Virginia Department of Emergency Management

HAZARD RISK & VULNERABLE POPULATIONS

2021 HAZARD MITIGATION ASSISTANCE GRANTS EQUITY WORKSHOPS

The Deloitte Health360 Solution informs population vulnerability and enables a data-driven approach to operationalizing equity in mitigation projects. It is broken down into two components: Population Vulnerability and Hazard Risk. Both components are added together to identify potential priority areas to support future mitigation projects.

POPULATION VULNERABILITY

Provides a people-focused metric that can be combined with infrastructure, elevation, and financial metrics to support a holistic approach to mitigation planning.

HAZARD RISK

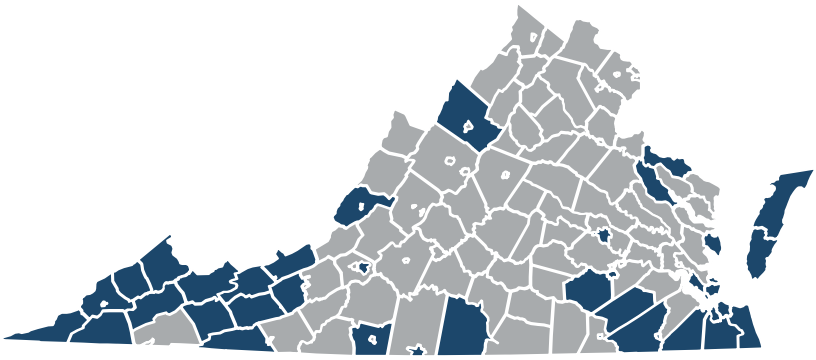
Reflects the number of households in each flood or hurricane zone weighted by risk severity to provide a people-focused risk metric.

PRIORITIZED CENSUS TRACTS

Combining population vulnerability and hazard risk at a sub-locality level can identify potential priority areas to support with future mitigation projects.

SERIES OBJECTIVES

1. Interpret data from the Deloitte Analysis and identify flooding risk in these areas.
2. Understand and explore potential solutions to hazard risk areas and vulnerable populations.
3. Educate stakeholders on funding programs such as FEMA hazard mitigation grants, CDBG grants, and the new CFP fund.
4. Discuss next steps, technical assistance needs, and training.



40 Localities Identified Scoring Over 70%

REGISTRATION https://odu.co1.qualtrics.com/jfe/form/SV_dd549WZWcIKVz3E

QUESTIONS? vdemgrants@vdem.virginia.gov

HAZARD RISK & POPULATION VULNERABILITY

Virginia Department of Emergency Management

SUBREGIONAL WORKSHOP

August 26, 2021 from 10am to 12pm

Accomack
Northampton

POPULATION VULNERABILITY

Provides a people-focused metric that can be combined with infrastructure, elevation, and financial metrics to support a holistic approach to mitigation planning.

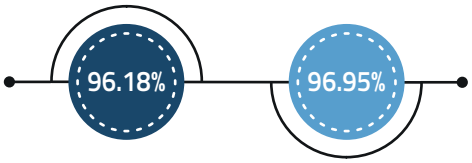
HAZARD RISK

Reflects the number of house-holds in each flood or hurricane zone weighted by risk severity to provide a people-focused risk metric.

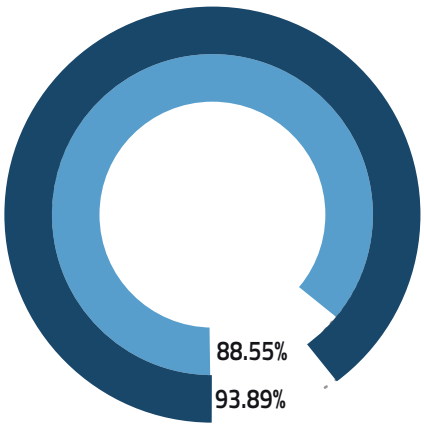
PRIORITIZED CENSUS TRACTS

Combining population vulnerability and hazard risk at a sub-locality level can identify potential priority areas to support with future mitigation projects.

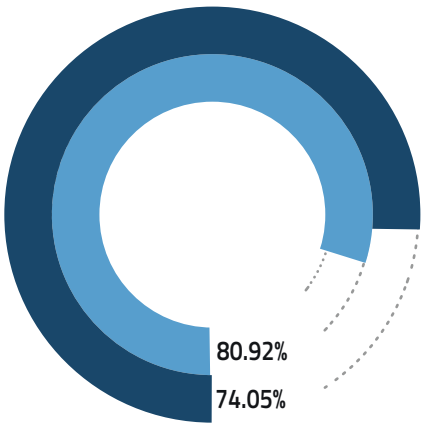
OVERALL PERCENTILE



HAZARD RISK PERCENTILE



POPULATION VULNERABILITY PECENTILE



FACILITATED BY The Virginia Modeling, Analysis, and Simulation Center

COVID-19 Unified Command/VEST Health Equity Working Group

MITIGATION PROJECTS ANALYSIS
NORTHAMPTON COUNTY

NOVEMBER 2020

Topics

The analysis provides **Northampton County** with information to support planning and preparation of projects for the Building Resilient Infrastructure and Communities (BRIC) grant application with an equity focus.

- ❑ Introduction to Data-Driven Approach
- ❑ Hazard Risk
- ❑ Population Vulnerability
- ❑ Summary
- ❑ FEMA Funding and Past Projects
- ❑ Considerations for Next Steps

This analysis ***expands the scope of population vulnerability*** to provide a ***data-driven equity lens*** for disaster mitigation project design

Data-Driven Approach

The Health360 platform informs population vulnerability and enables a data-driven approach to operationalizing equity in mitigation projects.

Powered By Health360

230M+
U.S. Adults Scored

Data updated every
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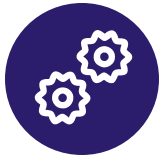


150+
Advanced predictive algorithms

400+
Variables used in the mortality predictive algorithm

Provides 360° view of a person

Algorithms rebuilt every 2 years

40+
Clients served

What is hazard risk and how is it calculated?

Household Hazard risk reflects the number of households in each flood or hurricane zone, weighted by severity.

Hazard Risk

Number of households in each zone:

Flood zones
- 100 year coastal
- 100 year riverine flood way
- 100 year riverine
- 500 year riverine

Hurricane zones
- Segmented A, B, C, D

- Households that reside in the flood and hurricane zones are considered to be **at-risk for environmental disasters**
- Hazard Risk reflects **the number of households located in Flood and Hurricane Zones**
- Hazard Risk is not a measure of **infrastructure, elevation, or financial risks**, but is a measure of the number of at-risk households in an area, weighted by the severity of the risk, to **provide a people-focused risk metric**

Note: Severity of the risk per household is captured on an ordinal scale from 1 – least severe (Hurricane Zone D, 500 Year Riverine) to 4 – most severe (Hurricane Zone A, 100 Year Coastal)

Hazard Risk = (# of Households Analyzed in Particular Hurricane or Flood Zones) X (Specified Zone Risk Level (1 through 4 depending on risk severity))

Hazard Risk in Your Locality

The figures below indicate how your locality's hazard risk[1] compares to others in Virginia as well as how many households reside in each flood or hurricane zone.

Hazard Risk[1] Percentile

89th

Your locality has more households in more severe flood/hurricane zones than 89% of other Virginia localities

Hazard Risk[1] Rank

16th

Your locality's Hazard Risk score is ranked 16th out of 132 Virginia localities

Households in Flood Zones & Locality Rank

← Severity			
100 Year Coastal	100 Year Riverine Floodway	100 Year Riverine	500 Year Riverine
1	0	50	229
10th out of 132 Localities	N/A out of 132 Localities	102nd out of 132 Localities	32nd out of 132 Localities

Flood zones are geographic areas that FEMA has defined according to varying levels of flood risk

Households in Hurricane Zones & Locality Rank

← Severity			
Zone A	Zone B	Zone C	Zone D
717	214	1,143	1,294
12th out of 132 Localities	16th out of 132 Localities	10th out of 132 Localities	9th out of 132 Localities

Evacuation zones designated as A through D are in place across coastal Virginia

1. Hazard risk reflects the number of households located in Flood and Hurricane Zones, weighted by severity
2. Note that the total sum of households may be more than the households in your locality because some are located in both flood and hurricane zones

What is population vulnerability and how is it calculated?

The Population Vulnerability score provides a people-focused metric that can be combined with infrastructure, elevation, and financial metrics to support a holistic approach to mitigation planning.

Population Vulnerability

Prevalence of:

1. Communities of color
2. Elevated health risk
3. Low income
4. # of people in household
5. # of children in household
6. Unemployment risk
7. Age (older adults)
8. Lack of vehicle access

- Population Vulnerability **expands upon the 2018 Virginia Hazard Mitigation plan definition** of population vulnerability (density and percentage of total population)
- Population Vulnerability **only considers localities with households in flood or hurricane zones (132 localities)**
- Population Vulnerability **identifies the locality and census blocks/Census Blocks** with the most vulnerable individuals/households on average
- Population Vulnerability should be interpreted as a **household's ability to safely respond** to an environmental disaster

Population Vulnerability in Your Locality

The figures below indicate how your locality's population vulnerability[1] score and composite attributes compare to other localities in Virginia.

