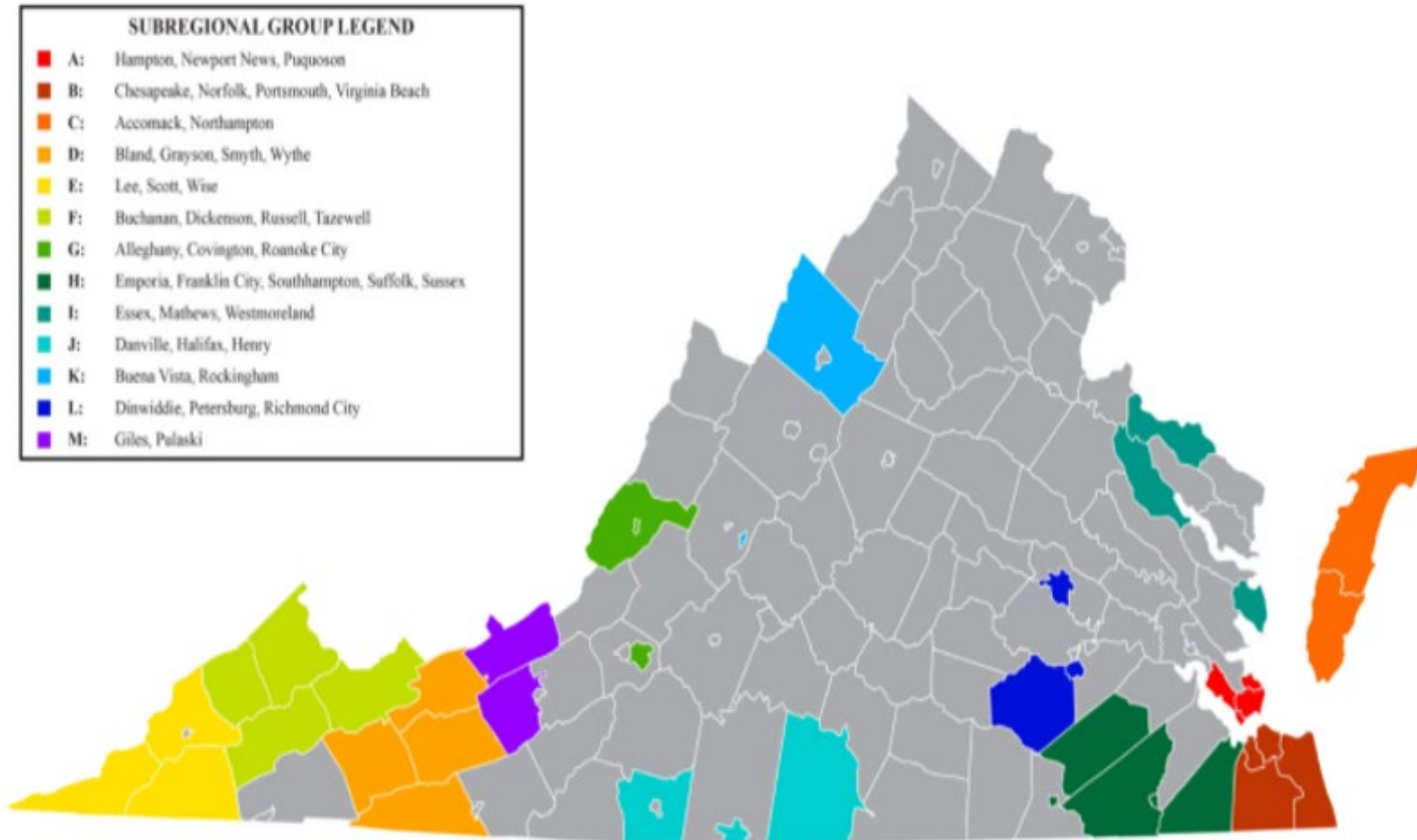
Note: See the appendix for a data table for the Top 15 Census Tracts

1. Population Vulnerability should be interpreted as an average household's ability to safely respond to an environmental disaster and only considers households located in flood or hurricane zones
2. Census tracts at the 0th percentile (areas in white) do not have households in Flood or Hurricane Zones

For internal use only by the Commonwealth of Virginia. Output based on available data.



40 Subregional Workshops



Results – FMA FY20

- 7 of the 15 project applications submitted for FMA were for local governments that were in the top 70% (40 total) in equity score based on the Deloitte Analysis. Virginia was one of 8 states to submit over \$10M in project applications.
- 8 of our 15 applications were identified for further review and 5 of those 8 were in the top 70% equity score



Questions?