Population Vulnerability[1] Percentile

81st

On average, a household in a flood or hurricane zone in your locality is more vulnerable than a household in 81% of other Virginia localities

Population Vulnerability[1] Rank

26th

Your locality's Population Vulnerability score is ranked 26th out of 132 Virginia localities

How NORTHAMPTON COUNTY Compares to Other Localities Across the Eight Vulnerability Attributes

Low Income	Elevated Health Risk	Age	Communities of Color
47th percentile	95th percentile	77th percentile	85th percentile

# of Children in Household	# of People in Household	Unemployment Risk	Lack of Vehicle Access
22nd percentile	30th percentile	51st percentile	84th percentile

1. Population Vulnerability should be interpreted as a household's ability to safely respond to an environmental disaster and only considers households located in flood or hurricane zones

Population Vulnerability & Hazard Risk Summary

Understanding population vulnerability and hazard risk in your locality can help support future mitigation projects.

Population Vulnerability[1] Percentile

81st

On average, a household in a flood or hurricane zone in your locality is more vulnerable than a household in 81% of other Virginia localities

Hazard Risk[2] Percentile

89th

Your locality has more households in more severe flood/hurricane zones than 89% of other Virginia localities

Population Vulnerability[1] Rank

26th

Your locality's Population Vulnerability score is ranked 26th out of 132 Virginia localities

Hazard Risk[2] Rank

16th

Your locality's Hazard Risk score is ranked 16th out of 132 Virginia localities

1. Population Vulnerability should be interpreted as a household's ability to safely respond to an environmental disaster and only considers households located in flood or hurricane zones
2. Hazard risk reflects the number of households located in Flood and Hurricane Zones, weighted by severity

Review of FEMA Funding & Past Mitigation Projects

Review of Mitigation Projects In Your Locality

The figures below provide information regarding mitigation projects[1] in your locality from 1990-2019 that may be helpful to consider in planning potential future mitigation projects.

Total Exclusive Project Funding[1]

$750,566

This is the total amount of federal funding alloted to mitigation projects solely owned by your locality from 1990-2019

Total Shared Project Funding[1]

$231,100

This is the total amount of federal funding allotted to mitigation projects owned by your locality and at least 1 other from 1990-2019

Exclusive Projects

4

Average Project Size

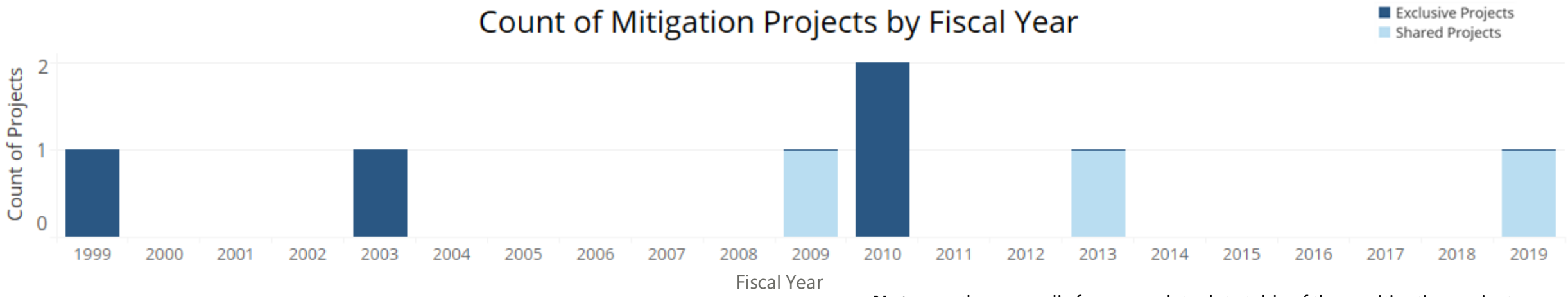
$188K

Shared Projects

3

Average Counties Per Project

2.0

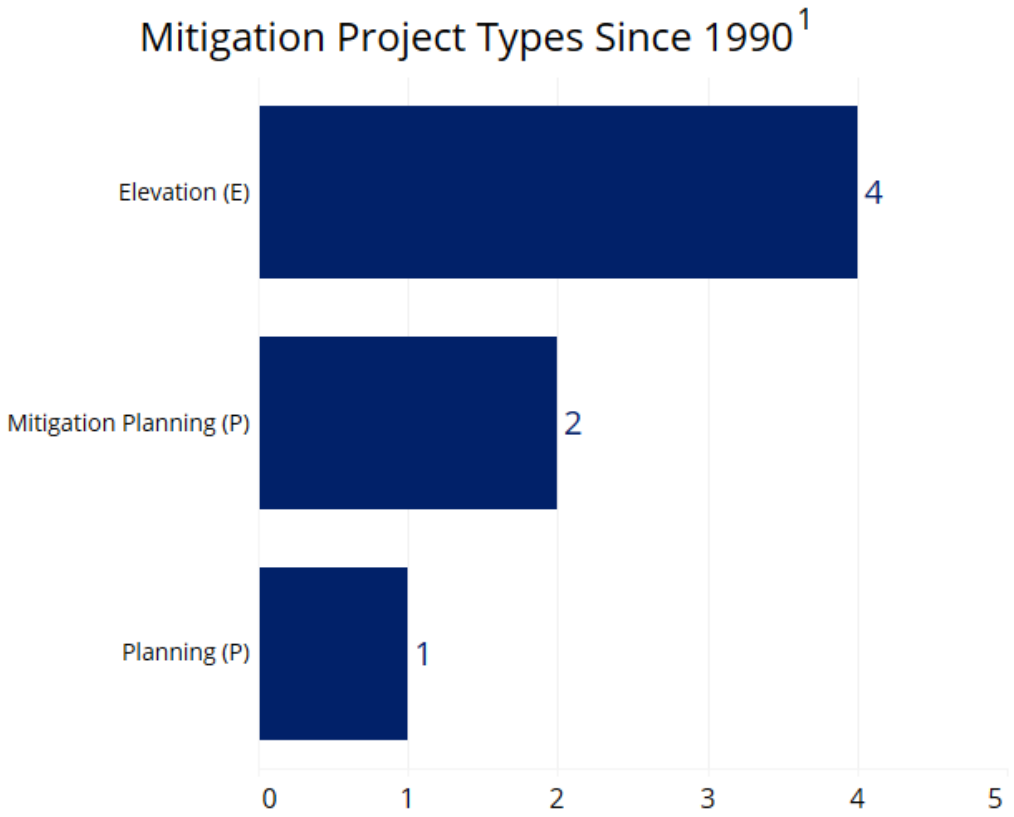


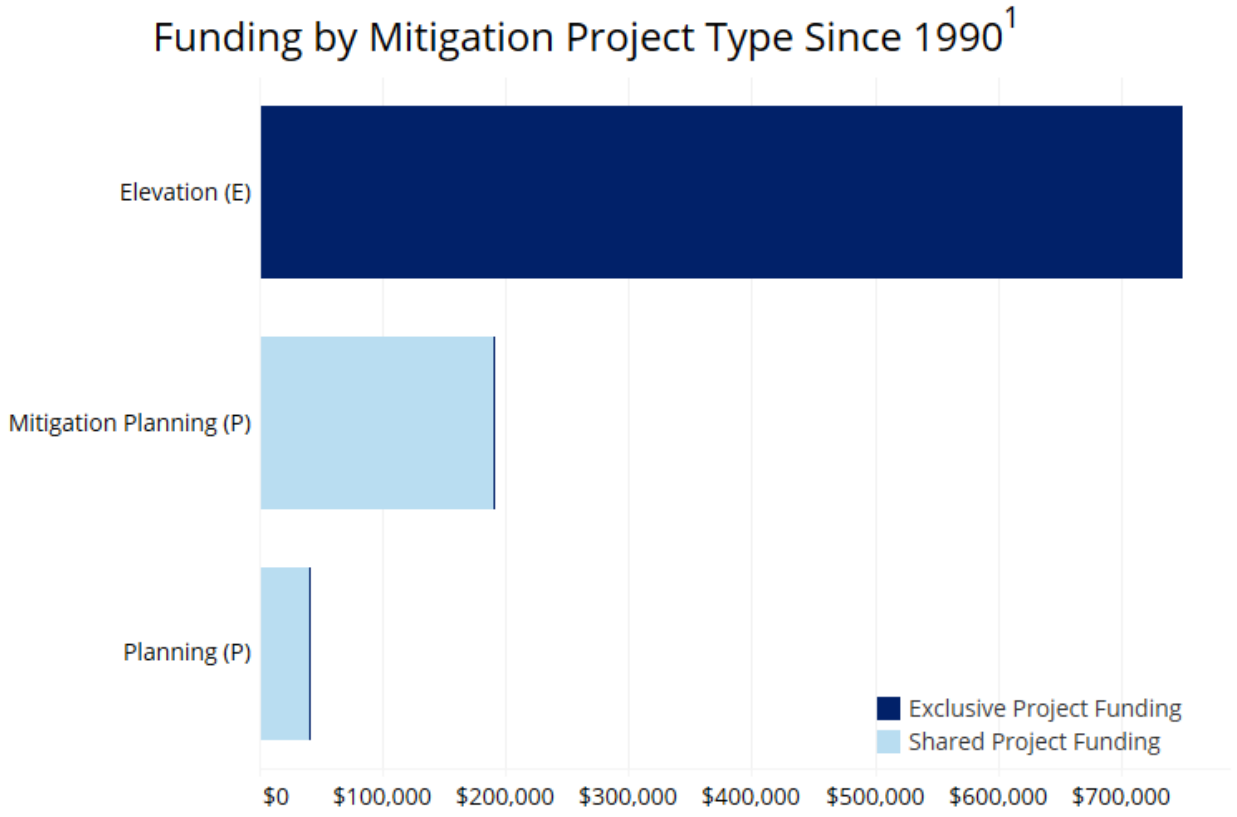
1. Source: FEMA Hazard Mitigation Projects-V2 dataset from fema.gov

Note: see the appendix for a complete data table of these mitigation projects

Past Mitigation Projects – Top Project Types

The figures below provide information regarding mitigation projects[1] in your locality from 1990-2019 that may be helpful to consider in planning potential future mitigation projects.





1. Source: FEMA Hazard Mitigation Projects-V2 dataset from fema.gov

Note: see the appendix for a complete data table of these mitigation projects

COVID-19 Impacts

COVID-19 In Your Locality

Since the beginning of the COVID-19 Pandemic, Northampton County has experienced the following:

Cases[1]

Total	Per 100k
319	**2,668**
88th out of 133 localities[2]	**28th** out of 133 localities

Hospitalizations[1]

Total	Per 100k
49	**410**
42nd out of 133 localities	**4th** out of 133 localities

Deaths[1]

Total	Per 100k
31	**259**
24th out of 133 localities	**3rd** out of 133 localities

1. COVID-19 case, hospitalization, and death figures are sourced from the Virginia Department of Health as of **10/26/2020**
2. COVID-19 Impact rankings are for all 133 Virginia localities, rather than the 132 included in the BRIC analysis for having at least one household in a flood or hurricane zone

Considerations for Next Steps

Considerations for Next Steps

When evaluating future mitigation project opportunities, the population vulnerability and hazard risk metrics can supplement existing measures to design mitigation projects with an equity lens.

- Consider **population vulnerability** and it's various components to support decisions on mitigation projects
- Consider **supplementing these people-focused metrics** with existing infrastructure, elevation, and financial analysis for a holistic mitigation planning approach that includes equity considerations
- Consider **past project types** and **prior funding** in the overall mitigation strategy

Appendix

What is population vulnerability and how is it calculated? *continued*

The vulnerability score for each Virginia household reflects an estimate of the household's ability to safely respond in the event of an environmental disaster.

Population Vulnerability

Attribute[1]	Weighting[2]	Description (in a household)
Low Income	18%	Number of adults with income less than $30,000
Elevated Health Risk	17%	Number of adults with one or more serious health conditions
Age (Older Adults)	15%	Number of adults who are age 65 and older
Communities of Color	13%	Number of Black or African American or Hispanic or Latino adults
# of Children in Household	12%	Number of children
# of People in Household	10%	Number of adults and children
Unemployment Risk	8%	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 table | FEMA Funding[1]

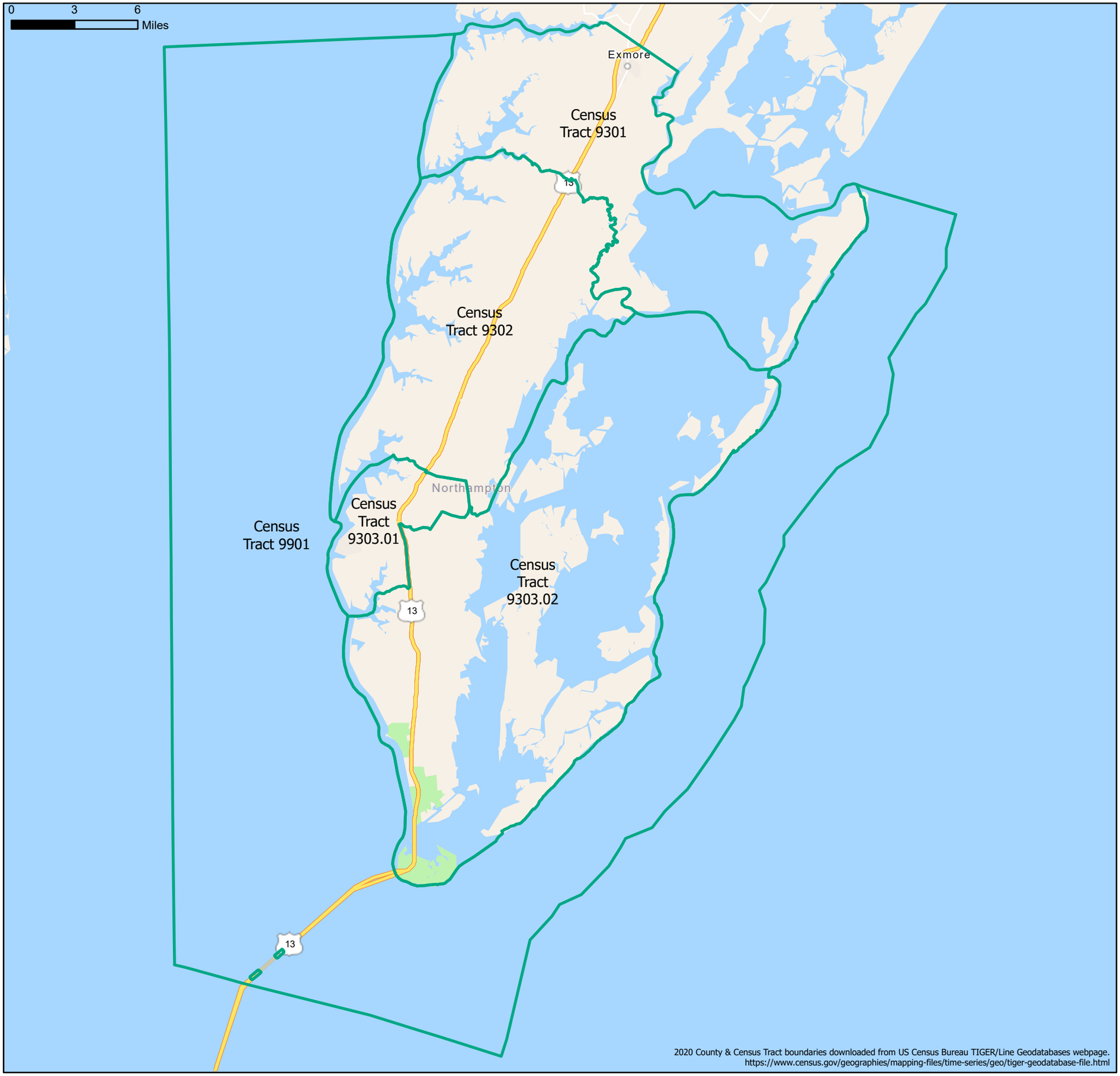
Grantee	Year of Fiscal Year	Exclusive vs Shared	Subgrantee	Project Counties	Project Type(s)	Federal Funds Obligated
NORTHAMPTON COUNTY	2019	Shared	ACCOMACK-NORTHAMPTON PLANNIN..	ACCOMACK; NORTHAMPTON	91.5: Local Multijurisdictional Multihazard Mitigation Plan - UPDATE	$90,000
	2013	Shared	ACCOMACK-NORTHAMPTON PLANNIN..	NORTHAMPTON; ACCOMACK	91.1: Local Multihazard Mitigation Plan	$100,000
	2010	Exclusive	ACCOMACK-NORTHAMPTON PLANNIN..	NORTHAMPTON	202.1: Elevation of Private Structures - Riverine; 202.2: Elevation of Private Structures - Coastal	$205,970
	2009	Shared	Accomack-Northampton Planning District Com..	ACCOMACK; NORTHAMPTON	95.1: FMA or CRS Plan	$41,100
	2003	Exclusive	Northampton (County)	NORTHAMPTON	202.1: Elevation of Private Structures - Riverine	$465,846
	1999	Exclusive	Northampton (County)	NORTHAMPTON	202.1: Elevation of Private Structures - Riverine	$78,750

1. Source: FEMA Hazard Mitigation Projects-V2 dataset from fema.gov

Northampton County

2020 Census Tract

VDEM GIS | 5/21/2021



2020 County & Census Tract boundaries downloaded from US Census Bureau TIGER/Line Geodatabases webpage.
https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-geodatabase-file.html