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Glasgow Housing Relocation and Floodproofing Project

Rebecca Joyce
Community Program Manager
Central Shenandoah
Planning District Commission



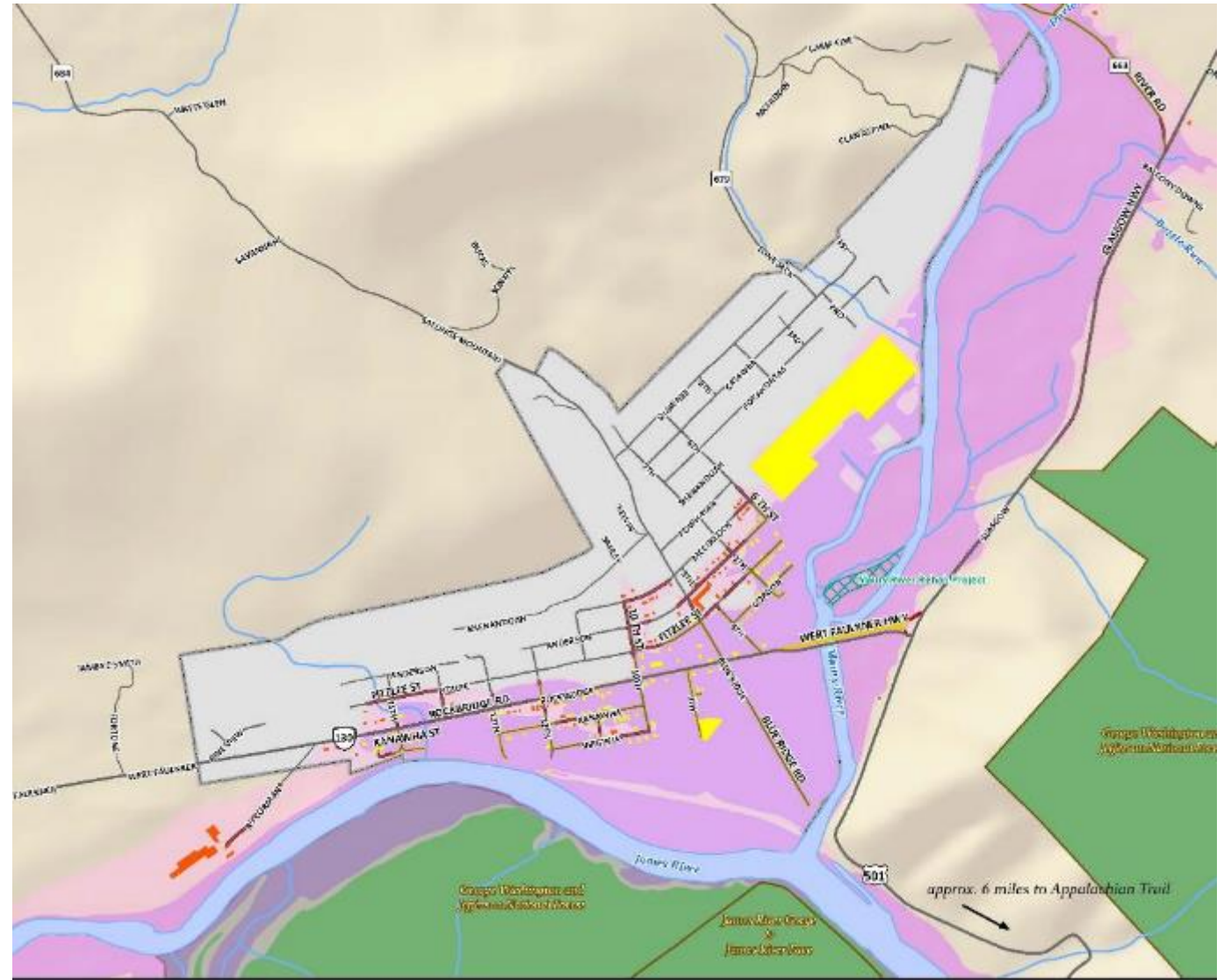
Central Shenandoah Planning District Commission