2020 Census Tract

Accomack County

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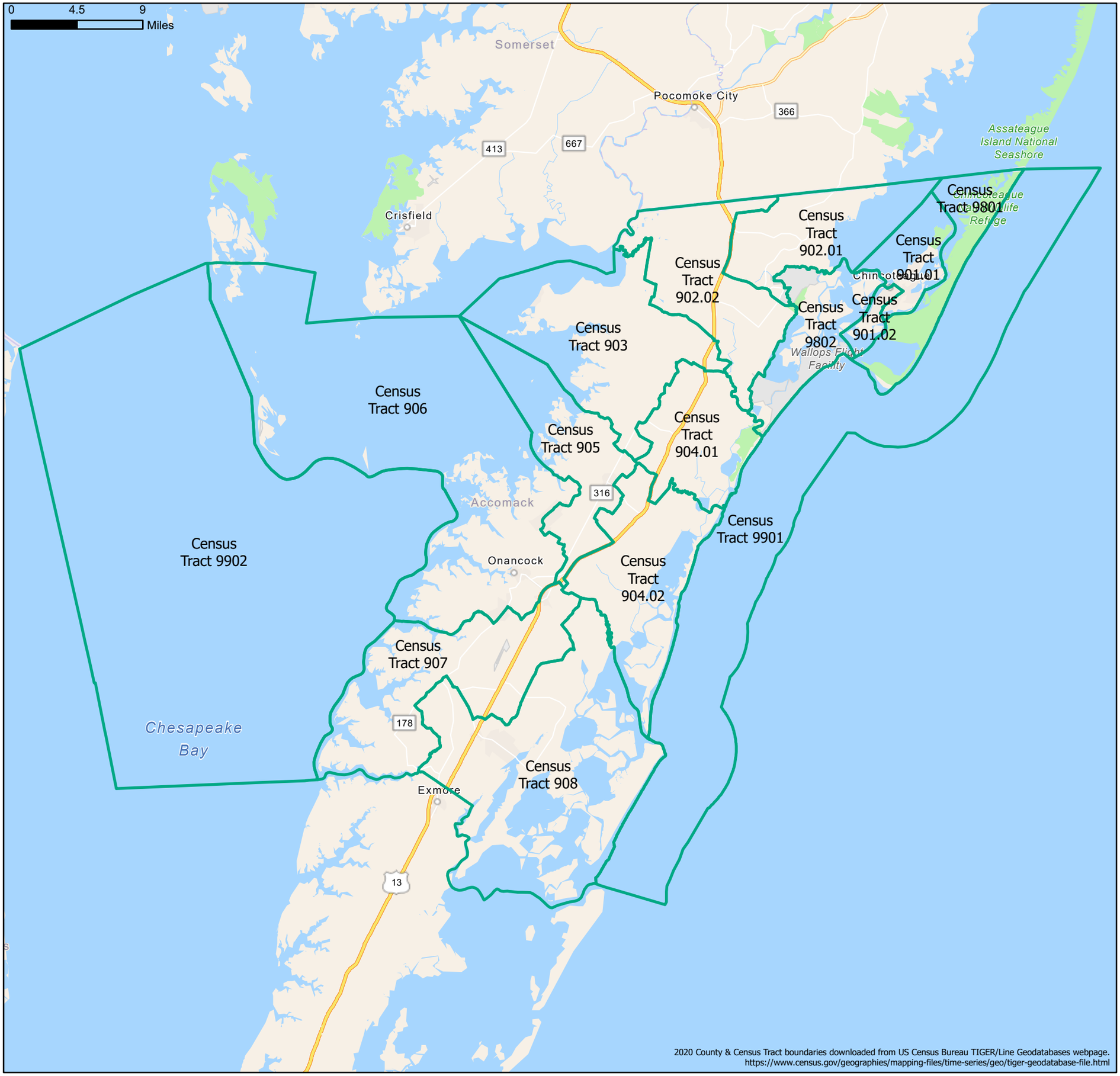

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COVID-19 Unified Command/VEST Health Equity Working Group

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ACCOMACK COUNTY

NOVEMBER 2020

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- ❑ FEMA Funding and Past Projects
- ❑ Considerations for Next Steps

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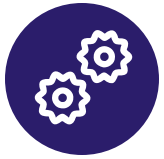

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What is hazard risk and how is it calculated?

Household Hazard risk reflects the number of households in each flood or hurricane zone, weighted by severity.

Hazard Risk

Number of households in each zone:

Flood zones
- 100 year coastal
- 100 year riverine flood way
- 100 year riverine
- 500 year riverine

Hurricane zones
- Segmented A, B, C, D

- Households that reside in the flood and hurricane zones are considered to be **at-risk for environmental disasters**
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- Hazard Risk is not a measure of **infrastructure, elevation, or financial risks**, but is a measure of the number of at-risk households in an area, weighted by the severity of the risk, to **provide a people-focused risk metric**

Note: Severity of the risk per household is captured on an ordinal scale from 1 – least severe (Hurricane Zone D, 500 Year Riverine) to 4 – most severe (Hurricane Zone A, 100 Year Coastal)

Hazard Risk = (# of Households in Particular Hurricane or Flood Zones) X (Specified Zone Risk Level (1 through 4 depending on risk severity))

Hazard Risk in Your Locality

The figures below indicate how your locality's hazard risk[1] compares to others in Virginia as well as how many households reside in each flood or hurricane zone.

Hazard Risk[1] Percentile

94th

Your locality has more households in more severe flood/hurricane zones than 94% of other Virginia localities

Hazard Risk[1] Rank

9th

Your locality's Hazard Risk score is ranked 9th out of 132 Virginia localities

Households in Flood Zones & Locality Rank

← Severity			
100 Year Coastal	100 Year Riverine Floodway	100 Year Riverine	500 Year Riverine
1	0	2,916	777
10th out of 132 Localities	N/A out of 132 Localities	8th out of 132 Localities	14th out of 132 Localities

Flood zones are geographic areas that FEMA has defined according to varying levels of flood risk

Households in Hurricane Zones & Locality Rank

← Severity			
Zone A	Zone B	Zone C	Zone D
4,101	1,889	590	4,594
8th out of 132 Localities	8th out of 132 Localities	11th out of 132 Localities	7th out of 132 Localities

Evacuation zones designated as A through D are in place across coastal Virginia

1. Hazard risk reflects the number of households located in Flood and Hurricane Zones, weighted by severity
2. Note that the total sum of households may be more than the households in your locality because some are located in both flood and hurricane zones

What is population vulnerability and how is it calculated?

The Population Vulnerability score provides a people-focused metric that can be combined with infrastructure, elevation, and financial metrics to support a holistic approach to mitigation planning.

Population Vulnerability

Prevalence of:

1. Communities of color
2. Elevated health risk
3. Low income
4. # of people in household
5. # of children in household
6. Unemployment risk
7. Age (older adults)
8. Lack of vehicle access

- Population Vulnerability **expands upon the 2018 Virginia Hazard Mitigation plan definition** of population vulnerability (density and percentage of total population)
- Population Vulnerability **only considers localities with households in flood or hurricane zones (132 localities)**
- Population Vulnerability **identifies the locality and census tracts/census blocks** with the most vulnerable individuals/households on average
- Population Vulnerability should be interpreted as a **household's ability to safely respond** to an environmental disaster

Population Vulnerability in Your Locality

The figures below indicate how your locality's population vulnerability[1] score and composite attributes compare to other localities in Virginia.

Population Vulnerability[1] Percentile

74th

On average, a household in a flood or hurricane zone in your locality is more vulnerable than a household in 74% of other Virginia localities

Population Vulnerability[1] Rank

35th

Your locality's Population Vulnerability score is ranked 35th out of 132 Virginia localities

How ACCOMACK COUNTY Compares to Other Localities Across the Eight Vulnerability Attributes

Low Income	Elevated Health Risk	Age	Communities of Color
56th percentile	82nd percentile	65th percentile	77th percentile

# of Children in Household	# of People in Household	Unemployment Risk	Lack of Vehicle Access
39th percentile	43rd percentile	34th percentile	71st percentile

1. Population Vulnerability should be interpreted as a household's ability to safely respond to an environmental disaster and only considers households located in flood or hurricane zones

Using Population Vulnerability & Hazard Risk to Prioritize Census Tracts

Combining population vulnerability and hazard risk at a sub-locality level can identify potential priority areas to support with future mitigation projects.

Population Vulnerability

Prevalence of:

1. Communities of color
2. Elevated health risk
3. Low income
4. # of people in household
5. # of children in household
6. Unemployment risk
7. Age (older adults)
8. Lack of vehicle access

+

Hazard Risk

Number of households in each zone:

Flood zones

- 100 year coastal
- 100 year riverine floodway
- 100 year riverine
- 500 year riverine

Hurricane zones

- Segmented A, B, C, D

=

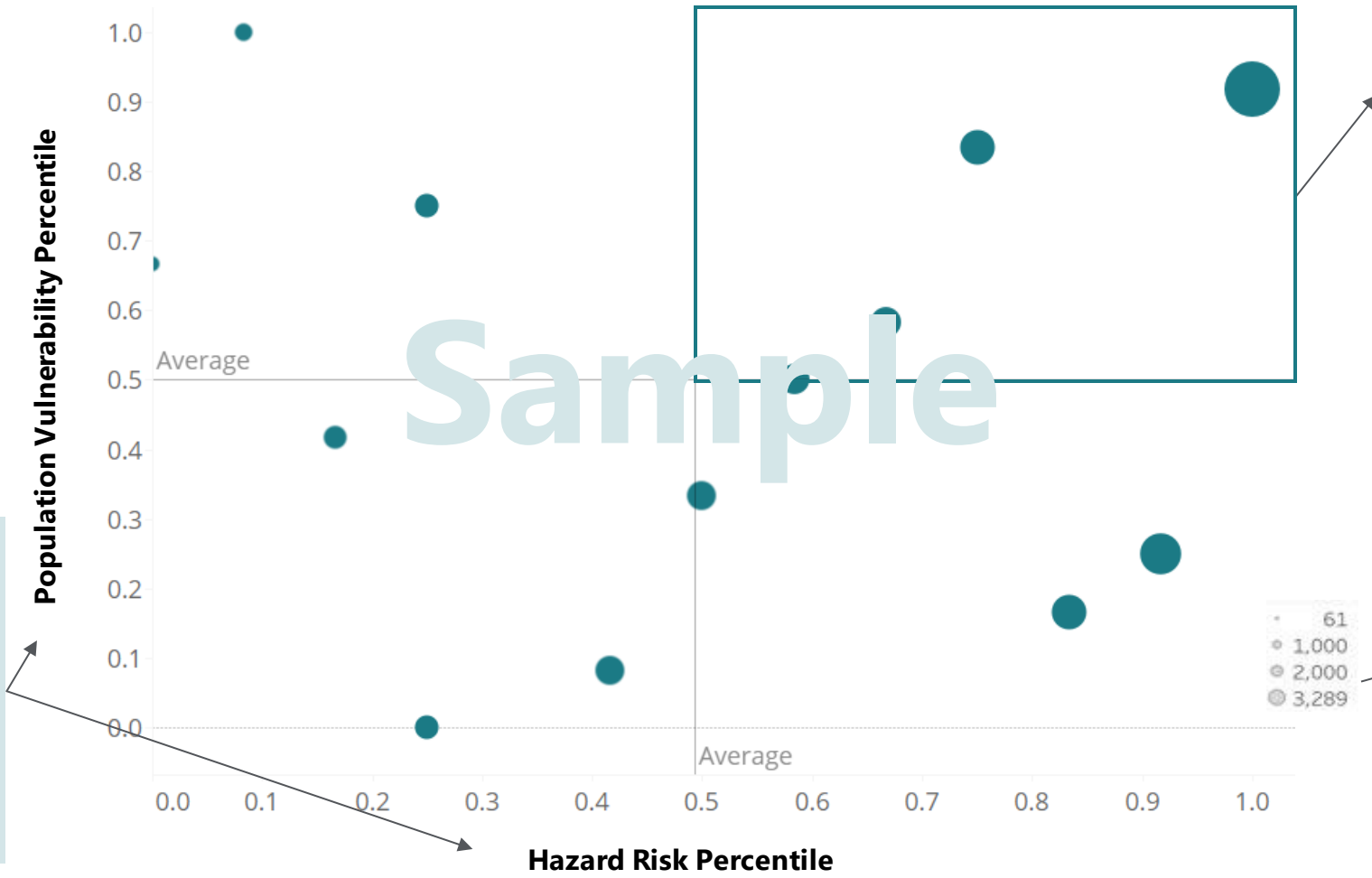
Prioritized Census Tracts

- High Population Vulnerability
- High Hazard Risk

Census tracts with both more households in severe flood/hurricane zones AND households with more vulnerable occupants

How to interpret the Census Tract plots

The chart below represents a *sample* locality and offers guidance on how to interpret the information when planning mitigation efforts.



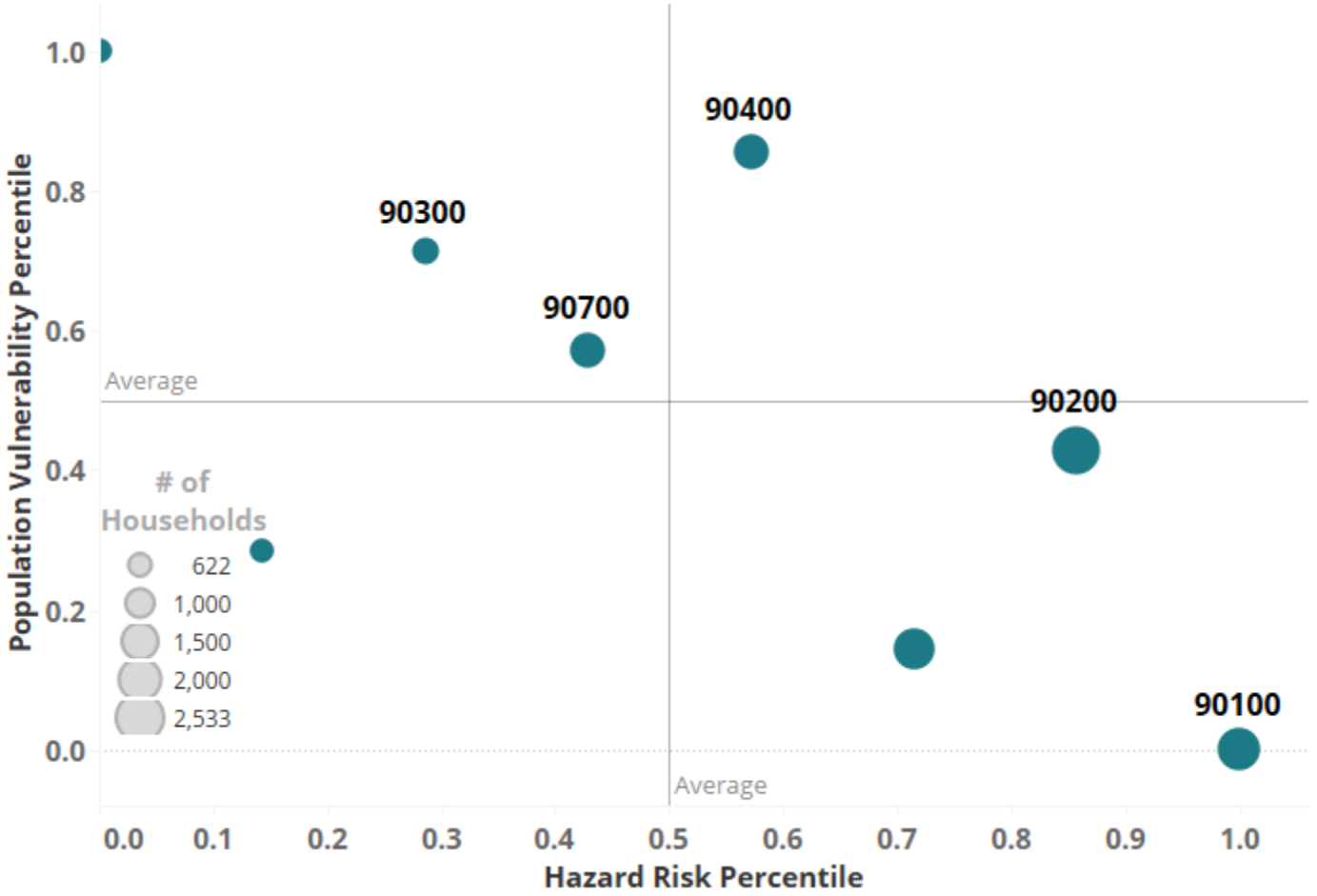
Circles in the upper right quadrant represent areas that you might consider prioritizing due to high population vulnerability and hazard risk

The x- and y-axes measure the percentiles of hazard risk and population vulnerability for each area

Size of the circle indicates the number of households in each area

Prioritizing Census Tracts in Accomack County

Areas with the most vulnerable populations and households in severe flood and hurricane zones present prioritization opportunities for mitigation projects.