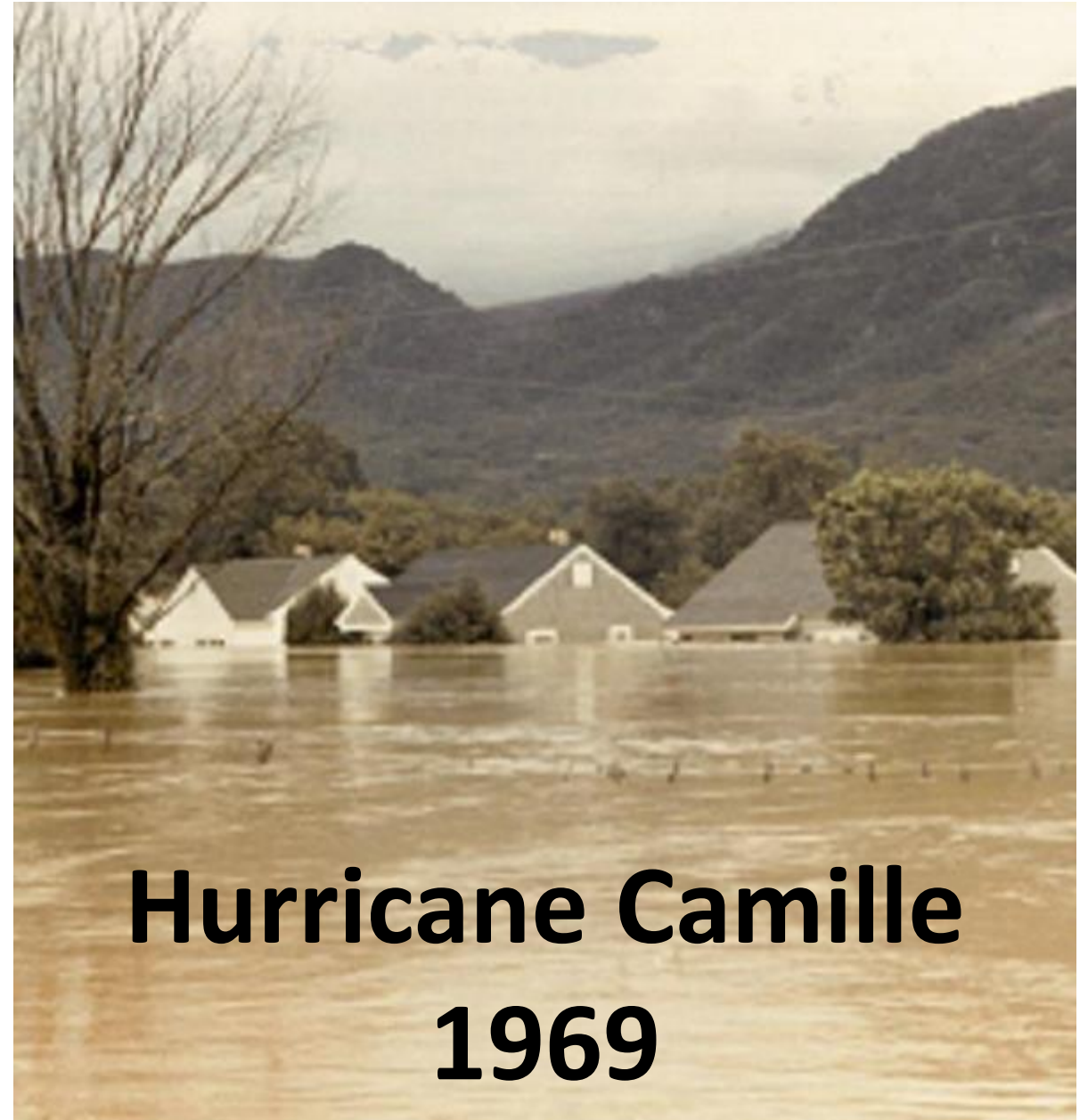
- Regional political subdivision chartered by the Commonwealth of Virginia in 1969.
- Covers 3,439 sq. miles
- Regional population over 290,000
- 21 Jurisdictions
 - 5 Counties
 - 5 Cities
 - 11 Towns
- Located in the Shenandoah Valley in the Appalachian Mountain Range.



Town of Glasgow

- Southern most jurisdiction in the Central Shenandoah Region
- Located in Rockbridge County, Virginia
- Covers 1.5 sq. miles
- Population 1,133 (2010)
- The confluence of the Maury and the James Rivers meet in Glasgow.
- Flooding has occurred in 1877, 1936, 1969 (Hurricane Camille), 1972 (Hurricane Agnes), 1985 (Hurricane Juan), and 1995





Project Highlights

- Budget: \$2,737,594
- Funding Sources:
 - FEMA Hazard Mitigation Grant Program
 - VA Department of Emergency Management
 - Community Development Block Grant
 - Rockbridge County waived landfill fees
- 5-year project : 1997 – 2002
- Acquisitions: 29
- Relocations – 8
- Elevations - 16





Relocation photographs





Elevation

Lessons Learned



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2021 BRIC and FMA Programs Webinars and Office Hours

- FEMA's Hazard Mitigation Assistance Division will hold office hours for the BRIC and FMA Programs on the following dates:
 - October 19, 21, 26, and 28



Full schedule of BRIC and FMA Programs Webinars and recordings are available at:
<https://www.fema.gov/grants/mitigation/2021-building-resilient-infrastructure-and-communities-and-flood-mitigation-assistance-programs>



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