Priority Areas in Flood and Hurricane Zones

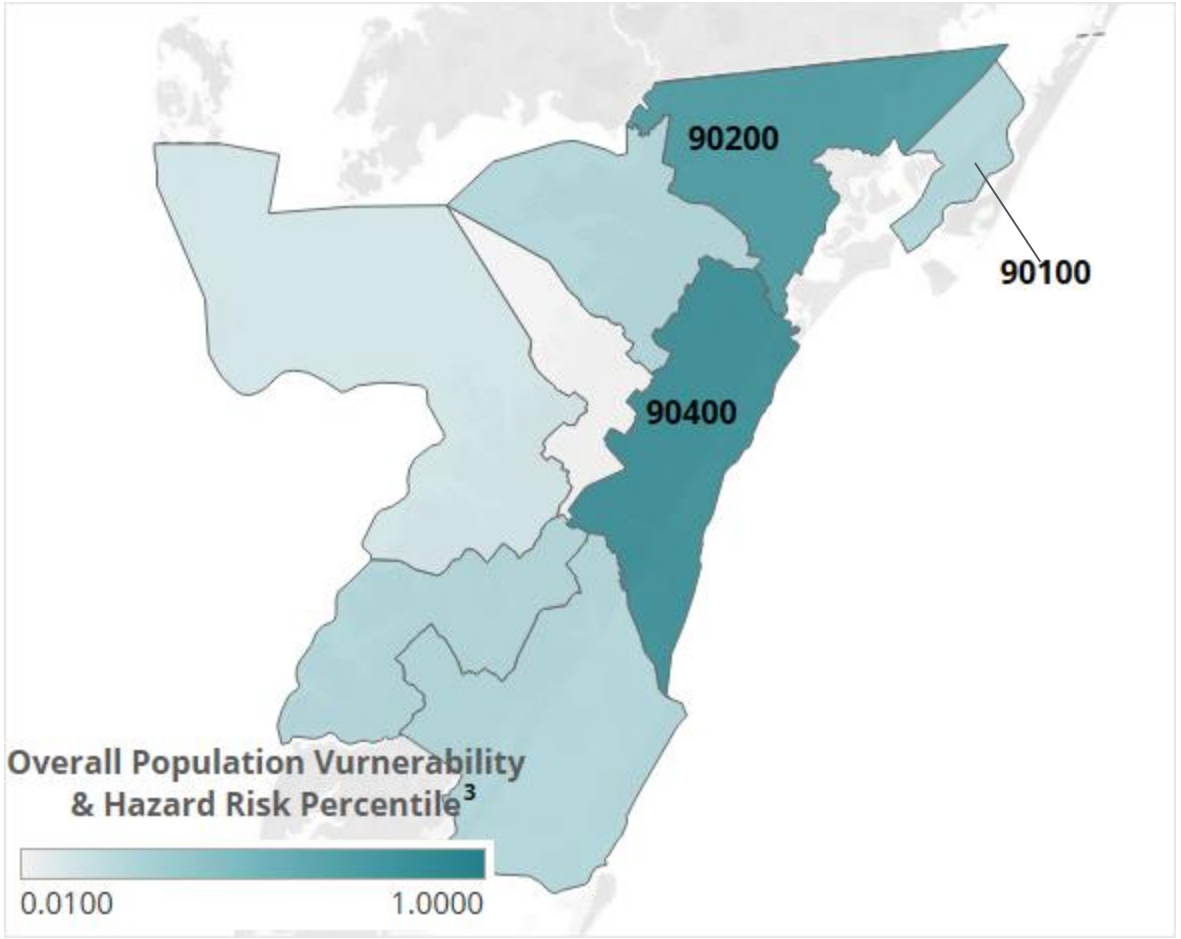
#	Area	# of Households	Within-Accomack County Percentiles		
			Overall Percentile	Population Vulnerability[1] Percentile	Hazard Risk[2] Percentile
1	90400	1,390	100th	86th	57th
2	90200	2,533	86th	43rd	86th
3	90100	1,991	29th	0th	100th
4	90700	1,351	29th	57th	43rd
5	90300	787	29th	71st	29th
6	90800	644	29th	100th	0th
7	90600	1,856	14th	14th	71st
8	90500	622	0th	29th	14th

1. Population Vulnerability should be interpreted as a household's ability to safely respond to an environmental disaster and only considers households located in flood or hurricane zones
2. Hazard risk reflects the number of households located in Flood and Hurricane Zones, weighted by severity

Prioritizing Census Tracts in Accomack County continued

Areas with the most vulnerable populations and households in severe flood and hurricane zones present prioritization opportunities for mitigation projects.

Potential Priority Areas in Accomack County



Priority Areas in Flood and Hurricane Zones

			Within-Accomack County Percentiles		
#	Area	# of Households	Overall Percentile	Population Vulnerability[1] Percentile	Hazard Risk[2] Percentile
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8	90500	622	0th	29th	14th

1. Population Vulnerability should be interpreted as a household's ability to safely respond to an environmental disaster and only considers households located in flood or hurricane zones
2. Hazard risk reflects the number of households located in Flood and Hurricane Zones, weighted by severity
3. Sub-localities at the 0th percentile (areas in white) do not have households in Flood or Hurricane Zones

Priority Census Tracts Summary

When evaluating future mitigation project opportunities, it may be helpful to consider the underlying attributes of population vulnerability and the number of houses in each flood/hurricane zone.

			Within-Accomack County Percentiles										
#	Census Tract	# of Households	Overall	Population Vulnerability[1]	Communities of Color	Elevated Health Risk	Low Income	# of People	# of Children	Unemployment Risk	Age	Lack of Vehicle Access
1	**90400**	**1,390**	**100th**	**86th**	71st	43rd	57th	100th	86th	86th	43rd	100th
2	**90200**	**2,533**	**86th**	**43rd**	57th	100th	43rd	57th	43rd	100th	57th	14th
3	**90100**	**1,991**	**29th**	**0th**	0th	0th	0th	0th	0th	29th	86th	29th

			W/I-Accomack County Percentiles		Accomack County Household Counts[3]							
#	Census Tract	# of Households	Overall	Hazard Risk[2]	100 Year Coastal	100 Year Riverine FW	100 Year Riverine	500 Year Riverine	Hurr. Zone A	Hurr. Zone B	Hurr. Zone C	Hurr Zone D
1	**90400**	**1,390**	**100th**	**57th**	-	-	37	69	690	-	-	700
2	**90200**	**2,533**	**86th**	**86th**	-	-	189	77	433	914	55	1131
3	**90100**	**1,991**	**29th**	**100th**	-	-	1553	390	1991	-	-	-

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. Hazard risk reflects the number of households located in Flood and Hurricane Zones, weighted by severity
3. Note that the total sum of households may be more than the households in your locality because some are located in both flood and hurricane zones

Review of FEMA Funding & Past Mitigation Projects

Review of Mitigation Projects In Your Locality

The figures below provide information regarding mitigation projects[1] in your locality from 1990-2019 that may be helpful to consider in planning potential future mitigation projects.

Total Exclusive Project Funding[1]

$5,247,466

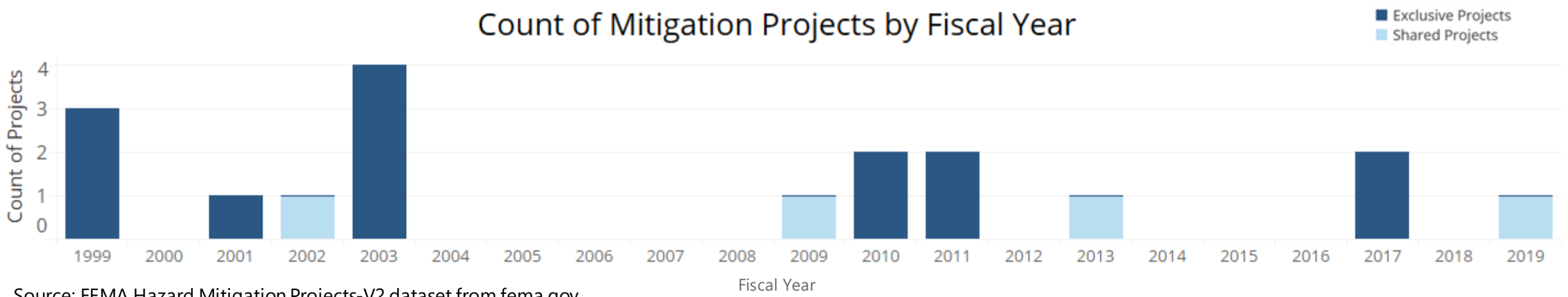
This is the total amount of federal funding alloted to mitigation projects solely owned by your locality from 1990-2019

Total Shared Project Funding[1]

$352,150

This is the total amount of federal funding allotted to mitigation projects owned by your locality and at least 1 other from 1990-2019

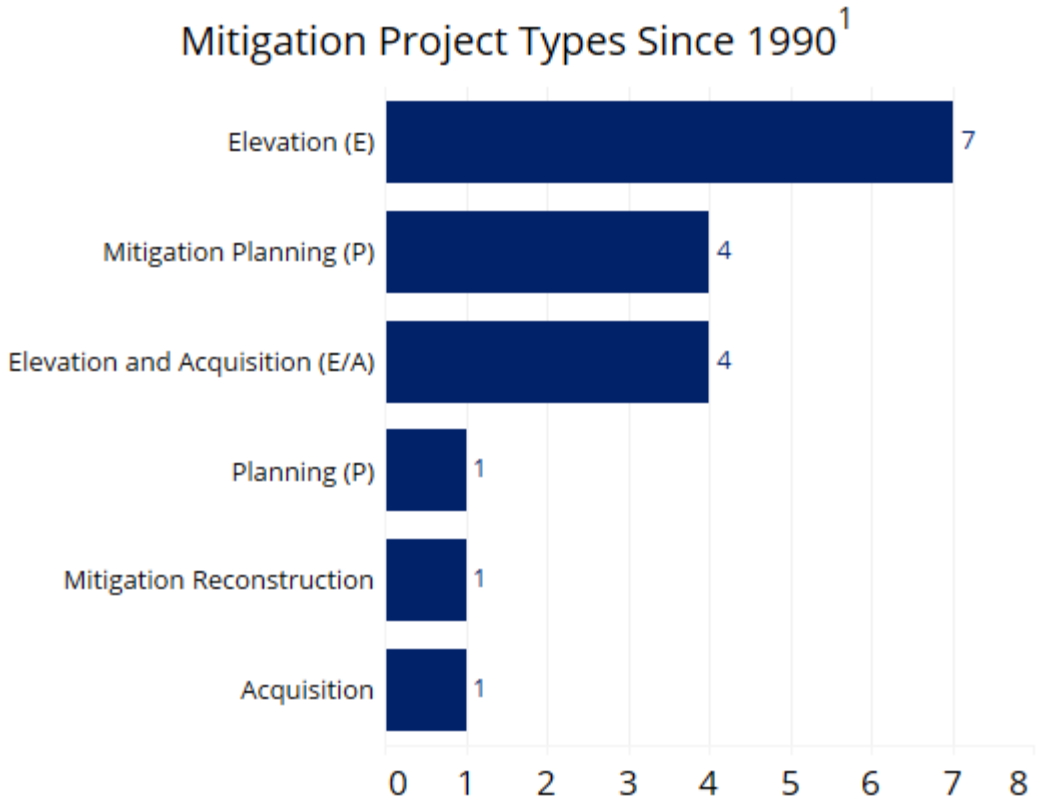
Exclusive Projects	Average Project Size	Shared Projects	Average Counties Per Project
14	$375K	4	2.3

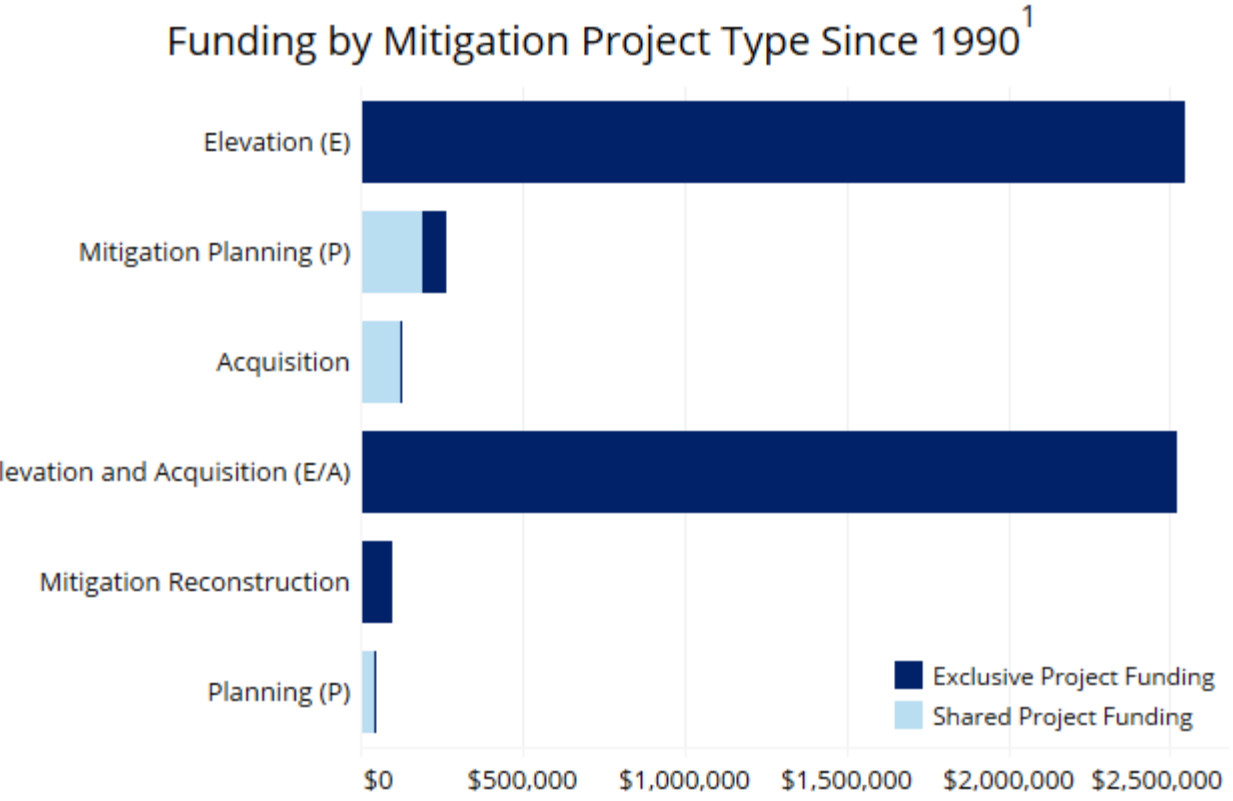


1. Source: FEMA Hazard Mitigation Projects-V2 dataset from fema.gov

Past Mitigation Projects – Top Project Types

The figures below provide information regarding mitigation projects[1] in your locality from 1990-2019 that may be helpful to consider in planning potential future mitigation projects.





1. Source: FEMA Hazard Mitigation Projects-V2 dataset from fema.gov

COVID-19 Impacts

COVID-19 In Your Locality

Since the beginning of the COVID-19 Pandemic, Accomack County has experienced the following:

Cases[1]

Total	Per 100k
1,210 **31st** out of 133 localities[2]	**3,696** **13th** out of 133 localities

Hospitalizations[1]

Total	Per 100k
96 **25th** out of 133 localities	**293** **13th** out of 133 localities

Deaths[1]

Total	Per 100k
19 **47th** out of 133 localities	**58** **34th** out of 133 localities

1. COVID-19 case, hospitalization, and death figures are sourced from the Virginia Department of Health as of **10/26/2020**
2. COVID-19 Impact rankings are for all 133 Virginia localities, rather than the 132 included in the BRIC analysis for having at least one household in a flood or hurricane zone

Considerations for Next Steps

Considerations for Next Steps

When evaluating future mitigation project opportunities, the population vulnerability and hazard risk metrics can supplement existing measures to design mitigation projects with an equity lens.

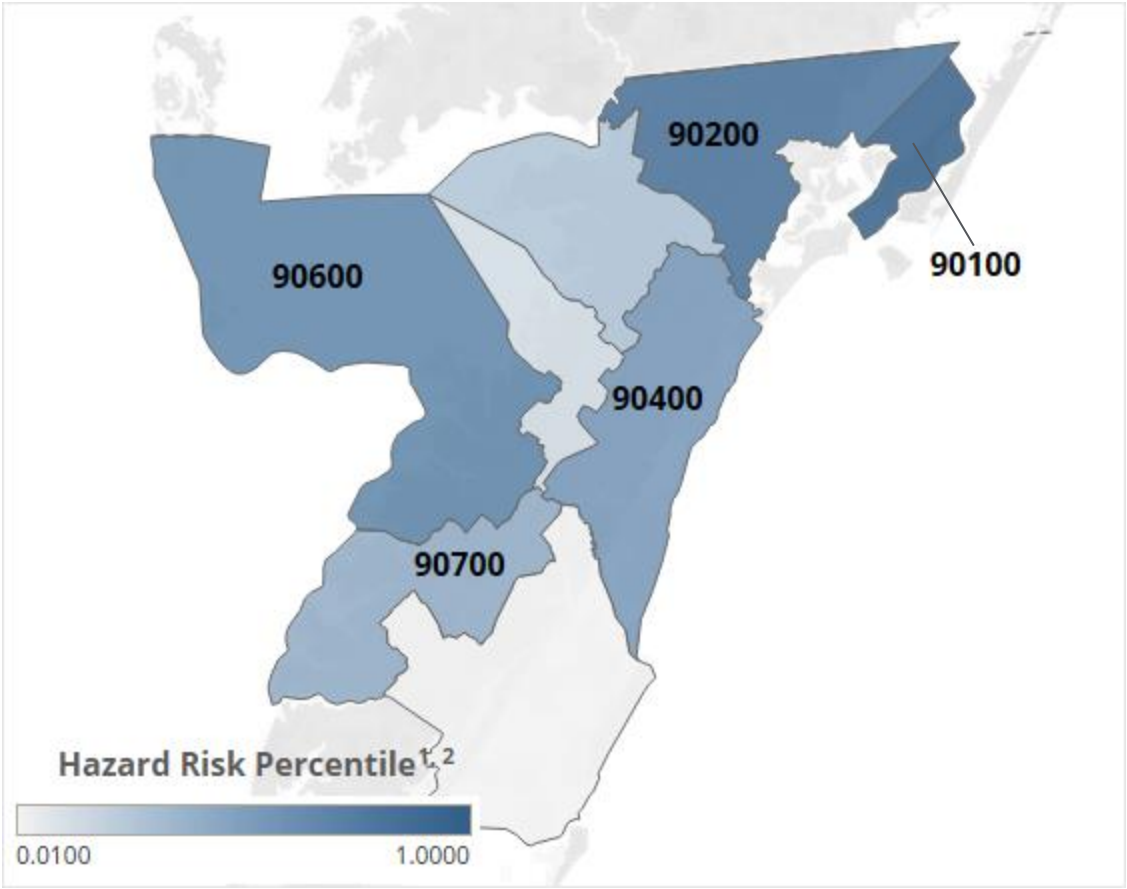
- Consider targeting **priority areas** when designing future mitigation projects
- Consider analysis at the **census tract/block level** to understand population vulnerability and hazard risks at a granular level to support decisions on mitigation projects
- Consider **supplementing these people-focused metrics** with existing infrastructure, elevation, and financial analysis for a holistic mitigation planning approach that includes equity considerations
- Consider **past project types** and **prior funding** in the overall mitigation strategy

Appendix

What areas in your locality have the greatest hazard risk?

When designing mitigation projects, it may be helpful to consider specific census tracts that have the greatest number of households residing in the more severe flood and/or hurricane zones.

Hazard Risk[1] in Accomack County



Top-5 Census Tracts for Hazard Risk[1]

				Accomack County Household Counts							
#	Census Tract	# of House-holds	Hazard Risk Percentile	100 Year Coastal	100 Year Riverine FW	100 Year Riverine	500 Year Riverine	Hurr. Zone A	Hurr. Zone B	Hurr. Zone C	Hurr. Zone D
1	**90100**	**1,991**	**100th**	0	0	1553	390	1991	0	0	0
2	**90200**	**2,533**	**86th**	0	0	189	77	433	914	55	1131
3	**90600**	**1,856**	**71st**	0	0	523	82	545	269	535	507
4	**90400**	**1,390**	**57th**	0	0	37	69	690	0	0	700
5	**90700**	**1,351**	**43rd**	0	0	117	97	178	228	0	945

Note: see the appendix for a complete data table for all Census Tracts

1. Hazard risk reflects the number of households located in Flood and Hurricane Zones, weighted by severity
2. Census tracts at the 0th percentile (areas in white) do not have households in Flood or Hurricane Zones

What is population vulnerability and how is it calculated? *continued*

The vulnerability score for each Virginia household reflects an estimate of the household's ability to safely respond in the event of an environmental disaster.

Population Vulnerability

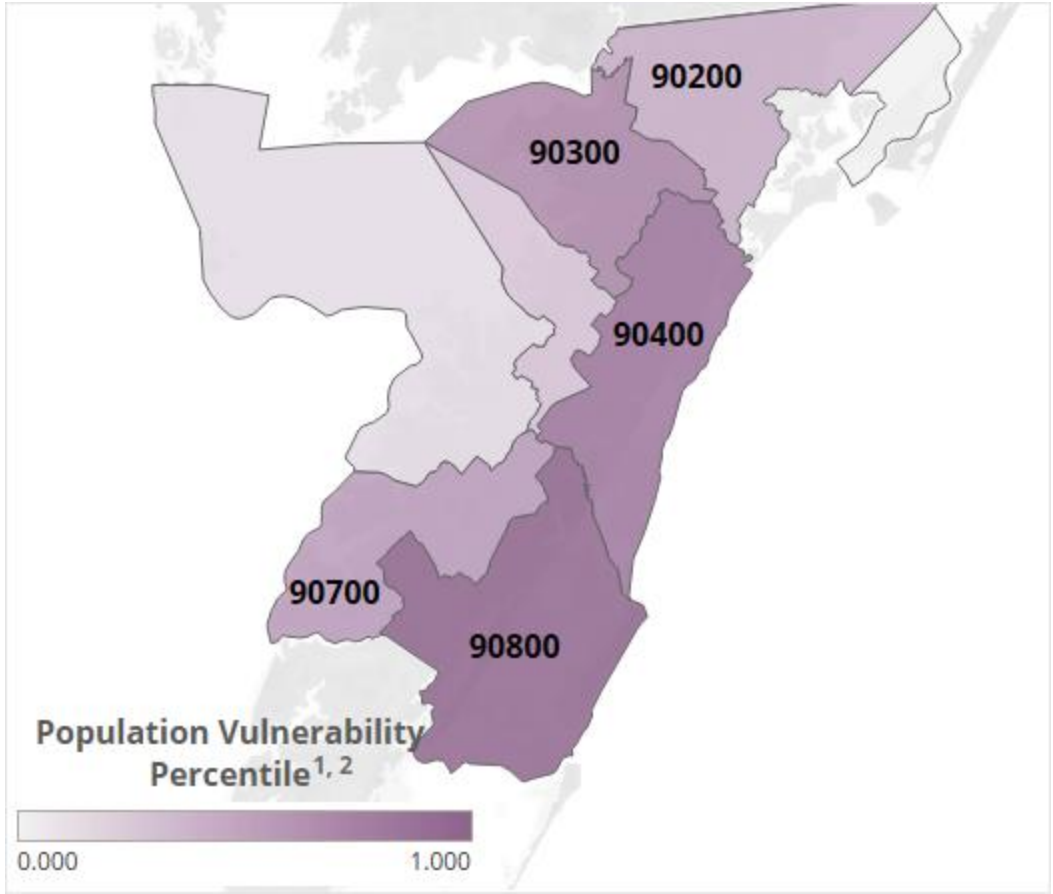
Attribute[1]	Weighting[2]	Description (in a household)
Low Income	18%	Number of adults with income less than $30,000
Elevated Health Risk	17%	Number of adults with one or more serious health conditions
Age (Older Adults)	15%	Number of adults who are age 65 and older
Communities of Color	13%	Number of Black or African American or Hispanic or Latino adults
# of Children in Household	12%	Number of children
# of People in Household	10%	Number of adults and children
Unemployment Risk	8%	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

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 Vulnerability[1] in Accomack County



Top-5 Census Tracts for Population Vulnerability[1]

			Within-Accomack County 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	**90800**	**644**	**100th**	100th	86th	86th	86th	100th	57th	29th	57th
2	**90400**	**1,390**	**86th**	71st	43rd	57th	100th	86th	86th	43rd	100th
3	**90300**	**787**	**71st**	29th	71st	100th	43rd	71st	71st	14th	0th
4	**90700**	**1,351**	**57th**	86th	57th	29th	71st	29th	14th	71st	43rd
5	**90200**	**2,533**	**43rd**	57th	100th	43rd	57th	43rd	100th	57th	14th

Note: See the appendix for a complete data table for all 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

Data table | Population Vulnerability & Hazard Risk

			Percentiles											Within-locality Household Counts							
#	Census Tract	# of Households	Overall	Population Vulnerability	Communities of Color	Elevated Health Risk	Low Income	# of People	# of Children	Unem-ployment Risk	Age	Lack of Vehicle Access	Hazard Risk	100 Year Coastal	100 Year Riverine FW	100 Year Riverine	500 Year Riverine	Hurr. Zone A	Hurr. Zone B	Hurr. Zone C	Hurr Zone D
1	**90400**	**1,390**	**100th**	86th	71st	43rd	57th	100th	86th	86th	43rd	100th	57th	0	0	37	69	690	0	0	700
2	**90200**	**2,533**	**86th**	43rd	57th	100th	43rd	57th	43rd	100th	57th	14th	86th	0	0	189	77	433	914	55	1131
3	**90100**	**1,991**	**29th**	0th	0th	0th	0th	0th	0th	29th	86th	29th	100th	0	0	1553	390	1991	0	0	0
4	**90700**	**1,351**	**29th**	57th	86th	57th	29th	71st	29th	14th	71st	43rd	43rd	0	0	117	97	178	228	0	945
5	**90300**	**787**	**29th**	71st	29th	71st	100th	43rd	71st	71st	14th	0th	29th	1	0	315	11	46	370	0	371
6	**90800**	**644**	**29th**	100th	100th	86th	86th	86th	100th	57th	29th	57th	0th	0	0	33	28	125	0	0	519
7	**90600**	**1,856**	**14th**	14th	14th	14th	14th	29th	14th	0th	100th	86th	71st	0	0	523	82	545	269	535	507
8	**90500**	**622**	**0th**	29th	43rd	29th	71st	14th	57th	43rd	0th	71st	14th	0	0	149	23	93	108	0	421

1. Note: These figures only account for census areas that have households in flood and/or hurricane zones

Data table | FEMA Funding[1]

Grantee	Year of Fiscal Year	Exclusive vs Shared	Subgrantee	Project Counties	Project Type(s)	Federal Funds Obligated
ACCOMACK COUNTY	2019	Shared	ACCOMACK-NO..	ACCOMACK; NORTHAMPTON	91.5: Local Multijurisdictional M..	$90,000
	2017	Exclusive	ACCOMACK-NORTHAMPTON..	ACCOMACK	200.2: Acquisition of Private Real Property (Structures and Land) ..	$850,000
	2013	Shared	ACCOMACK-NO..	NORTHAMPTON; ACCOMACK	91.1: Local Multihazard Mitigati..	$100,000
	2011	Exclusive	Accomack-Northampton Pl..	ACCOMACK	207.2: Mitigation Reconstruction	$99,405
			Statewide	ACCOMACK	202.2: Elevation of Private Struc..	$691,447
	2010	Exclusive	ACCOMACK-NORTHAMPTON..	ACCOMACK	202.1: Elevation of Private Structures - Riverine; ..	$321,477
	2009	Shared	Accomack-North..	ACCOMACK; NORTHAMPTON	95.1: FMA or CRS Plan	$41,100
	2003	Exclusive	ACCOMACK-NORTHAMPTON PLANNING DIST..	ACCOMACK	91.1: Local Multihazard Mitigation Plan	$35,256
					200.4: Acquisition of Public Real..	$1,672,184
			Tangier	ACCOMACK	202.1: Elevation of Private Structures - Riverine	$611,247
	2002	Shared	Roanoke	ROANOKE; ACCOMACK	200.3: Acquisition of Public Real..	$121,050
	2001	Exclusive	CONSERVATION & RECREATION	ACCOMACK	91.1: Local Multihazard Mitigation Plan	$41,250
	1999	Exclusive	Accomack (Coun..	ACCOMACK	202.1: Elevation of Private Struc..	$925,200

1. Source: FEMA Hazard Mitigation Projects-V2 dataset from fema.gov